

NORTHWEST NAZARENE UNIVERSITY

Creating a Mobile Application About Costa Rican Frogs and Toads Using React Native

THESIS

Submitted to the Department of Mathematics and Computer Science  
in partial fulfillment of the requirements

for the degree of  
BACHELOR OF SCIENCE

Emily Kelly  
2019

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## Abstract

Creating a Mobile Application About Costa Rican Frogs and Toads Using React Native.  
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The purpose of this project was to create a cross-platform mobile application for Dr. John Cossel of the NNU Biology department based on his book *Field Guide to the Frogs and Toads of Costa Rica*. The purpose of this application is to provide easily accessible species identification resources to aid researchers in the field.

React Native, a framework created by Facebook, was used to create the app. React Native combines JavaScript and React languages to develop iOS and Android apps simultaneously without using native languages. Expo toolkit was also used to manage and display the application. Using React Native and Expo allowed the creation of a lightweight app that is 10% the size of the eBook. Although the app is faster and uses less memory than the book, the app is lacking several necessary features, due to the limitations of features imposed by Expo. Developing with React Native using Expo is an easy approach to create simple applications, but is not as well-suited for creating feature-rich apps for projects such as this one.

To use the app, go to <https://bit.ly/2CnMeBr> and follow the User Manual. Screenshots of the application will be shown in the seminar presentation of this project.

## **Acknowledgments**

I would like to thank Dr. John Cossel for providing me with this wonderful opportunity to learn a new skill. I also want to thank my friends and family who supported me through this challenging process of designing and developing an app.

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## Background

This project was started in order to create a mobile application for Dr. John Cossel of the Northwest Nazarene University Biology Department. The project's goal was to create a faster, more user-friendly, and smaller-sized version of Dr. Cossel's eBook *The Field Guide to the Frogs and Toads of Costa Rica*. The eBook provides detailed information about the 147 species of frogs and toads inhabiting Costa Rica. In addition to information such as descriptions, calls (including audio snippets of the calls), and habitats for each species, information about the broader frog and toad families as well as hundreds of high-quality images are provided throughout the book. All information combined created a file that is approximately 1.2 GB in size. Installing the book onto a device takes time, and the large file size also causes lag and delays when flipping through the eBook. The goal of creating a mobile application was to combine all the same information into a smaller format for quicker download and speedier access times when browsing through the information.

In order to increase availability and access, the original intent of app development was to create a cross-platform application that would be available on both Android and iOS platforms. Normally, having an app available for both platforms requires two different versions of the same project to be completed in native languages at different times. However, with the use of Facebook's React Native mobile application framework, along with a software called Expo.io, it was simple to create apps for both platforms simultaneously using only one set of code.

React Native is a framework design specifically to be used for creating mobile applications. React Native is built on top of Facebook's React JavaScript library, which is a library for building user interfaces. Although React can also be used to create mobile applications, it is more commonly used to create computer applications while React Native is

used for building mobile applications. What makes React Native better for building mobile applications than its foundation library is that React Native provides support for converting JavaScript into native languages. React Native allows a single set of code to be implemented on both Android and iOS without any significant differences between the platforms in the code. One of the main functionalities useful to application development that React Native by itself lacks is the capability to view the application as it is being written. Expo Toolkit compensates for the features React Native lacks.

Expo Toolkit, normally just referred to as Expo, is a set of tools which enables the application development lifecycle. Expo comes alongside the React Native code and gives developers a simple way to view changes to the app in real-time. Expo also eases the app creation process by managing the application and all the finer details related with management so that the developer does not have to. All that is needed to use Expo to view an app while it is being developed is to download the Expo client app to a smartphone or other mobile device and connect to the application through a user account. Every time the code file is saved, Expo checks the file for errors and then displays the application in real-time, making it much easier to design and implement the application program. A management functionality that Expo provides that greatly aids the app development process is a simple way to create native binaries (downloadable files) for both Android and iOS. With a short Command Line command, Expo will build and publish files which can then be downloaded to the device of one's choosing.

Expo was the toolkit that was chosen for this project because it is the system that is recommended by Facebook in the React Native documentation. This toolkit is ideal for applications that are to be fully cross-platform. If Expo or another cross-platform development toolkit is not used, a native code development environment must be used for writing code. To

create the Android application, an Android development studio would be required for writing the Android version of the application. XCode, Apple's application development environment, would be required for creating the iOS version of the application. While there are other development tools available other than Expo, Facebook, the developer of React Native, recommends Expo, which is why that toolkit was chosen for this project.

## **Methods**

### **Setting Up the System**

Before an application can be created using React Native and Expo, a system of programs must first be installed on the development computer. The first step of setting up the development system is to ensure that Node.js is running on the computer. Node is an open source server environment which is used by Expo to create local server instances for developing and viewing applications. Expo runs on top of Node.js, so the computer must be equipped with Node before Expo can be installed. After Node.js has been installed on the development computer, Expo can then be installed by entering `npm install -g expo-cli` on the command line. This command will install the Expo Command Line Interface package globally on the computer which will allow the developer to use all the tools offered by Expo.

The next step of setting of the development system is to download the Expo client application onto the mobile device that will be used to preview and test the application during development. Simply go to the device's app store, search for and download the Expo client application.

Next, it is time to create the application. This application was originally created by entering a short command on the Command Line. After that command is executed, Expo leads the developer through a series of steps to get the project configured properly. The first step is to



choose whether the project file should be totally blank or if it should come with example templates and pages. This application began with a blank slate program to increase the amount of customization that could be performed on the app. After Expo asks what type of project to start with, it will then ask if the developer would like the project to be the default management style or if an experimental management style should be used; this project used the default management style. Next, Expo will ask for other details such as the application name as users will call it and will also ask for a “slug” name which will be used to create a unique URL to access the project through a browser after the project has been completed. Once the initial configuration details have been set and app creation has completed, it is then time to start the project and project server, which is also done through the command line.

After the start command has been executed, Expo will open the project and will also display a QR code which can be scanned to view the new application using the Expo Client. The QR code can be scanned with a mobile device to open the application in Expo Client. Another method to open the application is to create an account with Expo when prompted after the project has been created. If an account is created for the project, developers can then login to the account in the client app to view any open projects. Whenever a new development session is begun, developers must once again open the command line, change the working directory to the main project folder, and then execute the start command to start the development server. The main code file can be edited without running the server, but real-time app viewing will not be possible unless the server is running. The application code was written and developed in the App.js file in the project folder created by Expo. After the system has been setup, the next step of the application development process was to design a plan as to what would be included in the application and how development would proceed.

## **Designing the App**

Before starting to develop any program or application, some thought must first be put in to how the application should look and behave. To start the development process, Dr. Cossel was consulted so that the application could look and act like he wanted, as he was the person commissioning the app. Dr. Cossel requested that the overall design of the mobile app fit the same styling of the eBook. Dr. Cossel provided a copy of the eBook to aid in the development of the design. Dr. Cossel also requested that the application include collapsible sections on each page so that only the sections of information that a user wanted to see would be opened at any one time. Besides the general requirement for the application to match the style of the eBook and the request for collapsible sections on each page, there were not many other requirements requested by Dr. Cossel for the design of the application. The rest of the design decisions were left to the application developer.

With those requirements in place, the application was designed to be as simple as possible, making sure the app would flow smoothly from one page to another and that it would be very user friendly. There were many phases of design, with each new phase being more feasible than the last. The first phases were dreaming big and did not fully comprehend what would be possible to create using React Native and Expo. The following figures are the original designs of what was hoped could be accomplished for this application.



Figure 1. An initial sketch of what the main menu would look like.

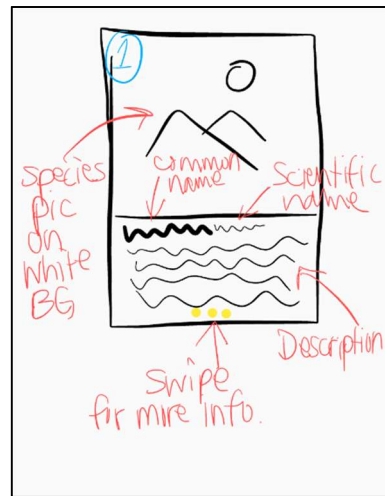


Figure 2. An initial sketch of what the main species description page would look like.

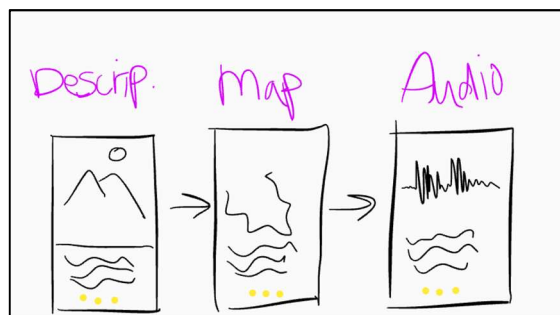


Figure 3. An initial sketch of the three pages that would comprise a single species description—Description, Map (Range & Habitat), and Audio/Calls.

Figure 1 is the initial design for the main menu of the application. Each of the sections would be a button to take users to another page. “Home” would take users to the home screen. “Search” would take users to a page where they could search for the frog they were looking for. The species would be divided into the sections “Frogs” and “Toads.” Finally, there would be a “Help” page and an “About” page that would provide users with general information about the application. After some further ideas were generated, it was decided that the application would not be divided into frogs and toads, but would instead be divided other ways. The “Search”

function idea was also removed after the initial design phase because it was decided that feature was outside the scope of the project.

Figures 2 and 3 show different aspects of the original design idea for what each species page would look like. Each species page would consist of three separate slides that could be accessed by swiping left/right on the screen. The first slide would be the main description of the frog (demonstrated in Figure 2), which would contain a header image on the top half of the page, with the common name, scientific name, and description of the species listed below the image. The second slide for the species would have a map and description of the species' range and habitat. The final slide of each page would contain the call audio for the species, with an audio player present along with a textual description of the species' call. For several reasons, this design was scrapped and altered to be easier to complete. First, there is no standard function library within React Native and Expo that allows for swiping between various screens on a page; a custom library would have to be created or would have to be modified from another developer's existing custom library. This design was also scrapped because it would mean each species would take up three times as much storage space as just using a single-page design. With the main goal of this project being to reduce the storage size of the finished product, making each species be three pages would mean not meeting that goal as well.

After doing more research into designing apps using React Native and Expo, a second design was created for each different type of page the application would contain. The following are the sketches of the second design for the application.



Figure 4. Second design of main species pages.

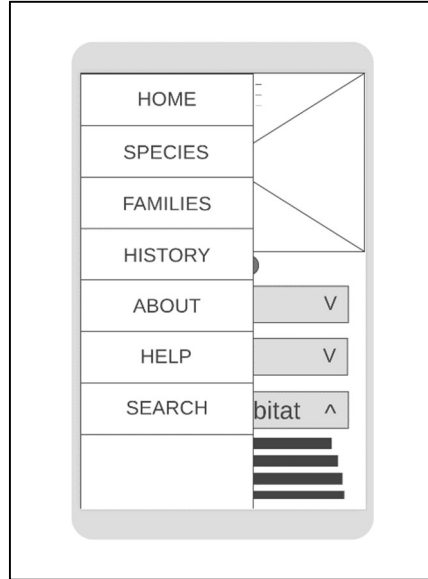


Figure 5. Second design for main menu (drawer style menu).

Figure 4 shows the second plan for what each species page would look like. Each page would be composed of an image slider at the top of the page which would allow users to swipe through a series of images of each species (each species in the eBook has one to five different images). Below the image slider would be collapsible sections for the species description, calls (which would include an audio player for the species with recorded calls available), and for range and habitat. These collapsible sections would give the application a more modern feel and would also meet the style requested by Dr. Cossel.

Figure 5 is a sketch of the second menu design, which would create a drawer-style menu that would be accessed by selecting a menu icon in the upper left corner of the app screen, available on every screen. Although this style of menu has a modern design, it was not feasible for the final design of the project. The menu was one of the last features to be added to the

project and was much more complicated than originally planned for, so a simpler version of the menu was created to complete the application. Additionally, the styling shown in Figure 4 for the design of the species pages was also not used because it too was too complicated to be implemented. Many design features such as these are not well-supported by Expo and would have required too much modification to existing Expo or React Native libraries in order to implement. Because of the extra unexpected complications in utilizing various features while working with Expo, the application was redesigned again in order to create the simplest application possible.

The final design of the app included three different methods for sorting and displaying frog species. The three different methods are sorting by family, sorting by scientific name, and sorting by common name. Each of those options would be on the main menu and would link to another page that would have lists of links in the sorting method chosen (i.e. selecting “Frog Families” would lead to a page with a list of the families in alphabetical order, selecting “Frogs by Scientific Name” would lead to a page with a list of species scientific names in alphabetical order, etc.). One type of page that was included in this design phase that was not included in the previous phases was the addition of main “Family” pages for each family of frogs. These pages were designed to be like the main Family description pages available in the eBook. Also included in the final design of the main menu was a link to an “About” page that contained general information about the application. The following figures are the final designs that were implemented for the application.

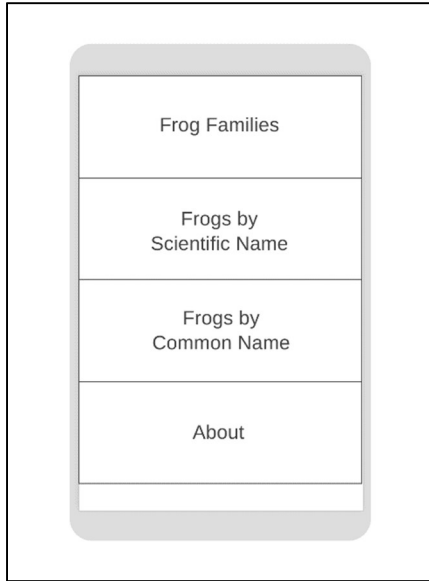


Figure 6. Design of the final, simpler format of the homepage/main menu.

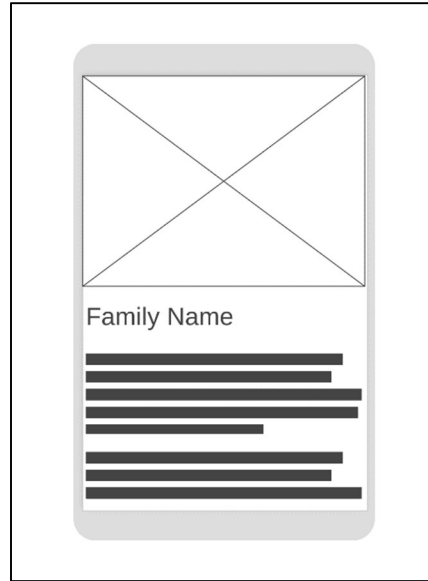


Figure 7. Design of the layout of main family pages. Would include an image as well as text from eBook.

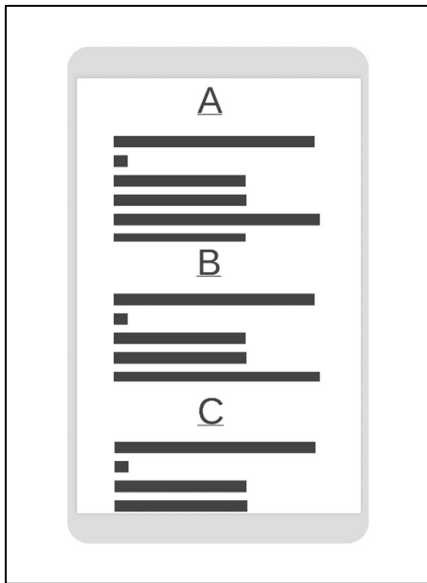


Figure 8. Design of the basic formatting for the pages with lists of species (used to display species in lists by Common, Scientific, or Family Name.) These pages are designed to be a list of text links separated by letter.

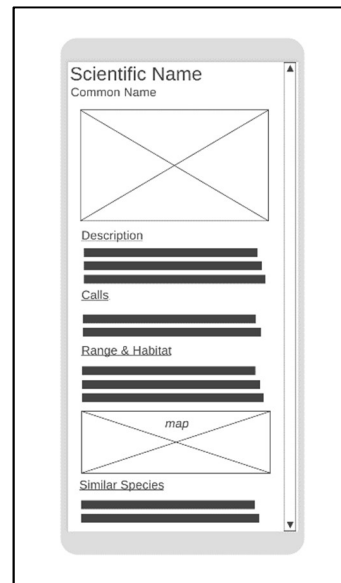


Figure 9. Design of the final layout for species pages. Each page will have one image for the species, and then Description, Calls, Habitat, and Similar Species will all be sections below the image.

In this final design of the application, the main page for each species has been converted to a single, scrollable page that contains a single image for each species followed by separate sections of simple, formatted text for the Description, Calls, Range and Habitat, and Similar

Species. The audio file, when available for a species, was to be accessible under the Calls section of the page. These final design decisions were made in order to make the style of the application match the existing eBook in as simple a way as possible.

In the eBook, each genus of frogs and toads has a unique header color which was recreated by the mobile application. Fonts were also designed to be the same in the mobile application as in the eBook, although that design element was not used by the final version of the app. To keep the development of the application as simple as possible, the application uses the default fonts provided by each platform, since iOS and Android do not have any other font styles in common. This lack of common fonts meant that adding custom fonts to the app would be more complex and time-consuming than originally planned for, which is why the app uses default fonts instead of custom fonts.

Designing the application was not as simple or as straightforward as what was originally assumed would be the case at the beginning of the project. The design kept needing to be tweaked as the application was being built as new limits of React Native and Expo were discovered. Designing the application was an iterative process that changed and adapted from the start to the end of the project. After the development system had been setup and the application had been designed and planned, the next step of the process was to begin developing the application.

## **Developing the App**

### **React Native Libraries.**

One of the features of React Native that makes it useful and well-liked is that there are hundreds of standard libraries that provide developers with almost every feature they could ever want for an application. Each library is comprised of components. Components are what define



behaviors, actions, and styles in React Native. Every object that is shown in a React Native application is either a custom component created by the developer, or a premade component from a library. Libraries define the most common components used by developers so that the same code does not have to be rewritten by every person using React Native. For the purposes of this project, the application uses the following React Native libraries:

- React-Native: this library is the basic library used by all applications being built with React Native. This library defines components such as Text, StyleSheet, View, Button, and Image, plus many other basic components to style and build an application.
- React-Navigation: this library provides components for navigating through an application. There are several different types of navigation formats including Stack, Tab and Drawer Navigators.
- React-Navigation-Tabs: this is an expansion to the React-Navigation library. This library provides a means for creating a customizable Tab Navigator which shows navigation options as tabs at the bottom of each screen.

Libraries can easily be imported into any React Native application by using an import statement at the beginning of the code file. Figure 10 shows all the import statements this project used. Such simple component importation allows for faster development times

```
import React from 'react';
import { StyleSheet, Text, View, Button, Image, ScrollView, Dimensions } from 'react-native';
import { createStackNavigator } from 'react-navigation';
import { createBottomTabNavigator, BottomTabBar } from 'react-navigation-tabs';
```

Figure 10. Import statements used in this project to import components from several libraries.

## Creating Pages.

The heart of building an application with React Native is creating the pages of the app. Every page contained within the application is a custom component that tells the device what to do and how to do it. Every component is its own class, and each class is an extension of the main React-Native component called Component. Figure 11 below is an example of a page component used within this application. The only necessary parts of the component are the name of the component as well as the render function. The render function tells the device what should be displayed. For brevity, the figure does not show all the details of the component as they are in the actual code. To see the full code of the component, please see Appendix C.

```
class HomeScreen extends React.Component {  
  render() {  
    return (  
    );  
  }  
}
```

Figure 11. An example page component. This component, as currently displayed, would create a blank page.

After the basic page component has been declared, any elements that must be displayed on the page such as text, images, and buttons, will be coded into the return function within the component. Once a component shell has been created to display a page within the application, the component can be copied and customized for each unique page in the application. This application contains a unique component for every species page. Additionally, every other page, such as the main family description pages, are also rendered using a unique component. This application contains more than 150 individual pages of information, creating a program that is more than 10,000 lines of code long.

### **Adding Content to Pages.**

Once a component shell was created for every page that would be included in the app, it was time to add the content for each page to the component. The app copied all the information and images from the eBook to create the pages of the app. In order to copy that information into the pages, components imported from the React-Native library were used to display each element. The most common imported component used was Text. To display text in a React Native application, the text that needs to be displayed is placed between an opening and a closing Text tag, much like the tags used in HTML. Figure 12 shows how Text is displayed in a React Native application. Notice that the text that will be printed on-screen is enclosed in tags. Similarly, every other element displayed on a page in the application is rendered by placing information between an opening and closing tag of whatever type of component is being used.

```
<Text>Leptodactylus poecilochilus{"\n"}</Text>//Scientific Name  
<Text>Turbo White-lipped Foam Frog{"\n"}</Text>//Common Name
```

Figure 12. An excerpt of Text code. Any text that is placed between the <Text> and </Text> tags will be displayed on the screen.

All text, images, and other information was copied into the application program's components using tags like those shown in Figure 12. Once all information had been copied over from the eBook into the application code using components as demonstrated above, the next step in the development process was styling all the components to match the eBook.

### **Styling the Application.**

Another great feature of building a mobile app with React Native is that React Native can use a stylesheet, similar to a CSS stylesheet, to create styles that can easily be reused throughout the entirety of the program code. Being able to create global program styles greatly sped up the process of styling each of the dozens of individual pages. Figure 13 is a small section of the

stylesheet used by the application. In the figure below, there are four different styles shown that can be used for customizing different parts of a page. The first style is for modifying the text formatting for the species common names on each page. The second style shown is for modifying the text formatting for section titles on those pages. The third style sets the formatting for paragraph text. The last style in the figure sets the size of the colored header bars that are present at the top of each page (these bars make the styling of the app match the eBook). Although a majority of the styles shown in Figure 13 are for formatting text, a stylesheet is not just limited to styling text; the stylesheet can be used to set global styles that can be used for every type of component.

```
commonTitles:{ //Styling for common names
  fontFamily: "Verdana",
  fontSize: 18,
  textAlign: "left",
  marginLeft: 5,
  marginTop: -10,
  color: "white"
},
sectionTitles:{
  fontFamily: "Verdana",
  fontSize: 20,
  textAlign: "center",
  margin: 5,
  fontWeight: "bold"
},
paragraphs:{ //Used for body paragraphs
  fontFamily: "Helvetica Neue",
  fontSize: 18,
  textAlign: "left",
  margin: 5
},
colorBar:{
  width: width *1.0,
  height: height * 0.25
}
```

Figure 13. Screenshot of part of a stylesheet. These styles can be reused throughout the entire program.

Figure 14 below shows how easy it is to use the styles created in the stylesheet by referencing the style within the opening tag of a component. Using this method of styling components saves a lot of lines of code over recreating each style in each component where it is used.

```
<View style = {styles.colorBar, {backgroundColor: "#a27e66"}}>
  <Text style={styles.scientificTitles}>Allobates talamancae{"\n"}</Text>
  <Text style = {styles.commonTitles}>Talamancan Cryptic Forest Frog{"\n"}</Text>
</View>
```

Figure 14. Screenshot of how the styles created in the stylesheet can be easily used throughout the application.

For less frequently used styles, it is not always helpful to create a global style in the stylesheet to modify a component. Sometimes it makes more sense to style a component by itself. An example of using a single instance of a style is when text must be italicized. Making text italicized is such a small style change that it would not be beneficial to create a global style. To make text italic, the following styling can be used: `<Text style={{fontStyle: 'italic'}}></Text>`. This same method of creating a style can be used for formatting any component attribute that is able to be modified; `style={{...}}` just needs to be inserted into the component's opening tag to add a style to that individual component. Creating unique formatting and styles for the application was very simple to do since the application is built with React Native. Both styling methods above helped to make this application match the eBook stylistically as much as possible.

### **Navigation.**

As with many features offered by React Native, navigation between screens within an application is also relatively simple; there is an entire library dedicated to app navigation. The first step to making the application navigable is to create a navigator of one type or another; this project used both a Stack Navigator and a Tab Navigator. The Stack Navigator allows users to back out of a current page to the page they were previously on in much the same manner as how a stack data structure works. The last page to be accessed will be the first page to be exited (Last In, First Out). The Tab Navigator creates a section of tab buttons on the bottom of every screen that can be used to navigate through the application. This application uses a tab navigator to

display a “Home” button on the bottom of every screen in order to speed up navigation for the user. The code that creates the navigators essentially takes the names of each component page and assigns it to a linking name; when the linking name is called in an event (such as a button being pressed), the navigator will open the page that was called by displaying the page component connected to the linking name. React Native handles all of the logic of navigation so the developer does not have to.

### **Images.**

Of all the tasks that were performed in the development of this application, one of the most time-consuming tasks was preparing images to be loaded into the app. The original image files that were provided to be used in the application were all high-quality images with large file sizes. When a high-quality image was inserted into the application for each species, the overall size of the program was too large to be rendered by Expo. Although there is no documentation that states the maximum file size for application files that can be created and rendered with Expo, there does seem to be a limit to how much image data an application can use.

In order to generate the application using Expo, all the images had to be reduced in size. Resizing the images was done manually to lower the image dimensions from being greater than 2000 pixels wide down to being around 300 pixels wide. Resizing each image cut the size of each image file down to approximately 1/10 of the original file size. Once the images had been downsized, Expo was able to build the application containing all images without any issues.

After resizing the photos, the white background of every image was deleted and changed to transparent. It was not completely necessary to make the backgrounds of the images transparent instead of white, but doing so makes the images more aesthetically pleasing when being displayed on backgrounds that are not white. The removal of backgrounds was also

performed because the images in the eBook have transparent backgrounds and removing the white backgrounds makes the app more closely resemble the eBook.

## **Results**

Overall, this project was successful in meeting its main objective. The main goal of the project was to create a mobile app version of the information contained in Dr. Cossel's eBook, *Field Guide to the Frogs and Toads of Costa Rica*, and that goal was met by the conclusion of this project. Currently, the app can be downloaded onto any Android device, and the file is just a fraction of the size of the eBook; the application is around 170 megabytes while the eBook is over 1 gigabyte. The app also provides quicker access to the information than the eBook can provide due to the app being simpler, being a smaller file, and taking less time to load. However, even though an app was created, the project did not fully meet all the smaller goals that were originally set.

One goal of the application that was not met was having a cross-platform app that would be available for both iOS and Android. Unfortunately, the app currently does not have an iOS version. The final step of developing an application with React Native and Expo is to have Expo build standalone app files for iOS and Android. This is done with a simple command line command using the Expo Command Line Interface. For an unknown reason, any time an attempt is made at having Expo build the iOS file for the project, there is an error connecting to the Apple App Store Connect interface. There seems to be a bug or error of some sort within Expo that is preventing it from being able to connect to Apple to verify the creation of the file. In order to view the application on iOS, the Expo Client app must be used while connected to the internet; the app cannot be downloaded or installed natively onto an iOS device. There were no errors creating the Android build, so the app can be downloaded and installed on any Android device.

The app has not yet been uploaded to any app store, so any users wanting to download the app must directly download and install a copy of the file onto a device using a computer (instructions for this provided in Appendix B).

Another issue this project encountered was that developing a React Native app using Expo to manage the project limits the features that can be implemented by the application. Expo only supports custom libraries to a certain extent, and once its support limit is reached, advanced features can no longer be added. One feature this application does not include due to the limits of Expo management was the use of audio files for the calls of the frogs. Expo does not support any audio libraries, so no call audio was able to be added to the application. To add audio to the application, the application will have to go through a process called Ejection, in which Expo generates the native code files for Android and iOS and will no longer be able to manage the application. Once the application has been ejected, the audio files can then be added to the application using the native programming languages for Android and iOS. For the purposes of this project and its time restraints, the application was not ejected and thus cannot use audio files.

Although the results of this project do not fully meet the original goals, the application that was created is still a good first version. Much was learned during the development of this application that can be used in the future to build off the application as it currently stands to eventually meet all the requirements that this app was originally intended to meet.

### **Future Work**

In the future, this application can be expanded to add all the features that were not able to be implemented due to the shortcomings of working with Expo. If the project is ejected to native languages, the Android and iOS versions can be developed separately to be able to create feature-rich applications which include better customization and, more importantly, include the



audio files that were not included in the current version of the application. It would also be beneficial to add more images for each species in addition to the single main image that is currently provided.

There is also room to add more complex features to this application to make it substantially more useful for the intended user group. Possible future features include using geolocation to identify species that might be in a researcher's vicinity and using machine learning to identify a species based on a call that recorded in the field. There are many ways for this project to be improved upon by future students and developers.

### **Conclusion**

After completing app development in React Native using Expo to manage the project, I have concluded that Expo is best suited for building simple apps that are not feature-rich. Expo provided support for most of the features that a simple app would need. However, this project required more advanced uses than an average application. If I did this project over again, I would do more research into other application development systems that also create cross-platform applications with React Native but offer better feature support than Expo did. If I had not used Expo or had chosen to develop an application specifically for one of the platforms, I believe the project would have been more successful. Adding the capability to create a cross-platform application reduced many of the other capabilities of the application. If a developer does not want to use audio in their application, wants a software to perform most of the challenging tasks associated with development, or does not mind having a somewhat limited application, then developing a React Native application using Expo as a management tool will probably work well. However, if a developer wants to utilize as many advanced and native features as possible and does not mind doing some of the more complicated application management tasks manually,

then that developer is better off not using React Native with Expo as the management toolkit. For best results, native programming for either platform might just be the best way to create an application.

## References

Cossel, J. O., Jr., & Kubicki, B. (2017). Field Guide to the Frogs and Toads of Costa Rica.

Expo (Version 26.0.0) [Computer software]. (n.d.). Retrieved from <https://expo.io/>

Facebook. (n.d.). React Native (Version 0.59) [Computer software]. Retrieved from <https://facebook.github.io/react-native/>

## Appendix A: Application Screenshots

### iPhone 7

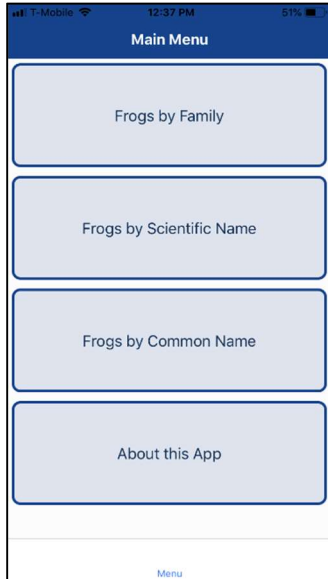


Figure 15. Screenshot of main menu. This is what users will first see when the application is opened.

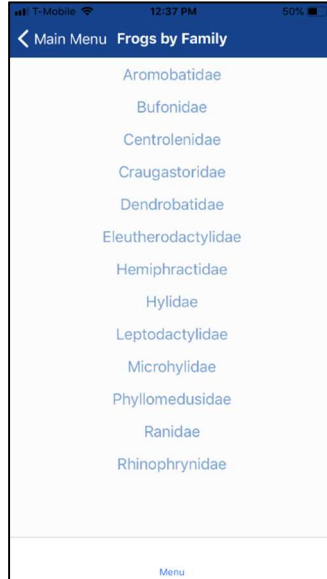


Figure 16. Screenshot of the sorted list of frog families. Each text item is a button linking to another page.

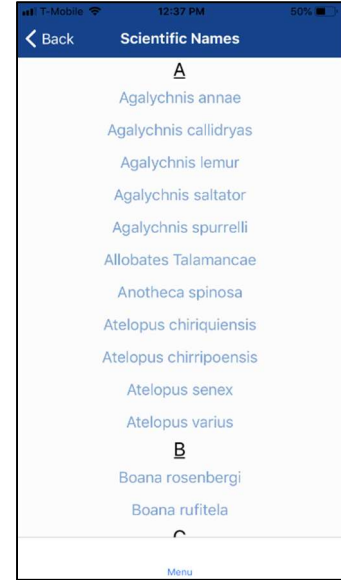


Figure 17. Screenshot of the sorted list of frogs by scientific (Latin) name.



Figure 18. Screenshot of the sorted list of frogs by common name.

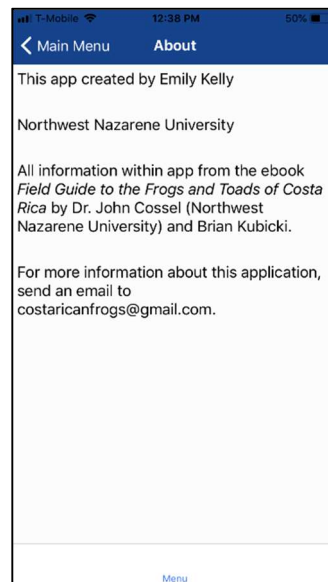


Figure 19. Screenshot of the About page within the application.

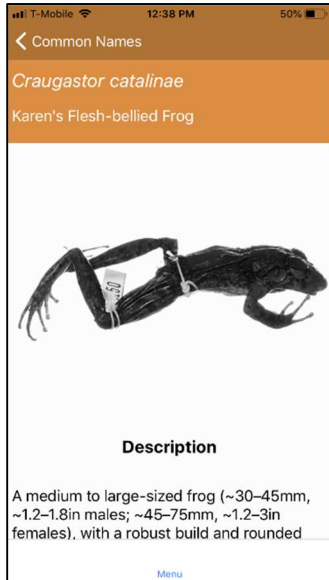


Figure 20. Screenshot of the beginning of a species page. Notice the coloring matches the eBook.

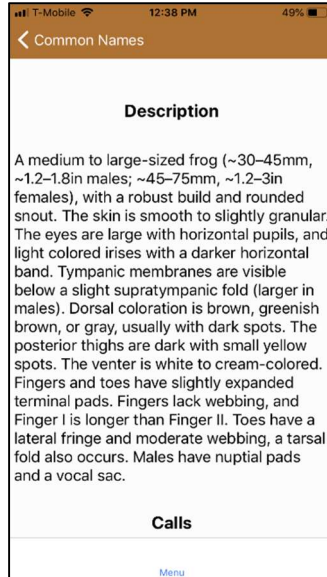


Figure 21. Screenshot of the Description section of the same species page.

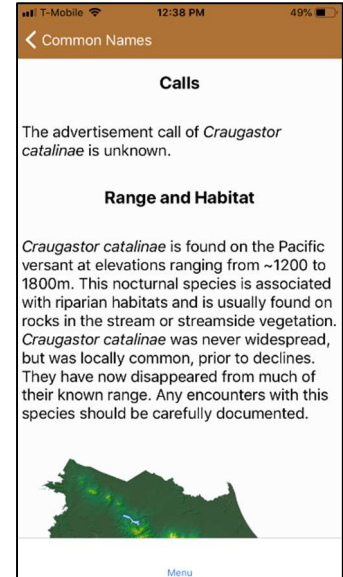


Figure 22. Screenshot of the Calls and Range & Habitat section of the same species page.

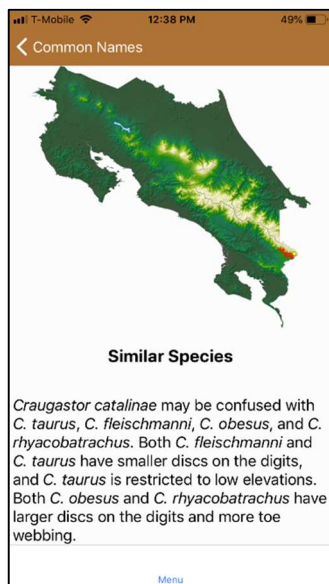


Figure 23. Screenshot of the species range map and the Similar Species section of the same species page.

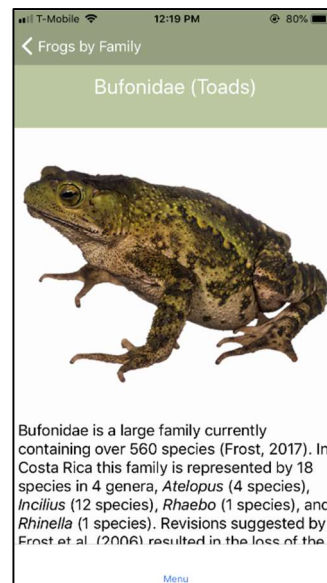


Figure 24. Screenshot of the Bufonidae frog family home page. Below the description is a list of links to each species in the family.

# iPad

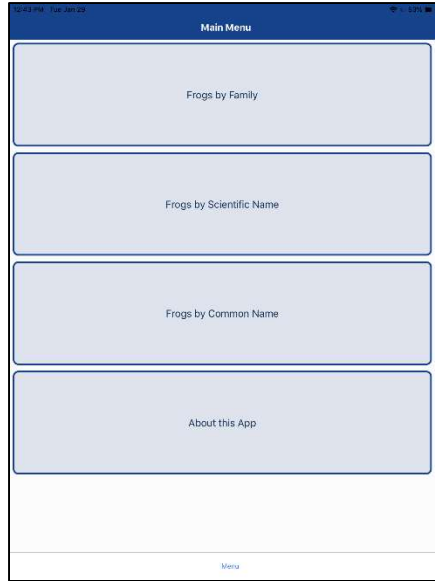


Figure 25. Screenshot of the main menu. This is what users will see when opening the application on an iPad.



Figure 26. Screenshot of the sorted list of frog families.



Figure 27. Screenshot of the sorted list of frogs by common name.

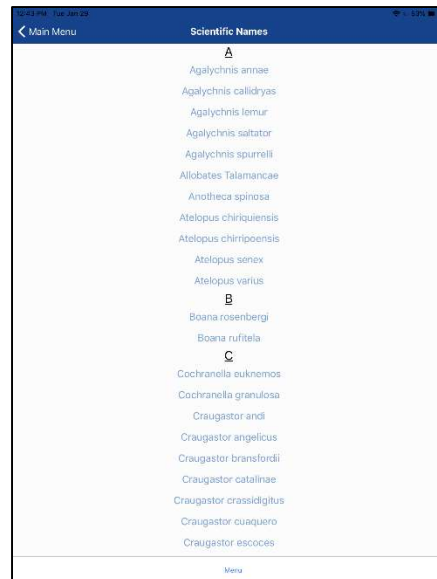


Figure 28. Screenshot of the sorted list of frogs by scientific name.

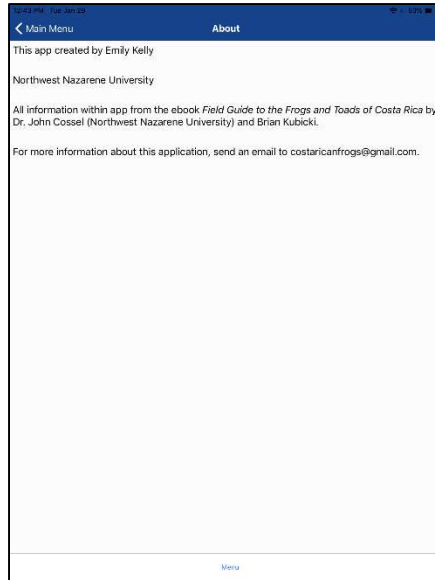


Figure 29. Screenshot of the About page of the application.

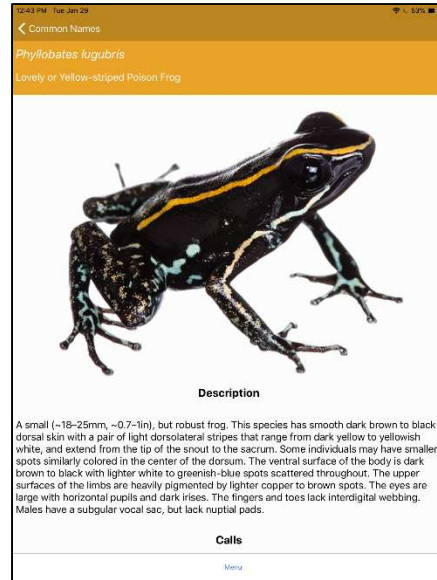


Figure 30. Screenshot of a species page. Notice that the image is dynamically resized to fit the larger screen size.

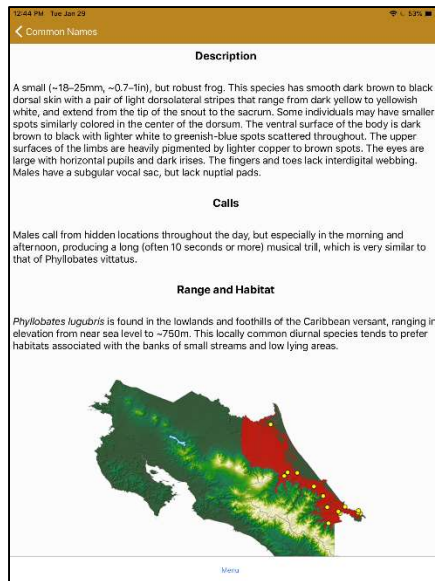


Figure 31. Screenshot of the text sections of the same species page.

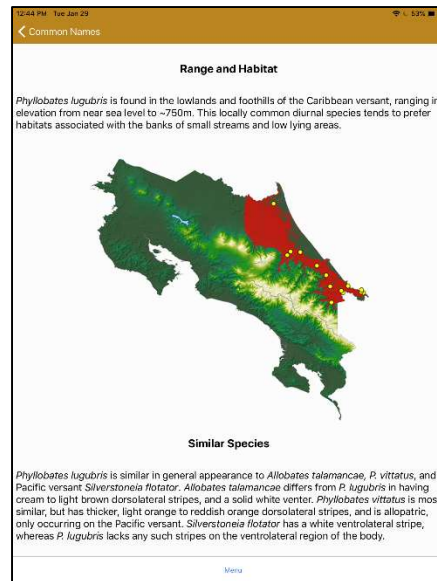


Figure 32. Screenshot of the Range & Habitat section of the same species page. Again, the map image has been resized to fit the larger screen size.

## Android Phone

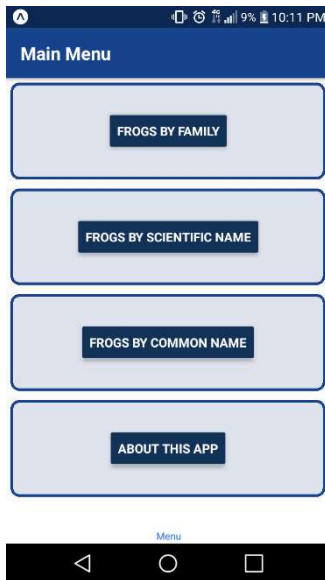


Figure 33. Screenshot of the home screen on an Android.



Figure 34. Screenshot of the sorted list of frog families.

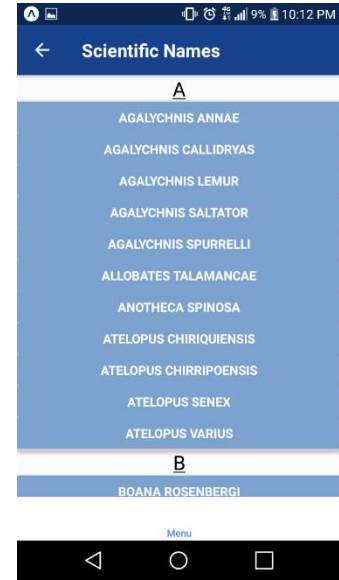


Figure 35. Screenshot of the sorted list of frogs by scientific name.



Figure 36. Screenshot of the sorted list of frogs by common name.

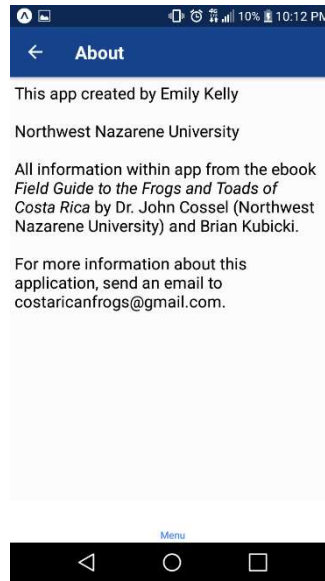


Figure 37. Screenshot of the About page.



Figure 38. Screenshot of a family description page. Note that the image has been dynamically resized to fit phone screen.





Figure 39. Screenshot of another family description page.

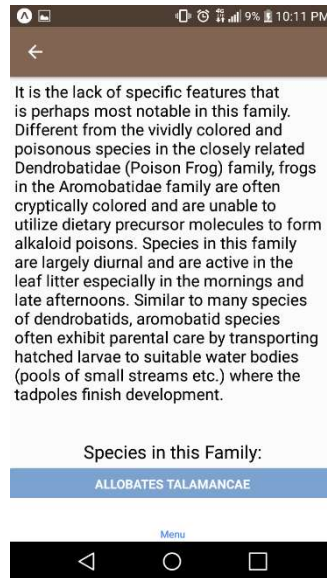


Figure 40. Screenshot of the same family page. Notice that there is a list of frogs in this family at the bottom of the page.



Figure 41. Screenshot of a species page. Notice that the color at the top of the screen matches the color on the family description page.

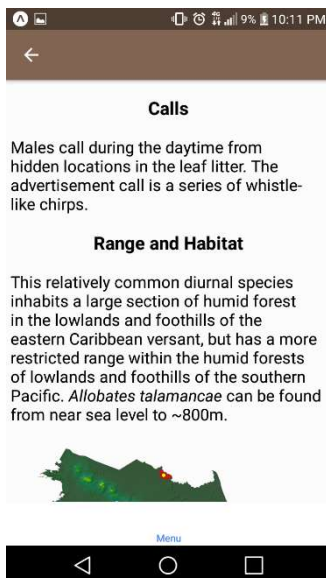


Figure 42. Screenshot of the Calls and Range & Habitat sections of the same species page.

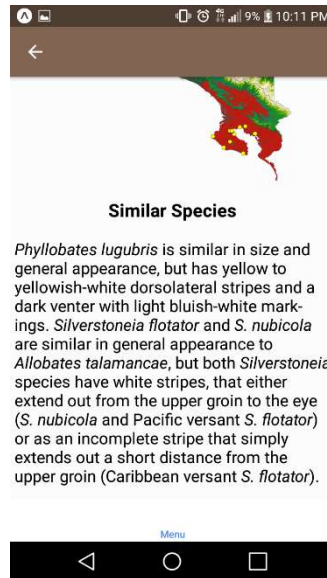


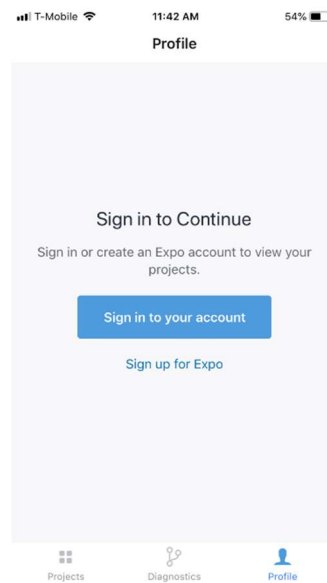
Figure 43. Screenshot of the Similar Species section of the same species page.

## Appendix B: Application User Manual

Since there is no standalone iOS app yet, a workaround must be used to view the app on iOS.

### iOS

1. Go to the Apple App store
2. Search for “Expo”. Download the app “Expo Client.”
3. Once Expo has downloaded and installed, open the application. You will need to login to an account in order to view the application on an iOS device, due to restrictions imposed on Expo by Apple. I have created a generic account for this purpose. When you open Expo, if not automatically directed to the correct page, navigate to the “Profile” tab, located in the bottom right corner of the screen. You should see a screen like the one below:

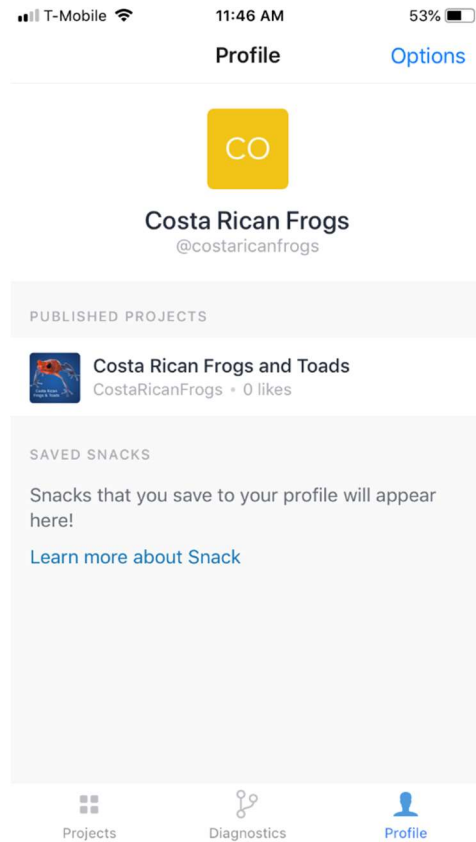


To login to the generic account, enter the following credentials:

Username: costaricanfrogs

Password: costaRica9854

- Once you have logged in to Expo, you should see the following screen:



- Touch “Costa Rican Frogs and Toads” to open the application.
- You should now be able to use my application as if it was running natively on your iOS device!

## Android

### Option 1 (Recommended):

- If the native, standalone application is wanted on an Android device, use the following instructions to download, install and use the application.
- There are two ways to get the standalone application build for download onto a device.
  - Hardcopy of the application provided by the developer
  - If a hardcopy of the application is not available, the application is stored on Google Drive and can be downloaded at the following URL:

<https://bit.ly/2CnMeBr>

Once the file has been saved to a computer, follow the directions below to transfer the application to a device for installation and use.

- To download and install the application on an Android device:
  - Connect a device to a computer with a cable

- b. Navigate to the location where the application file is saved  
*\*\*Make sure your Android device is set up to allow USB transfers\*\**
  - c. Simply drag and drop the application file (.apk extension) to the Android device. This will start the USB transfer which may take a few moments.
  - d. Once the application has finished downloading onto the device, the download must be selected and the device instructed to install the application (the file might need to be accessed via the “File Manager” or “Downloads” application in order to be installed).
    - i. This may cause the device to give an error which says applications from unknown publishers cannot be installed.
    - ii. If the application is not allowed to be installed due to it being from an unknown publisher, navigate the device Settings > Security > Device Administration and look for a slider option that says something like “Unknown sources: allow installation of apps from unknown sources”. Once this setting has been activated, the application should be allowed to install.
  - e. Allow the device a few moments to install the application. Once the installation has completed, the app “Costa Rican Frogs and Toads” should be able to be opened.
  - f. When the application is opened for the first time, there may be an error that says, “Something went wrong.” If this happens, click the refresh icon that should be in the center of the page. After refreshing, the application should work normally. If the app still does not work, it may need to be uninstalled and reinstalled.
4. Congratulations, the app should now be available for on- and offline use!

To access the application without downloading the standalone app file, please see the following instructions.

Option 2:

1. Go to the device app store and download the “Expo Client” application
2. To access the application using Expo Client for Android, there are two slight variations of access. The first option is to sign in to an account like what was listed in the steps for viewing the application on an iOS device. See above for details for this method.
3. The second option for viewing the application using Expo Client is to simply navigate to the “Explore” page (the page that is accessed by pressing the magnifying glass icon on the bottom of the screen).
4. Once on the explore screen, search for the following using the search box:  
 @costaricanfrogs
5. In the search results, either access the user profile called “Costa Rican Frogs” and open the application from the profile page, or just select the “Costa Rican Frogs and Toads” project, and that will open the application.
6. The device should now be able to be accessed as if it was natively running on the Android device. (Note: this method will only work with a network connection).

## Appendix C: Program Code

The following code is the entirety of the React Native program file for this project. All code is in a single file called App.js. This JavaScript file is one that is generated by Expo upon the creation of the project and must always have the name “App.”

```
import React from 'react';
import { StyleSheet, Text, View, Button, Image, ScrollView, Dimensions } from 'react-native';
import { createStackNavigator } from 'react-navigation';
import { createBottomTabNavigator, BottomTabBar } from 'react-navigation-tabs';

var {width} = Dimensions.get('window'); //Getting the width of the display window
var {height} = Dimensions.get('window'); //Getting the height of the display window

const styles = StyleSheet.create({
  image:{
    width: width * 1.0,
    height: height * 0.5
  },
  coverImage:{
    width: width * 1.0,
    height: height * 1.0,
  },
  titles:{ //Largest title size
    fontSize: 24,
    textAlign: "left",
    margin: 5
  },
  speciesInFamilyTitle:{ //Second-largest title size; mostly used for the
title "Species in this family" on main family pages
    fontSize: 20,
    textAlign: "center",
    margin: 5
  },
  familyTitles:{ //Styling for titles on main family pages
    fontSize: 24,
    textAlign: "center",
    color: "white", //Will be on colored backgrounds
    margin: 5,
    marginTop: 10
  },
  scientificTitles:{ //Styling for scientific names
    fontSize: 22,
    textAlign: "left",
    marginLeft: 5,
    marginTop: 10,
    marginBottom: -5,
    fontStyle: "italic",
    color: "white",
  },
  commonTitles:{ //Styling for common names
    fontSize: 18,
    textAlign: "left",
    marginLeft: 5,
    marginTop: -5,
    color: "white"
  },
},
```

```

    sectionTitles:{
      fontSize: 20,
      textAlign: "center",
      margin: 5,
      fontWeight: "bold"
    },
    paragraphs:{ //Used for body paragraphs
      fontSize: 18,
      textAlign: "left",
      margin: 5
    },
    colorBar:{ //Styling for the color bars at the top of each species page. Sets
the size of the bar. Color set in individual pages.
      width: width *1.0,
      height: height * 0.25
    },
    mainMenuItems: //Styling for main menu items (darker background)
    {
      width: width * .97,
      height: height * 0.18,
      backgroundColor: "#dee3ed",
      justifyContent: "center",
      alignItems: "center",
      borderWidth: 3,
      borderStyle: 'solid',
      borderRadius: 10,
      borderColor: '#16438B',
      margin: 5,
    },
  },
});

```

```

class HomeScreen extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#16438B',
    },
    headerTintColor: '#16438B',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{backgroundColor: "#16438B"}}>
        <View style = {{flex: 1}}>
          <View style = {{flex: 2}}>
            <Text style = {{color: "white", textAlign: "center",
fontSize: 30}}>Field Guide <Text style = {{fontSize: 16}}>to the </Text></Text><Text
style = {{color: "white", textAlign: "center", fontSize: 30}}>Frogs <Text style =
{{color: "white", textAlign: "center", fontSize: 16}}>and</Text> Toads <Text style =
{{fontSize: 16}}>of </Text></Text><Text style = {{color: "white", textAlign: "center",
fontSize: 30}}>Costa Rica {"\n"}</Text>
          </View>

          <View style = {{flex: 2, backgroundColor: "white"}}>
            <Image
              resizeMode = 'center'
              source={require('./assets/Images/homepage-
image.png')}
              style = {styles.image}
            />
          </View>
        </View>
      </ScrollView>
    );
  }
}

```

```

        <View style = {{flex: 3}}>
            <Text style = {{color: "white", textAlign: "center",
fontSize: 12}}>{"\n"}{"\n"}{"\n"}App Created by Emily Kelly</Text>
        </View>

    </View>

    </ScrollView>
    );
}
}

/*****
*****/
/**** Begin Aromobatidae Pages *****/
class Aromobatidae extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#816451',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
                <View style = {styles.colorBar, {backgroundColor: "#a27e66"}}>
                    <Text style = {styles.familyTitles}>Aromobatidae (Cryptic Forest
Frogs){"\n"}</Text>
                </View>

                <Image
                    resizeMode = 'center'

                    source={require('./assets/Images/1_Allobates_talamancae/aromobatidae-
main.png')}

                    style = {styles.image}
                />

                <Text style = {styles.paragraphs}>The species in the family Aromobatidae
were formerly contained within the Poison Frog family Dendrobatidae, until taxonomic
revision was suggested by Grant et al. in 2006. The status of this family has been
contested, but is currently recognized by Frost (2017).{"\n"}{"\n"}

                The family Aromobatidae displays its northern extent with the single
species known to occur in Costa Rica, <Text style={{fontStyle: 'italic'}}>Allobates
talamancae</Text> (Talamancan Cryptic Forest Frog). Other species in this family occur
in Panama and throughout northern South America in the Andes, the Amazon and the
Atlantic forest of Brazil.{"\n"}{"\n"}

                It is the lack of specific features that is perhaps most notable in this
family. Different from the vividly colored and poisonous species in the closely
related Dendrobatidae (Poison Frog) family, frogs in the Aromobatidae family are often
cryptically colored and are unable to utilize dietary precursor molecules to form
alkaloid poisons. Species in this family are largely diurnal and are active in the
leaf litter especially in the mornings and late afternoons. Similar to many species of
dendrobatids, aromobatid species often exhibit parental care by transporting hatched
larvae to suitable water bodies (pools of small streams etc.) where the tadpoles
finish development.{"\n"}{"\n"}
            </ScrollView>
        );
    }
}

```

```

        </Text>

        <Text style = {styles.speciesInFamilyTitle}>Species in this
Family:</Text>
        <Button
            color="#7ca2d0"
            title="Allobates talamancae"
            onPress={() => this.props.navigation.navigate('TalamancaePage')}
        />
    </ScrollView>
    );
}
}

class TalamancaePage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#816451',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
                <View style = {styles.colorBar, {backgroundColor: "#a27e66"}}>
                    <Text style={styles.scientificTitles}>Allobates
talamancae{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Talamancan Cryptic Forest
Frog{"\n"}</Text>
                </View>

                <Image
                    resizeMode = 'center'
                    source={require('./assets/Images/1_Allobates_talamancae/Allobates-
talamancae-2.png')}
                    style = {styles.image}
                />

                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A tiny to small-sized (16-25mm, 0.6-
1in), but robust frog. A pair of cream to light brown dorsolateral stripes extend from
the tip of the snout to the sacrum. The dorsum and flanks are dark brown to nearly
black. On both sides of the body, along the ventrolateral region, there are
contrasting white lines that extend from the upper lip to the groin. The arms and legs
typically are a lighter tone, often ranging in color from tan to light orange-brown.
Adult males have a black throat and chest; females have uniformly light ventral
surfaces.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
                <Text style = {styles.paragraphs}>Males call during the daytime from
hidden locations in the leaf litter. The advertisement call is a series of whistle-
like chirps.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

```



```

    <Text style = {styles.paragraphs}>This relatively common diurnal species
inhabits a large section of humid forest in the lowlands and foothills of the eastern
Caribbean versant, but has a more restricted range within the humid forests of
lowlands and foothills of the southern Pacific. <Text style={{fontStyle:
'italic'}}>Allobates talamancae</Text> can be found from near sea level to
~800m.{"\n"}</Text>

```

```

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/1_Allobates_talamancae/Allobates-
talamancae-range-2.png')}
      style = {styles.image}
    />

```

```

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Phylllobates lugubris</Text> is similar in size and general appearance, but
has yellow to yellowish-white dorsolateral stripes and a dark venter with light
bluish-white markings. <Text style={{fontStyle: 'italic'}}>Silverstoneia
flotator</Text> and <Text style={{fontStyle: 'italic'}}>S. nubicola</Text> are similar
in general appearance to <Text style={{fontStyle: 'italic'}}>Allobates
talamancae</Text>, but both <Text style={{fontStyle: 'italic'}}>Silverstoneia</Text>
species have white stripes, that either extend out from the upper groin to the eye
(<Text style={{fontStyle: 'italic'}}>S. nubicola</Text> and Pacific versant <Text
style={{fontStyle: 'italic'}}>S. flotator</Text>) or as an incomplete stripe that
simply extends out a short distance from the upper groin (Caribbean versant <Text
style={{fontStyle: 'italic'}}>S. flotator</Text>).{"\n"}</Text>

```

```

    </ScrollView>
  );
}
}
/**** End Aromobatidae Pages *****/
/*****
*****/

```

```

/*****
*****/

```

```

/**** BEGIN BUFONIDAE PAGES *****/
class Bufonidae extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#96A081',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#bcc8a2"}}>
          <Text style = {styles.familyTitles}>Bufonidae (Toads){"\n"}</Text>
        </View>

```

```

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/bufonidae-main.png')}

```

```
style = {styles.image}
/>
```

```
<Text style = {styles.paragraphs}>Bufonidae is a large family currently
containing over 560 species (Frost, 2017). In Costa Rica this family is represented by
18 species in 4 genera, <Text style={{fontStyle: 'italic'}}>Atelopus</Text> (4
species), <Text style={{fontStyle: 'italic'}}>Incilius</Text> (12 species), <Text
style={{fontStyle: 'italic'}}>Rhaebo</Text> (1 species), and <Text style={{fontStyle:
'italic'}}>Rhinella</Text> (1 species). Revisions suggested by Frost et al. (2006)
resulted in the loss of the familiar genus <Text style={{fontStyle:
'italic'}}>Bufo</Text> for Costa Rica's toads, and a recent paper by Acevedo et al.
(2016) distinguishes the Giant Toad (formerly <Text style={{fontStyle:
'italic'}}>Rhinella marina</Text>) as a new species <Text style={{fontStyle:
'italic'}}>R. horribilis</Text>.{ "\n" }{ "\n" }
```

```
Bufonids are now found on all continents except Antarctica (in the last
century Cane/Marine Toads (<Text style={{fontStyle: 'italic'}}>Rhinella sp</Text>)
were introduced to Australia). The family is widely distributed in Costa Rica,
occurring in every Province, at nearly all elevations from sea level to > 3000m on
Chirripo (<Text style={{fontStyle: 'italic'}}>Atelopus chirripoensis</Text>). Toads
can be found in all forest types in Costa Rica, ranging from dry forests of Guanacaste
to the wettest forests. They are often terrestrial, but can be semiarbooreal (<Text
style={{fontStyle: 'italic'}}>Incilius coniferus</Text>), or fossorial (ex. species of
dwarf toads). Species in this family also exhibit a variety of reproductive modes
ranging from the traditional "toad" mode of laying eggs in still water such as ponds
(many <Text style={{fontStyle: 'italic'}}>Incilius</Text> species), to stream-
associated breeding (most Atelopus species), and even terrestrial egg laying with
direct development (<Text style={{fontStyle: 'italic'}}>Incilius
chompipe</Text>).{ "\n" }{ "\n" }
```

```
Although bufonids exhibit a great diversity in morphology, most toads
have a squat body shape with short limbs and often hop or walk rather than leap. Many
species of toads have relatively dry skin that is covered with warts and tubercles.
Poison glands are concentrated in these bumps and larger glandular areas called
parotoid glands. The poisonous secretions range from peptides, alkaloids and steroids
with varying levels of physiological impacts on organisms ingesting these compounds.
Toads vary greatly in size with an order of magnitude difference in size between the
smallest (~20mm) to the largest (~20cm) species. Features that toad species share are
the lack of teeth in adults, the presence of Bidder's organs (regions on the testes of
males), and a sinistral spiracle on tadpoles.{ "\n" }{ "\n" }
```

```
</Text>
```

```
<Text style = {styles.speciesInFamilyTitle}>Species in this
Family:</Text>
<Button color = "#7ca2d0"
title="Atelopus chiriquiensis"
onPress={() =>
this.props.navigation.navigate('ChiriquiensisPage')}
/>
<Button color = "#7ca2d0"
title="Atelopus chirripoensis"
onPress={() =>
this.props.navigation.navigate('ChirripoensisPage')}
/>
<Button color = "#7ca2d0"
title="Atelopus senex"
onPress={() => this.props.navigation.navigate('SenexPage')}
/>
<Button color = "#7ca2d0"
title="Atelopus varius"
onPress={() => this.props.navigation.navigate('VariusPage')}
/>
```

```

<Button color = "#7ca2d0"
        title="Incilius aucoine"
        onPress={() => this.props.navigation.navigate('AucoinePage')}
    />
<Button color = "#7ca2d0"
        title="Incilius chompipe"
        onPress={() => this.props.navigation.navigate('ChompipePage')}
    />
<Button color = "#7ca2d0"
        title="Incilius coccifer"
        onPress={() => this.props.navigation.navigate('CocciferPage')}
    />
<Button color = "#7ca2d0"
        title="Incilius coniferus"
        onPress={() => this.props.navigation.navigate('ConiferusPage')}
    />
<Button color = "#7ca2d0"
        title="Incilius epioticus"
        onPress={() => this.props.navigation.navigate('EpioticusPage')}
    />
<Button color = "#7ca2d0"
        title="Incilius fastidiosus"
        onPress={() => this.props.navigation.navigate('FastidiosusPage')}
    />
<Button color = "#7ca2d0"
        title="Incilius guanacaste"
        onPress={() => this.props.navigation.navigate('GuanacastePage')}
    />
<Button color = "#7ca2d0"
        title="Incilius holdridgei"
        onPress={() => this.props.navigation.navigate('HoldridgeiPage')}
    />
<Button color = "#7ca2d0"
        title="Incilius luetkenii"
        onPress={() => this.props.navigation.navigate('LuetkeniiPage')}
    />
<Button color = "#7ca2d0"
        title="Incilius melanochlorus"
        onPress={() =>
this.props.navigation.navigate('MelanochlorusPage')}
    />
<Button color = "#7ca2d0"
        title="Incilius periglenes"
        onPress={() => this.props.navigation.navigate('PeriglenesPage')}
    />
<Button color = "#7ca2d0"
        title="Incilius valliceps"
        onPress={() => this.props.navigation.navigate('VallicepsPage')}
    />
<Button color = "#7ca2d0"
        title="Rhaebo haematiticus"
        onPress={() => this.props.navigation.navigate('HaematiticusPage')}
    />
<Button color = "#7ca2d0"
        title="Rhinella horribilis"
        onPress={() => this.props.navigation.navigate('HorribilisPage')}
    />
</ScrollView>
);
}
}

```

```

class ChiriquiensisPage extends React.Component {

```

```

    static navigationOptions = {
headerStyle: {
  backgroundColor: '#96A081',
},
headerTintColor: '#fff',
headerTitleStyle: {
  fontWeight: 'bold',
},
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
      <View style = {styles.colorBar, {backgroundColor: "#bcc8a2"}}>
        <Text style = {styles.scientificTitles}>Atelopus
chiriquiensis{'\n'}</Text>
        <Text style = {styles.commonTitles}>Chiriqui Harlequin
Frog{'\n'}</Text>
      </View>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/2_Atelopus_chiriquiensis/Atelopus-
chiriquiensis-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Description{'\n'}</Text>
      <Text style = {styles.paragraphs}>A medium-sized frog (~28-34mm, 1.1-
1.3in males; ~36-49mm, ~1.4-1.9in females). The dorsal coloration differs between the
sexes, with males usually a solid light green, powder blue, light tan, or rust. Female
coloration is variable but usually consists of contrasting stripes or reticulations of
black and orange-red. The parotoid glands are low profile and elongated, and no
tympanic membranes are present. The eye has a horizontal pupil and a gold iris. The
ventral surfaces of the body and the limbs are light colored with dark mottling. The
digits lack expanded terminal pads and the fingers have limited webbing. Finger I is
short and stubby as are the toes I-II. The toes have moderate webbing. The snout has a
strongly sloping profile. Males have brown nuptial pads and a subgular vocal
sac.{'\n'}</Text>

      <Text style = {styles.sectionTitles}>Calls{'\n'}</Text>
      <Text style = {styles.paragraphs}>Males are territorial and call from low
perches along streams, producing a very short, buzz-like whistle or peep
"wheezzt".{'\n'}</Text>

      <Text style = {styles.sectionTitles}>Range and Habitat{'\n'}</Text>
      <Text style = {styles.paragraphs}>This formerly common, diurnal species
has disappeared from its historical sites within Costa Rica and may be extinct. Any
encounters with this species should be documented. <Text style={{fontStyle:
'italic'}}>Antelopus chiriquiensis</Text> were usually found in association with
streams in moist forests of the Talamanca. The elevational range for <Text
style={{fontStyle: 'italic'}}>A. chiriquiensis</Text> is ~1,100-2,500m.{'\n'}</Text>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/2_Atelopus_chiriquiensis/Atelopus-
chiriquiensis-range-2.png')}
        style = {styles.image}
      />

```

```

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Atelopus chiriquiensis</Text> is very similar to other <Text
style={{fontStyle: 'italic'}}>Atelopus</Text> species in Costa Rica. However, <Text
style={{fontStyle: 'italic'}}>A. varius</Text> has smoother skin and inconspicuous
dorsal glands, <Text style={{fontStyle: 'italic'}}>A. senex</Text> has very pronounced
dorsal glands, and <Text style={{fontStyle: 'italic'}}>A. chirripoensis</Text> is only
known from a single specimen from Cerro Chirripo Grande.{"\n"}</Text>

    </ScrollView>
  );
}
}

class ChirripoensisPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#96A081',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#bcc8a2"}}>
          <Text style = {styles.scientificTitles}>Atelopus
chirripoensis{"\n"}</Text>
          <Text style = {styles.commonTitles}>Chirripo Harlequin
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/3_Atelopus_chirripoensis/Atelopus-
chirripoensis-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A large toad (~60-85mm, ~2.4- 3.4in).
The dorsal coloration of the only known specimen (preserved) is a solid dark brown
color. The venter was a pale, reddish orange color in life. Overall, the skin is
smooth, but there are slight, raised glands/tubercles scattered on the dorsolateral
surfaces. The snout is rounded, and the eyes are medium-sized with a fleshy ridge
extending from the snout and over the upper eyelid. There are no tympanic membranes;
however, a glandular ridge extends from the posterior of the eye to the shoulder
(insertion of the arm). The arms and legs are relatively short and stout. The digits
are robust, and lack expanded terminal tips. The fingers lack webbing, but the toes
have extensive, thick webbing.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Unknown{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This diurnal species is only known from
the subalpine paramo habitat of Cerro Chirripo Grande. The single specimen was

```

collected from a breeding congregation in an ephemeral pond at an elevation of ~3,400-3,500m. Despite extensive efforts, the species has not been detected since the original specimen was collected in 1980. The species is likely extinct, thus any encounters with this species are of scientific importance and should be carefully documented.

```
        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/3_Atelopus_chirripoensis/Atelopus-
chirripoensis-range-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Atelopus chirripoensis</Text> is quite unique and it is unlikely any other
species of anuran within Costa Rica will be confused with <Text style={{fontStyle:
'italic'}}>A. chirripoensis</Text>. Other <Text style={{fontStyle:
'italic'}}>Atelopus</Text> species generally lack the solid dark brown dorsal
coloration, and all have snouts that are more pointed and sloping in
profile.{"\n"}</Text>

      </ScrollView>
    );
  }
}

class SenexPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#96A081',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#bcc8a2"}}>
          <Text style = {styles.scientificTitles}>Atelopus
senex{"\n"}</Text>
          <Text style = {styles.commonTitles}>Wizened Harlequin
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/4_Atelopus_senex/Atelopus-senex-
Emma-Mooring-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.paragraphs}>(Photo by Emma Mooring)</Text>

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized toad (~28-32mm, ~1.1-
1.3in males; ~30-43mm, ~ 1.2-1.7in females). The dorsal coloration is variable,
```

ranging from blue-gray to black in males, and similar ground color, but often with light areas of yellow, green, and/or orange in females. The venter is gray and may have dark markings. The skin is smooth, but there are very pronounced, raised glandular ridges extending from the scapulae to the sacrum, as well as glandular areas on the snout, head, elbows, knees and heels. The snout is sloping in profile. There are no tympanic membranes. An elongated parotoid gland extends from the posterior margin of the eye. The limbs are relatively long and slender. The digits lack expanded terminal tips, and the fingers lack webbing, but the toes have moderate, thick webbing. Males have brown nuptial pads and a subgular vocal sac.

<Text style = {styles.sectionTitles}>Calls

Males call from perches in or near streams, producing a short buzzing trill.

<Text style = {styles.sectionTitles}>Range and Habitat

This formerly common, diurnal species has disappeared from its historical sites within Costa Rica and may be extinct. Any encounters with this species should be documented. *Atelopus senex* were usually found in association with streams in moist forests of the Central Volcanic range and northern Talamancas. The elevational range for *A. senex* is ~1,250-2,200m.

<Image

resizeMode = 'contain'  
 source={require('./assets/Images/4\_Atelopus\_senex/Atelopus-senex-range-2.png')}  
 style = {styles.image}  
 />

<Text style = {styles.sectionTitles}>Similar Species

*Atelopus senex* is most likely to be confused with other *Atelopus* species. The most similar in appearance is *A. chiriquiensis*. Males may have similar solid bluish dorsal coloration, but the glandular areas in *A. chiriquiensis* are much more modest. The glandular protuberances are absent in *A. varius*.

</ScrollView>

);  
 }  
 }

class VariusPage extends React.Component {

static navigationOptions = {  
 headerStyle: {  
 backgroundColor: '#96A081',  
 },  
 headerTintColor: '#fff',  
 headerTitleStyle: {  
 fontWeight: 'bold',  
 },  
};

render() {  
 return (

<ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0}}>  
 <View style = {styles.colorBar, {backgroundColor: "#bcc8a2}}>  
 <Text style = {styles.scientificTitles}>Atelopus  
 varius  
 <Text style = {styles.commonTitles}>Variable Harlequin  
 Frog

```

</View>

<Image
  resizeMode = 'contain'
  source={require('./assets/Images/5_Atelopus_varius/Atelopus-
varius-Brian-Kubicki-2.png')}
  style = {styles.image}
/>
<Text style = {styles.paragraphs}>(Photo by Brian Kubicki)</Text>

<Text style = {styles.sectionTitles}>Description{"\n"}</Text>
<Text style = {styles.paragraphs}>A medium-sized toad (~27-39mm, ~1.1-
1.5in males; ~33-48mm, ~1.3- 1.9in females). Coloration is variable, consisting of a
red, orange, yellow, or yellowish-green ground color with varying amounts of black
blotches and/or spots, both dorsally and ventrally. The skin is smooth. The snout is
pointed and sloping in profile. The eyes have horizontal pupils and a light green
iris. There are no tympanic membranes. The arms and legs are relatively long and
slender. The digits lack expanded terminal tips, and the fingers lack webbing, but the
toes have moderate, thick webbing. Males have brown nuptial pads and a subgular vocal
sac.{"\n"}</Text>

<Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
<Text style = {styles.paragraphs}>Males are territorial and call from low
perches along streams, producing a short, high pitched "peep" or "chiiip" that has a
subtle rapid, buzz-like quality.{"\n"}</Text>

<Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
<Text style = {styles.paragraphs}>This formerly common, diurnal species
has disappeared from nearly all of its historical sites within Costa Rica. It was
feared to be extinct until small populations were rediscovered in their southern range
on the Pacific slope. Any encounters with this species should be documented. <Text
style={{fontStyle: 'italic'}}>Atelopus varius</Text> are usually found in association
with fast-flowing, small streams in moist forests, formerly at a wide range of
elevations from near sea level to ~2,100m.{"\n"}</Text>

<Image
  resizeMode = 'contain'
  source={require('./assets/Images/5_Atelopus_varius/Atelopus-
varius-range-2.png')}
  style = {styles.image}
/>

<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
<Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Atelopus varius</Text> is most likely to be confused with other <Text
style={{fontStyle: 'italic'}}>Atelopus</Text> species. <Text style={{fontStyle:
'italic'}}>Atelopus senex</Text> and <Text style={{fontStyle: 'italic'}}>A.
chiriquiensis</Text> are most similar in form, but both have modest to pronounced
glandular areas on the dorsum. <Text style={{fontStyle: 'italic'}}>Atelopus
chiripoensis</Text> is much larger and presumably has a solid, dark colored
dorsum.{"\n"}</Text>

</ScrollView>
);
}
}

class AucoinePage extends React.Component {
  static navigationOptions = {
    headerStyle: {

```



```

        backgroundColor: '#864F2F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
        fontWeight: 'bold',
    },
    };
render() {
    return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
            <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>
                <Text style = {styles.scientificTitles}>Incilius
aucoine{"\n"}</Text>
                <Text style = {styles.commonTitles}>Rainforest Toad{"\n"}</Text>

            </View>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/6_Incilius_aucoinae/Incilius-
aucoinae-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A medium to large-sized toad (~40-65mm,
~1.6-2.6in males; ~65-105mm, 2.6-4.1in females). The skin is covered with tubercles of
varying sizes, forming rows that extend from the parotoid glands to the groin. The
parotoid glands are triangular and situated above the dorsolateral row of tubercles. A
supratympanic fold extends from the eye to the parotoid gland. Dorsal coloration
consists of browns and grays often with a pale mid-dorsal stripe. The limbs are marked
with dark transverse bands. The venter is light colored and males may have a dark gray
throat and chest. The eyes have horizontal pupils and gold irises with dark
reticulations. Fingers are long and slender and lack webbing. The toes are also long,
but have limited webbing. Males have brown nuptial pads and a subgular vocal
sac.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>The call for this species has not been
formally described, but it is a short trill, similar to the call of the closely
related Incilius melanochlorus.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}>This common nocturnal species is found
in moist to wet forests of the Pacific versant, with a disjunct population occurring
in the Central Volcanic region. During the breeding season (dry season) they are found
in or near slow moving streams and rivers with rocky substrates at elevations ranging
from near sea level to ~750m.{"\n"}</Text>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/6_Incilius_aucoinae/Incilius-
aucoinae-range-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius aucoinae</Text> may be confused with other toads. The most similar
is <Text style={{fontStyle: 'italic'}}>I. melanochlorus</Text>, however they are
allopatric occurring on the Atlantic versant, and have a transverse fold between the
cranial crests (absent in <Text style={{fontStyle: 'italic'}}>I. aucoinae</Text>).

```

<Text style={{fontStyle: 'italic'}}>Incilius coccifer</Text> and <Text style={{fontStyle: 'italic'}}>I. valliceps</Text> both have oval parotoid glands. <Text style={{fontStyle: 'italic'}}>Incilius luetkenii</Text> has dark, keratinized cranial crests and <Text style={{fontStyle: 'italic'}}>Rhinella horribilis</Text> has huge parotoid glands.{"\n"}</Text>

```

    </ScrollView>
  );
}
}

class ChompipePage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#864F2F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>
          <Text style = {styles.scientificTitles}>Incilius
chompipe{"\n"}</Text>
          <Text style = {styles.commonTitles}>Central Volcanic Dwarf
Toad{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/7_Incilius_chompipe/Incilius-
chompipe-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small toad (~22-34mm, 0.9-1.3in), but
robust and highly tuberculate with nearly fully webbed hands and feet. The dorsal skin
has an overall rough texture with numerous pointed to rounded tubercles. Along the
upper lateral surface of the body there is a row of large pointed to rounded tubercles
that extend from the groin to the posterior edge of the raised triangular parotoid
gland. The snout is pointed in both dorsal and lateral views. The coloration of the
dorsum is typically a mixture of different shades of brown, but some individuals also
have lighter orange blotches and tubercles. Finger I is completely embedded in pad-
like webbing.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call for this species
is unknown.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius chompipe</Text> is endemic to Costa Rica, and only known to
inhabit cloud forests from ~1,400 to 2,250m within the Central Volcanic Range. This
uncommon species had only been reported from the slopes of the Barva and Irazu
volcanoes, but was also recently found along the eastern slopes of the Turrialba
Volcano at 2,250m (B. Kubicki, pers. observ.). Very little is known about the biology

```

of *I. chompipe* but captive reproduction demonstrated they have direct development, and it is now known that they utilize axillary amplexus (B. Kubicki, pers. observ.).

```
<Image
  resizeMode = 'contain'
  source={require('./assets/Images/7_Incilius_chompipe/Incilius-
chompipe-range-2.png')}
  style = {styles.image}
/>

<Text style = {styles.sectionTitles}>Similar Species</Text>
<Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius epioticus</Text> and <Text style={{fontStyle: 'italic'}}>Incilius
guanacaste</Text> are the closest related taxa and are very similar to <Text
style={{fontStyle: 'italic'}}>I. chompipe</Text> morphologically. Both <Text
style={{fontStyle: 'italic'}}>I. epioticus</Text> and <Text style={{fontStyle:
'italic'}}>I. guanacaste</Text> are known to be allopatrically distributed from <Text
style={{fontStyle: 'italic'}}>I. chompipe</Text>. <Text style={{fontStyle:
'italic'}}>Incilius epioticus</Text> is known to inhabit the Talamancan mountains,
while <Text style={{fontStyle: 'italic'}}>I. guanacaste</Text> is only known from the
Miravalles and Rincón de la Vieja Volcanoes.</Text>

</ScrollView>
);
}
}

class CocciferPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#864F2F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>
          <Text style = {styles.scientificTitles}>Incilius
coccifer</Text>
          <Text style = {styles.commonTitles}>Dry Forest Toad</Text>
        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/8_Incilius_coccifer/Incilius-
coccifer-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description</Text>
        <Text style = {styles.paragraphs}>A medium to large-sized toad (~45-65mm,
~1.8-2.6in, males; ~53-83mm 2.1-3.3in, females). The skin is covered in spiny
tubercles (especially laterally). Dorsal coloration is tan to brown with darker
blotches. A light-colored interorbital bar and a vertebral stripe occur, as do
dorsolateral stripes extending from the parotoid glands to the groin. The ventral
```

color is white with faint small dark markings. Cranial crests are present, as are supratympanic folds over visible tympanic membranes. The parotoid glands are oval. Pupils are horizontal and the iris is gold with dark reticulations. The limbs and digits are stout. Fingers lack webbing and toes have limited webbing. Males have brown nuptial pads and subgular vocal sac.

```
<Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
<Text style = {styles.paragraphs}>During the rainy season, males call
from flooded fields, ponds and puddles producing a buzz-like call.{"\n"}</Text>

<Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
<Text style = {styles.paragraphs}>This common nocturnal species is found
in a variety of habitats ranging from forests, fields, open areas and even urban
locations. They occur on the Pacific versant and in the Central Valley. The
elevational range is from near sea level to ~1,400m.{"\n"}</Text>
```

```
<Image
  resizeMode = 'contain'
  source={require('./assets/Images/8_Incilius_coccifer/Incilius-
coccifer-range-2.png')}
  style = {styles.image}
/>
```

```
<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
<Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius coccifer</Text> may be confused with other toads. The most similar
is <Text style={{fontStyle: 'italic'}}>I. valliceps</Text>, but they lack the light
orbital bar and have a distinct row or enlarged tubercles laterally. <Text
style={{fontStyle: 'italic'}}>Incilius aucoinae </Text>and <Text style={{fontStyle:
'italic'}}>I. melanochrous</Text> both have smaller, triangular parotoid glands. <Text
style={{fontStyle: 'italic'}}>Incilius luetkenii</Text> has dark, keratinized cranial
crests and <Text style={{fontStyle: 'italic'}}>Rhinella horribilis</Text> has huge
parotoid glands.{"\n"}</Text>
```

```
</ScrollView>
);
}
}

class ConiferusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#864F2F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>
          <Text style = {styles.scientificTitles}>Incilius
coniferus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Green Climbing
Toad{"\n"}</Text>
        </View>

        <Image
```

```

        resizeMode = 'contain'
        source={require('./assets/Images/9_Incilius_coniferus/Incilius-
coniferus-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A moderate to large-sized toad (~53-
72mm, ~2.1-2.8in males; 76-94mm, 3-3.7in females). The skin is covered in scattered
tubercles that may have black keratinized tips. A dorsolateral row of enlarged
tubercles extends from the parotoid gland to the groin. Dorsal ground coloration is
highly variable, often ranging from tan, brown, yellow to green, with scattered darker
blotches. The venter is light colored with scattered, small dark markings. Cranial
crests are present as are supratympanic folds over large, visible tympanic membranes.
The parotoid glands are usually small. The snout tapers anteriorly and the evident
nostrils are protuberant. Pupils are horizontal and the iris varies in color but has
fine, dark reticulations. The limbs are long and the hands are large, with long
fingers (finger II longer than finger I). Fingers lack webbing, but toes have limited
to moderate webbing. Males have dark nuptial pads and a subgular sac.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>During the dry season, males call from
pools and puddles, producing a very long, pulsating trill.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>This common nocturnal species is found
in moist to wet forests at elevations ranging from near sea level to ~1,700m. As their
common name suggests, they may be found climbing in lower vegetation. They occur on
both the Pacific and Atlantic versants, but are absent from the dry forests of the
Guanacaste and from the Central Valley.{"\n"}</Text>

    <Image
        resizeMode = 'contain'
        source={require('./assets/Images/9_Incilius_coniferus/Incilius-
coniferus-range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius coniferus</Text> may be confused with other toads; however, other
toads are rarely green in color. The most similar is <Text style={{fontStyle:
'italic'}}>I. valliceps</Text>, but they have much larger parotoid glands. <Text
style={{fontStyle: 'italic'}}>Incilius aucoinae</Text> and <Text style={{fontStyle:
'italic'}}>I. melanochrous</Text> both have triangular parotoid glands. <Text
style={{fontStyle: 'italic'}}>Incilius luetkenii</Text> has shorter fingers, and <Text
style={{fontStyle: 'italic'}}>Rhinella horribilis</Text> has huge parotoid
glands.{"\n"}</Text>

    </ScrollView>
  );
}
}

class EpioticusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#864F2F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',

```

```

    },
    };
    render() {
    return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
            <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>
                <Text style = {styles.scientificTitles}>Incilius
epioticus{"\n"}</Text>
                <Text style = {styles.commonTitles}>Talamancan Dwarf
Toad{"\n"}</Text>
            </View>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/10_Incilius_epioticus/Incilius-
epioticus-Victor-Acosta-2.png')}
                style = {styles.image}
            />
            <Text style = {styles.paragraphs}>(Photo by Victor Acosta)</Text>

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A small to medium-sized toad (~23-37mm,
~0.9-1.5in). The dorsal coloration is brown to brownish-gray, occasionally with orange
or red spots, and the venter is a lighter shade of brown. The skin is densely covered
in small tubercles producing a rough appearance. The snout is pointed and cranial
crests extend from the tip of the snout posteriorly over the eyes, to the rounded
parotoid glands. Tympanic membranes are absent. The eyes have a horizontal pupil and
brown or golden iris. A row of tubercles extends from the parotoid gland to the groin.
The hands and feet have thick webbing. Males have light colored nuptial pads, but lack
a vocal sac.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>The advertisement call for this species
is unknown.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius epioticus</Text> is a diurnal toad that is rarely encountered.
They occur on the Atlantic versant of the Talamancas at elevations ranging from ~1,700
to 2,050m. They are found in mature, moist to wet forests with deep leaf litter in
which they hide, and are likely fossorial much of the year.{"\n"}</Text>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/10_Incilius_epioticus/Incilius-
epioticus-range-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius chompipe</Text> and <Text style={{fontStyle: 'italic'}}>Incilius
guanacaste</Text> are closely related and very similar in appearance to <Text
style={{fontStyle: 'italic'}}>I. epioticus</Text> and could be very difficult to
distinguish. However, both <Text style={{fontStyle: 'italic'}}>I. chompipe</Text> and
<Text style={{fontStyle: 'italic'}}>I. guanacaste</Text> are allopatrically
distributed from <Text style={{fontStyle: 'italic'}}>I. epioticus</Text>. <Text
style={{fontStyle: 'italic'}}>Incilius chompipe</Text> is known to inhabit the Central
Volcanic mountains, while <Text style={{fontStyle: 'italic'}}>I. guanacaste</Text> is
only known from the Miravalles and Rincón de la Vieja Volcanoes.{"\n"}</Text>

```

```

        </ScrollView>
    );
}
}

class FastidiosusPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#864F2F',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
                <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>
                    <Text style = {styles.scientificTitles}>Incilius
fastidiosus{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Disdainful Toad{"\n"}</Text>
                </View>

                <Image
                    resizeMode = 'contain'
                    source={require('./assets/Images/11_Incilius_fastidiosus/Incilius-
fastidiosus-Duellman-Moorring-2.png')}
                    style = {styles.image}
                />
                <Text style = {styles.paragraphs}>(Photo by Duellman and Moorring)</Text>

                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A medium-sized toad (~43-60mm, ~1.7-
2.4in). They have numerous well-developed warts on the body and limbs giving them a
bumpy texture. The warts and tubercles are pale orangish-tan contrasting with the dark
brown ground color. Enlarged warts form a lateral row. Large cranial crests extend
from the snout to the posterior margin of the eye, and abut oval parotoid glands. They
lack tympanic membranes. The eyes are large with a horizontal pupil and a dark iris.
The ventral surface of the body is granular and darkly colored with light mottling.
Webbing exists between the fingers as does a thick webbing between the toes. Males
lack vocal sacs but have pale nuptial pads.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
                <Text style = {styles.paragraphs}>Males do not produce advertisement
calls. Nevertheless, during breeding congregations males may produce a quiet trill as
a release call when amplexed by another male.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
                <Text style = {styles.paragraphs}>The diurnal species occurs in
premontane and montane cloud forests of the Talamancas at elevations between ~750-
2,400m. They may be found in pools or stream edges during the brief breeding period
following the first heavy rains of the year (April and May). Other times of the year
they occur in leaf litter. <Text style={{fontStyle: 'italic'}}>Incilius
fastidiosus</Text> has experienced severe declines and may now be extinct. Any
encounters with this species should be documented.{"\n"}</Text>

                <Image
                    resizeMode = 'contain'

```

```

        source={require('./assets/Images/11_Incilius_fastidiosus/Incilius-
fastidiosus-range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius fastidiosus</Text> is most likely to be confused with closely
related <Text style={{fontStyle: 'italic'}}>I. holdridgei</Text>. They may be
distinguished by the more abundant and pronounced lateral warts, and more developed
cranial crests on <Text style={{fontStyle: 'italic'}}>I. fastidiosus</Text>. Further,
the species are allopatric, with <Text style={{fontStyle: 'italic'}}>I.
holdridgei</Text> occurring in the Central Volcanics.{"\n"}</Text>

    </ScrollView>
  );
}
}

class GuanacastePage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#864F2F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>
          <Text style = {styles.scientificTitles}>Incilius
guanacaste{"\n"}</Text>
          <Text style = {styles.commonTitles}>Guanacaste Mountain Dwarf
Toad{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/12_Incilius_guanacaste/Incilius-
guanacaste-Juan-Abarca-2.png')}
          style = {styles.image}
        />
        <Text style = {styles.paragraphs}>(Photo by Juan Abarca)</Text>

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small-sized toad (~20-25mm, ~0.8-1in)
with a robust body and short limbs. The dorsal coloration is brown to brownish-gray,
occasionally with pale spots, especially on the hands and feet. The venter is also
dark gray or brown. The skin (dorsal and ventral) is covered in small, rounded
tubercles producing a rough appearance, and an indistinct lateral row of tubercles is
present on each side. The snout is pointed and cranial crests extend from the tip of
the snout posteriorly over the eyes to the tiny, triangular parotoid glands. Tympanic
membranes are absent. The eyes have a horizontal pupil and a brown iris. The hands and
feet have a thick webbing with finger I entirely encompassed in webbing and all of the
toes fully webbed. Males lack both a vocal sac and nuptial pads.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>

```



```
    <Text style = {styles.paragraphs}>The advertisement call for this species is unknown.{ "\n" }</Text>
```

```
    <Text style = {styles.sectionTitles}>Range and Habitat{ "\n" }</Text>
```

```
    <Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Incilius guanacaste</Text> is a diurnal toad that is rarely encountered. They occur on the Miravalles and Rincon de la Vieja Volcanoes at elevations ranging from ~1,700 to 2,000m. They are found in mature premontane and montane rainforests with deep leaf litter in which they hide. They are likely fossorial much of the year.{ "\n" }</Text>
```

```
    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/12_Incilius_guanacaste/Incilius-guanacaste-range-2.png')}
      style = {styles.image}
    />
```

```
    <Text style = {styles.sectionTitles}>Similar Species{ "\n" }</Text>
```

```
    <Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Incilius guanacaste</Text> may be confused with closely related <Text style={{fontStyle: 'italic'}}>I. chompipe</Text> and <Text style={{fontStyle: 'italic'}}>I. epioticus</Text>. <Text style={{fontStyle: 'italic'}}>Incilius chompipe</Text> has much larger, and often more pointed tubercles, including a more distinct lateral row. <Text style={{fontStyle: 'italic'}}>Incilius epioticus</Text> differs in also having larger tucles, including a lateral row, as well as larger oval parotoid glands. All three species are allopatrically distributed. <Text style={{fontStyle: 'italic'}}>Incilius epioticus</Text> occurs in the Talamancas, whereas <Text style={{fontStyle: 'italic'}}>I. chompipe</Text> occurs in the Central Volcanic mountains.{ "\n" }</Text>
```

```
  </ScrollView>
```

```
  );
}
}
```

```
class HoldridgeiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#864F2F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>
          <Text style = {styles.scientificTitles}>Incilius
holdridgei{ "\n" }</Text>
          <Text style = {styles.commonTitles}>Holdridge's Toad{ "\n" }</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/13_Incilius_holdridgei/Incilius-holdridgei-Victor-Acosta-2.png')}
          style = {styles.image}
        />
      </ScrollView>
    );
  }
}
```

```

    />
    <Text style = {styles.paragraphs}>(Photo by Victor Acosta)</Text>

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A medium-sized toad (~32-53mm, ~1.3-
2.1in). The skin has a rough or bumpy appearance due to the numerous tubercles of
various sizes. The eyes have horizontal pupils and a dark/black iris. Tympanic
membranes are absent. Slight cranial crests (supraocular ridges) extend posteriorly to
the small round parotoid glands. The dorsal coloration is black or brown with pale red
or orangish spots associated with tubercles. A lateral row of large tubercles extend
from the eye to the groin and are often marked with a pale line. The venter is
granular and is mottled with black and cream blotches. The limbs are similar in
length, and the hands and feet are webbed. The thick webbing on the toes is moderate,
whereas the fingers have limited webbing. Males have light nuptial pads but lack a
vocal sac.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Not known to call.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>This rare species occurs in lower
montane rainforests of the Central Volcanics from ~1,800 to 2,200m. They are diurnal
and may be found on the forest floor or under leaf litter and surface debris. Much of
the year they are fossorial and usually found on the surface only during the brief
mating period in the early rainy season (April to May). This species was believed to
be extinct until rediscovered in 2010. Any encounters with the species should be
documented.{"\n"}</Text>

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/13_Incilius_holdridgei/Incilius-
holdridgei-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius holdridgei</Text> may be confused with the closely related <Text
style={{fontStyle: 'italic'}}>Incilius fastidiosus</Text>. However, <Text
style={{fontStyle: 'italic'}}>I. fastidiosus</Text> has much more pronounced cranial
crests and is larger in overall size. Further, <Text style={{fontStyle: 'italic'}}>I.
fastidiosus</Text> is allopatric, occurring in the eastern Talamancas.{"\n"}</Text>

  </ScrollView>
);
}
}

class LuetkeniiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#864F2F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>

```

```

        <Text style = {styles.scientificTitles}>Incilius
luetkenii{"\n"}</Text>
        <Text style = {styles.commonTitles}>Yellow Toad{"\n"}</Text>

    </View>

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/14_Incilius_luetkenii/Incilius-
luetkenii-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A large-sized toad (77-107mm, ~3-
4.2in). The dorsal skin is densely covered with rounded tubercles giving a bumpy
appearance. The dorsal coloration is variable and differs between males and females.
Breeding males having a bright yellow color which can darken to a yellowish-brown
(metachrosis). Females are often brown to reddish brown dorsally (sometimes
yellowish), usually with a light vertebral stripe and beige lateral stripes. Large
cranial crests and labial crests with black, keratinized ridges are present. The
tympanic membrane is easily visible below a supratympanic ridge that abuts a small
parotoid gland. The eyes have horizontal pupils and bronze-copper irises with dark
reticulations. The limbs are stout. Fingers lack webbing but the toes are moderately
webbed. The venter is granular and white to cream colored. Males have a subgular vocal
sac and dark nuptial pads.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call from the edges of temporary
ponds, ditches, and pools of slow-moving streams during the beginning of the rainy
season (May to June). The call is a short, pulsating, low-pitched trill
"brrrrrt."{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>This nocturnal species is common in the
Guanacaste region, inhabiting dry forests, wetlands, and disturbed areas (pastures,
agricultural areas). The elevational range for <Text style={{fontStyle:
'italic'}}>Incilius luetkenii</Text> is from near sea level to ~1,150m.{"\n"}</Text>

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/14_Incilius_luetkenii/Incilius-
luetkenii-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius luetkenii</Text> breeding males are distinct and not likely to be
confused with other species. However, non-yellow forms may be confused with other
large <Text style={{fontStyle: 'italic'}}>Incilius species</Text>. <Text
style={{fontStyle: 'italic'}}>Incilius coccifer</Text> differs in having a pale
interorbital bar middorsal pinstripe, and lacking the keratinized cranial crests.
<Text style={{fontStyle: 'italic'}}>Incilius aucoinae</Text> and <Text
style={{fontStyle: 'italic'}}>I. melanochlorus</Text> differ in having small
triangular parotoid glands and lacking the keratinized cranial crests. <Text
style={{fontStyle: 'italic'}}>Incilius valliceps</Text> has much larger parotoid
glands and a lateral row of large tubercles.{"\n"}</Text>

    </ScrollView>
  );

```

```

    }
  }

class MelanochlorusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#864F2F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f9f9f9"}}>
        <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>
          <Text style = {styles.scientificTitles}>Incilius
melanochlorus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Wet Forest Toad{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/15_Incilius_melanochlorus/Incilius-
melanochlorus-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium to large-sized toad (~43-65mm,
~2.4-3.4in males; ~65-103mm, ~2.6-4.1in females). The skin is covered with tubercles
of varying sizes, forming two rows extending from the parotoid glands to the groin.
The parotoid glands are triangular and situated above the dorsolateral row of
tubercles. A supratympanic fold extends between the tympanic membrane and the parotoid
gland, and a transverse folds extend between the cranial crests. The dorsal coloration
consists of browns and grays, often with a light-toned middorsal stripe. The limbs are
marked with dark transverse bands. The venter is light colored, but males may have a
dark gray throat and chest. The eyes have horizontal pupils and gold irises with dark
reticulations. Fingers are long and slender and lack webbing. The toes are also long,
but have limited webbing. Males have brown nuptial pads and a subgular vocal
sac.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from the edges of rocky
streams during the dry season (January - February). The call is a short, pulsating,
low-pitched trill "brrrrrt.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This common nocturnal species is found
in moist to wet forests of the Atlantic versant. During the breeding season (dry
season) they may be found in or near slow moving streams and rivers with rocky
substrates at elevations ranging from near sea level to ~1,400m.{"\n"}</Text>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/15_Incilius_melanochlorus/Incilius-
melanochlorus-range-2.png')}
          style = {styles.image}

```

```

    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius melanochlorus</Text> may be confused with other toads. The most
similar is <Text style={{fontStyle: 'italic'}}>I. aucoinae</Text> however, they are
allopatric, occurring on the Pacific versant, and they lack a transverse fold between
the cranial crests (present in <Text style={{fontStyle: 'italic'}}>I.
melanochlorus</Text>). <Text style={{fontStyle: 'italic'}}>Incilius coccifer</Text>
and <Text style={{fontStyle: 'italic'}}>I. valliceps</Text> both have large, oval
parotoid glands. <Text style={{fontStyle: 'italic'}}>Incilius luetkenii</Text> has
dark, keratinized cranial crests and Rhinella horribilis has huge parotoid
glands.{"\n"}</Text>

    </ScrollView>
  );
}
}

class PeriglenesPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#864F2F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>
          <Text style = {styles.scientificTitles}>Incilius
periglenes{"\n"}</Text>
          <Text style = {styles.commonTitles}>Golden Toad{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/16_Incilius_periglenes/Incilius-
periglenes-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized toad (39-56mm, ~1.5-
2.2in). The skin is covered in low, rounded tubercles producing a rough texture. The
dorsal coloration differs between males and females, with males having a solid, bright
orange color, whereas females have a dark greenish-brown to black ground color with
scattered red spots and blotches. Cranial crests extend posteriorly to large, oval
parotoid glands. The eyes have horizontal pupils and dark irises. There are no
tympanic membranes present. The venter is pale with dark mottling and a granular
appearance. The limbs are stout and the fingers lack webbing, whereas the toes have
limited webbing. Males lack a vocal sac, but have dark nuptial pads.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males vocalize in or near temporary
pools that form within cloud forests at the very beginning of the rainy season (March
to June). Although they may not produce an advertisement call (there are mixed
opinions on this), they do produce a release call that is a short trill.{"\n"}</Text>

```

```

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius periglenes</Text> is endemic to Costa Rica, and only known to
inhabit lower montane cloud forests near Monteverde at elevations of ~1,500 to 1,650m.
This diurnal species is secretive and fossorial except for short breeding episodes
(usually about a week long or less) during the very early rainy season, when they may
occasionally be found on the forest floor, or more commonly, congregating at temporary
pools. This toad was locally abundant although with an extremely limited range. They
are thought to be extinct. Consequently, any encounters with this species should be
carefully documented (photos only).{"\n"}</Text>

        <Image
            resizeMode = 'contain'
            source={require('./assets/Images/16_Incilius_periglenes/Incilius-
periglenes-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Incilius periglenes</Text> is quite unique, and unlikely to be confused
with any other Costa Rican frogs or toads.{"\n"}</Text>

    </ScrollView>
    );
}
}

class VallicepsPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#864F2F',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
                <View style = {styles.colorBar, {backgroundColor: "#a8633b"}}>
                    <Text style = {styles.scientificTitles}>Incilius
valliceps{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Gulf Coast Toad{"\n"}</Text>

                </View>

                <Image
                    resizeMode = 'contain'
                    source={require('./assets/Images/17_Incilius_valliceps/Incilius-
valliceps-Brian-Kubicki-2.png')}
                    style = {styles.image}
                />

                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A medium to large-sized toad (~48-82mm,
~1.9-3.2in). The dorsum has rounded, smooth tubercles and a lateral row of enlarged,
pointed tubercles extending from the large parotoid glands to the groin. The dorsal
coloration is usually tan, marked with various small dark blotches. Occasionally there

```

is a pale vertebral stripe extending partially or completely down the back, and/or a dark interorbital bar. The lateral row of tubercles is bordered by a dark band below and a pale band above. Thick, raised cranial crests are very evident and form a supratympanic ridge over the large tympanic membranes (nearly the size of the eye). The eyes have a horizontal pupil and a gold to reddish orange iris. The venter is pale yellow and granular. The fingers lack webbing, whereas the toes are slightly webbed. Males have dark nuptial pads and a slightly darkened subgular vocal sac.

<Text style = {styles.sectionTitles}>Calls{"\n"}</Text>

<Text style = {styles.paragraphs}>Males call from in or near still water of streams, pools, and ponds. The call is a short trill that is repeated after several seconds.

<Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

<Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Incilius valliceps</Text> is an uncommon, nocturnal toad found in lowland forests of the San Juan River drainage at elevations ranging from ~50 to 500m. They may be encountered on the forest floor, often near streams or rivers.

<Image  
 resizeMode = 'contain'  
 source={require('./assets/Images/17\_Incilius\_valliceps/Incilius-valliceps-range-2.png')}  
 style = {styles.image}  
 />

<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

<Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Incilius valliceps</Text>, is most likely to be confused with sympatric, large toad species in northern Costa Rica. <Text style={{fontStyle: 'italic'}}>Incilius melanochlorus</Text> has much smaller parotoid glands and weaker cranial crests. <Text style={{fontStyle: 'italic'}}>Incilius coccifer</Text> has weaker cranial crests, a white vertebral pinstripe, and a light interorbital bar. <Text style={{fontStyle: 'italic'}}>Incilius luetkenii</Text> has blackened cranial crests, much smaller parotoid glands and lacks the lateral row of tubercles. <Text style={{fontStyle: 'italic'}}>Rhinella horribilis</Text> has huge parotoid glands.

</ScrollView>

);  
 }  
 }

```
class HaematiticusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Rhaebo
haematiticus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Leaf Litter Toad{"\n"}</Text>
        </View>
      </ScrollView>
    );
  }
}
```

```

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/18_Rhaebo_haematiticus/Rhaebo-
haematiticus-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A medium to large-sized toad (~42-62mm,
~1.7-2.1in males; ~50-80mm, ~2-3.1in females). The dorsum is relatively smooth, but
has scattered low tubercles. A slight fold of skin extends from the very large
parotoid gland towards the groin. The dorsal coloration is variable, ranging from a
light reddish brown, to darker brown or gray, with small scattered black blotches. A
dark lateral band bordered above by a thin pale line extends from the snout to the
groin. There are no cranial crests, but a supratympanic fold extends from the eye to
the parotoid glands. The tympanic membranes are small but visible. The eyes are large
and have horizontal pupils and gold irises with dark reticulations. The venter is pale
gray with a red wash, and dark mottling that may cover much of the ventral surface.
They have long arms and the digits are also long, while essentially lacking webbing.
Males have dark nuptial pads and a subgular vocal sac.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>During the first half of the rainy
season, males call from terrestrial sites near rocky pools of rivers and streams. The
calls is a series of rapid, short notes "peep, peep, peep."{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>This nocturnal species is usually found
on leaf litter in moist to wet forests of both Atlantic and Pacific slopes from near
sea level to ~1,300m. During the breeding season they may be found near forest streams
and rivers.{"\n"}</Text>

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/18_Rhaebo_haematiticus/Rhaebo-
haematiticus-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Rhaebo haematiticus</Text> is quite unique and it is unlikely to be
confused with any other species of anuran within Costa Rica.{"\n"}</Text>

  </ScrollView>
);
}
}

class HorribilisPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#5E4632',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  },
};
render() {

```



```

return (
  <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
    <View style = {styles.colorBar, {backgroundColor: "#76583f"}}>
      <Text style = {styles.scientificTitles}>Rhinella
horribilis{"\n"}</Text>
      <Text style = {styles.commonTitles}>Giant Toad{"\n"}</Text>

    </View>

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/19_Rhinella_horribilis/Rhinella-
horribilis-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A large to giant-sized toad (~85-145mm,
~3.3-5.7in males; ~90-175mm, ~3.5-6.9in females). The dorsum is covered with scattered
warts and tubercles, more pronounced in males than in females. The warts and tubercles
often have keratinized spines (more prevalent in males). Cranial crests are well
developed and form a supratympanic ridge that extends to the huge parotoid gland. The
tympanic membranes are large and evident. Dorsal coloration is variable, usually
brown, reddish brown, yellowish brown or gray, with scattered dark blotches in females
and juveniles. The eyes have horizontal pupils and gold irises with heavy, dark
reticulations. The venter is cream-colored with dark mottling and granular appearance.
The limbs are relatively short and stocky. The fingers lack webbing but males have
brown nuptial pads and a subgular vocal sac. Toes have limited webbing and a distinct
medial tarsal fold is present.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call from in or near the edges of
ponds, ditches, artificial water sources, or pools of slow moving rivers. The call
consists of a long, slow, low-pitched trill.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Rhinella horribilis</Text> is a very common nocturnal toad that may be
found in many habitats ranging from near sea level to ~1,600m. They commonly occur in
disturbed areas including agricultural areas and rural towns, and or more uncommonly
encountered along forest edges and natural open areas.{"\n"}</Text>

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/19_Rhinella_horribilis/Rhinella-
horribilis-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}>Adult <Text style={{fontStyle:
'italic'}}>Rhinella horribilis</Text> are not likely to be confused with any other
anuran in Costa Rica. Juvenile <Text style={{fontStyle: 'italic'}}>R.
horribilis</Text> may appear similar to other toad species, but the very large
parotoid glands and the tarsal fold should distinguish them.{"\n"}</Text>

  </ScrollView>
);
}
}
/**** END BUFONIDAE PAGES *****/

```

```
/*  
*****  
******/
```

```
/*  
*****  
******/
```

```
/** BEGIN CENTROLENIDAE PAGES *****/
```

```
class Centrolenidae extends React.Component {  
  static navigationOptions = {  
    headerStyle: {  
      backgroundColor: '#2F673A',  
    },  
    headerTintColor: '#fff',  
    headerTitleStyle: {  
      fontWeight: 'bold',  
    },  
  };  
  render() {  
    return (  
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>  
        <View style = {styles.colorBar, {backgroundColor: "#3b8149"}}>  
          <Text style = {styles.familyTitles}>Centrolenidae (Glass  
Frogs){"\n"}</Text>  
        </View>  
  
        <Image  
          resizeMode = 'contain'  
          source={require('./assets/Images/centrolenidae-main.png')}  
          style = {styles.image}  
        />  
  
        <Text style = {styles.paragraphs}>  
          Centrolenidae, commonly known as Glass Frogs, is a modest-sized family  
with ~150 species currently recognized (Frost, 2017). Costa Rica has 14 species of  
Glass Frogs in five genera. The most speciose genus is <Text style={{fontStyle:  
'italic'}}>Hyalinobatrachium</Text> with 7 species. The other genera include <Text  
style={{fontStyle: 'italic'}}>Cochranella </Text>(2 species), <Text style={{fontStyle:  
'italic'}}>Espadarana</Text> (1 species), <Text style={{fontStyle:  
'italic'}}>Teratohyla</Text> (2 species), and <Text style={{fontStyle:  
'italic'}}>Sachatamia</Text> (2 species). Taxonomic revisions suggested by Guayasamin  
et al. (2009) resulted in changes for Centrolenids of Costa Rica. Two species formerly  
in <Text style={{fontStyle: 'italic'}}>Centrolenella</Text> and three species from  
<Text style={{fontStyle: 'italic'}}>Cochranella</Text> were placed in the genera <Text  
style={{fontStyle: 'italic'}}>Espadarana</Text> (1 species), <Text style={{fontStyle:  
'italic'}}>Teratohyla</Text> (2 species) and <Text style={{fontStyle:  
'italic'}}>Sachatamia</Text> (2 species).{"\n"}{"\n"}  
        </Text>  
      </ScrollView>  
    );  
  }  
}
```

The family Centrolenidae occurs only in the Neotropics, ranging from Mexico, throughout much of Central America, northern South America and Atlantic forests of Brazil and Paraguay. In Costa Rica Centrolenids can be found in every province, and range in elevation from near sea level to ~1,900m. Glass Frogs can be found in a wide variety of habitats ranging from pastures to primary forests, but associated with streams or rivers on which they depend for reproduction. Males of all species are able to vocalize and may be heard calling at night from streamside vegetation. In addition to calling, males may carry out a variety of other activities related to reproduction, such as wrestling with each other for territories (ex. <Text style={{fontStyle: 'italic'}}>Espadarana prosoblepon</Text>), or guarding clutches of eggs on leaves overhanging water (ex. <Text style={{fontStyle: 'italic'}}>Hyalinobatrachium valerioi</Text>). After hatching tadpoles live in the water of streams and rivers, where they stay hidden in stream bottom sediment and

debris. Tadpoles of many species appear reddish because of their highly vascularized skin, an adaptation for living in water with a low oxygen content.{"\n"}{"\n"}

Glass Frogs are aptly named as their ventral skin is usually transparent making internal organs visible to various degrees depending on species. All Costa Rican species of the genus *Hyalinobatrachium* have transparent membranes lining the abdominal cavity making their viscera readily visible. Other physical characteristics of Glass Frogs include their green dorsal coloration, large forward-facing eyes with horizontal pupils, and discs on the ends of their digits.{"\n"}{"\n"}

```
</Text>
<Text style = {styles.speciesInFamilyTitle}>Species in this
Family:</Text>
<Button color = "#7ca2d0"
  title="Cochranella euknemos"
  onPress={() => this.props.navigation.navigate('EuknemosPage')}
/>
<Button color = "#7ca2d0"
  title="Cochranella granulosa"
  onPress={() => this.props.navigation.navigate('GranulosaPage')}
/>
<Button color = "#7ca2d0"
  title="Espadarana prosoblepon"
  onPress={() => this.props.navigation.navigate('ProsobleponPage')}
/>
<Button color = "#7ca2d0"
  title="Hyalinobatrachium chirripoi"
  onPress={() => this.props.navigation.navigate('ChirripoiPage')}
/>
<Button color = "#7ca2d0"
  title="Hyalinobatrachium colymbiphylum"
  onPress={() =>
this.props.navigation.navigate('ColymbiphylumPage')}
/>
<Button color = "#7ca2d0"
  title="Hyalinobatrachium diana"
  onPress={() => this.props.navigation.navigate('DianaPage')}
/>
<Button color = "#7ca2d0"
  title="Hyalinobatrachium fleischmanni"
  onPress={() => this.props.navigation.navigate('FleischmanniPage')}
/>
<Button color = "#7ca2d0"
  title="Hyalinobatrachium talamanca"
  onPress={() => this.props.navigation.navigate('HyTalamancaPage')}
/>
<Button color = "#7ca2d0"
  title="Hyalinobatrachium valerioi"
  onPress={() => this.props.navigation.navigate('ValerioiPage')}
/>
<Button color = "#7ca2d0"
  title="Hyalinobatrachium vireovittatum"
  onPress={() =>
this.props.navigation.navigate('VireovittatumPage')}
/>
<Button color = "#7ca2d0"
  title="Sachatamia albomaculata"
  onPress={() => this.props.navigation.navigate('AlbomaculataPage')}
/>
<Button color = "#7ca2d0"
  title="Sachatamia illex"
  onPress={() => this.props.navigation.navigate('IlexPage')}
```

```

        />
        <Button color = "#7ca2d0"
            title="Teratohyla pulverata"
            onPress={() => this.props.navigation.navigate('PulverataPage')}
        />
        <Button color = "#7ca2d0"
            title="Teratohyla spinosa"
            onPress={() => this.props.navigation.navigate('SpinosaPage')}
        />
    </ScrollView>
    );
}
}

class EuknemosPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#2F673A',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
                <View style = {styles.colorBar, {backgroundColor: "#3b8149"}}>
                    <Text style = {styles.scientificTitles}>Cochranella
euknemos{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Slope-snouted Glass
Frog{"\n"}</Text>
                </View>

                <Image
                    resizeMode = 'contain'

                    source={require('./assets/Images/20_Cochranella_euknemos/Cochranella-euknemos-
2.png')}
                    style = {styles.image}
                />

                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A small to moderate-sized frog (~24-
32mm, ~0.9-1.3in). This species has a light green to emerald green dorsum with
numerous neatly defined yellow to yellowish-white spots scattered throughout. The
snout has a strongly sloping profile. The pigmented section (white) of the parietal
peritoneum is reduced, covering just the upper chest. The digestive organs are visible
and are covered in a white visceral lining. Moderate webbing is found just between
fingers III-IV, covering approximately one-third to half the distance to the tips of
the fingers.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
                <Text style = {styles.paragraphs}>Males call from the upper surfaces of
leaves within riparian vegetation. The call of <Text style={{fontStyle:
'italic'}}>Cochranella euknemos</Text> consists of one or two rapid high-pitched buzz-
like notes, but occasionally as many as three to four notes might be emitted during a
single advertisement call.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

```

`<Text style = {styles.paragraphs}>In Costa Rica, this rare nocturnal species was just recently rediscovered after 25 years since its last encounter. <Text style={{fontStyle: 'italic'}}>Cochranella euknemos</Text> has only been found at a total of five sites in Costa Rica, all within cloud forests in the Central Volcanic Range, between ~1,150-1,500m.{"\n"}</Text>`

```

<Image
  resizeMode = 'contain'

```

```

  source={require('./assets/Images/20_Cochranella_euknemos/Cochranella-euknemos-
range-2.png')}
  style = {styles.image}
/>

```

```

<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

```

```

<Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Cochranella euknemos</Text> could be confused with <Text style={{fontStyle:
'italic'}}>Sachatamia albomaculata</Text> and <Text style={{fontStyle:
'italic'}}>Teratohyla pulverata</Text>. <Text style={{fontStyle: 'italic'}}>Sachatamia
albomaculata</Text> has a truncate snout profile and lacks a white lining on the
digestive organs. <Text style={{fontStyle: 'italic'}}>Teratohyla pulverata</Text>
completely lacks pigmentation in the parietal peritoneum and has moderate to extensive
interdigital webbing between fingers II-III and III-IV.{"\n"}</Text>

```

```

</ScrollView>

```

```

);
}
}

```

```

class GranulosaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#2F673A',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
}

```

```

render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
      <View style = {styles.colorBar, {backgroundColor: "#3b8149"}}>
        <Text style = {styles.scientificTitles}>Cochranella
granulosa{"\n"}</Text>
        <Text style = {styles.commonTitles}>Granular Glass
Frog{"\n"}</Text>

```

```

      </View>

```

```

<Image
  resizeMode = 'contain'

```

```

  source={require('./assets/Images/21_Cochranella_granulosa/Cochranella-
granulosa-2.png')}
  style = {styles.image}
/>

```

```

<Text style = {styles.sectionTitles}>Description{"\n"}</Text>

```

```

<Text style = {styles.paragraphs}>A small to moderate-sized frog (~24-
32mm, ~0.9-1.3in) The dorsal coloration is light green to emerald green and often has

```

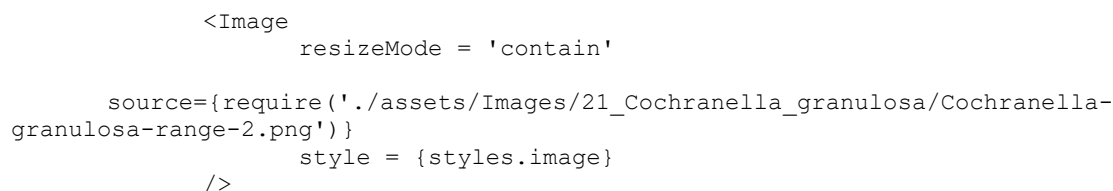
several dark spots, especially on the dorsal surface of the body. The dorsal skin has a granular texture. The pigmented section (white) of the parietal peritoneum is reduced, covering just the upper chest. The digestive organs are visible and are covered in a white visceral lining. The blue-green bones are particularly visible in the limbs.

**Calls**

Males call from the upper surfaces of leaves on streamside vegetation, usually several meters above the stream. The call of *Cochranella granulosa* consists of a series of rapid high-pitched pulsed trills "reet, reet, reet", typically three notes, but occasionally as many as four to five notes might be emitted during a single advertisement call. Long pauses may occur between calls.

**Range and Habitat**

This common nocturnal species inhabits the majority of the lowlands and foothills along the humid and even semi-humid forests of both the Caribbean and Pacific versants; principally being found from near sea level to ~1,500m.



**Similar Species**

*Cochranella granulosa* is quite different than any other Costa Rican anuran, so the likelihood of confusion should be minimal. One species that could possibly be confused with *C. granulosa* is *Teratohyla spinosa*. *Teratohyla spinosa* differs most from *C. granulosa* by lacking a white lining on the digestive organs.

```

    </ScrollView>
  );
}
}

class ProsobleponPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#576427',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#6c7d31"}}>
          <Text style = {styles.scientificTitles}>Espadarana
prosoblepon{"\n"}</Text>
          <Text style = {styles.commonTitles}>Emerald Glass
Frog{"\n"}</Text>
        </View>
      </ScrollView>
    );
  }
}

```

```

</View>

<Image
  resizeMode = 'contain'

  source={require('./assets/Images/22_Espadarana_prosoblepon/Espadarana-
prosoblepon-2.png')}
  style = {styles.image}
/>

  <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
  <Text style = {styles.paragraphs}>A small to moderate-sized frog (~24-
31mm, ~0.9-1.2in). This species has a light green to emerald green dorsum with
numerous dark spots often scattered throughout. A partially pigmented (white) parietal
peritoneum covers the upper two-thirds to three-fourths of the venter, allowing only
the lower sections of the intestines (lacking a white lining) to be seen. Adult males
have an evident humeral projection on the upper arm, and the blue-green bones are
particularly visible in the limbs>{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
  <Text style = {styles.paragraphs}>Males usually call from the upper
surfaces of leaves on streamside vegetation, however they may also call from woody
portions of plants (ex. stems and branches) and even rocks. The call of <Text
style={{fontStyle: 'italic'}}>Espadarana prosoblepon</Text> is normally a rapid three-
note series, "tik tik tik," but occasionally the males can be heard emitting four or
even five notes>{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
  <Text style = {styles.paragraphs}>In Costa Rica, this common nocturnal
species is known to inhabit the lowlands and foothills of the humid and even semi-
humid forests along both the Caribbean and Pacific versants; principally being found
from near seal level to ~1,900m>{"\n"}</Text>

  <Image
  resizeMode = 'contain'

  source={require('./assets/Images/22_Espadarana_prosoblepon/Espadarana-
prosoblepon-range-2.png')}
  style = {styles.image}
/>

  <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
  <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Espadarana prosoblepon</Text> is quite unique among Costa Rican Glass
Frogs, especially with the adult male individuals having their humeral projection, but
it could be possible to confuse this species with <Text style={{fontStyle:
'italic'}}>Cochranella granulosa</Text>. <Text style={{fontStyle:
'italic'}}>Cochranella granulosa</Text> can easily be distinguished from <Text
style={{fontStyle: 'italic'}}>E. prosoblepon</Text> due to having a white visceral
lining>{"\n"}</Text>

  </ScrollView>
);
}
}

class ChirripoiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#598332',
    },
  },

```

```

headerTintColor: '#fff',
headerTitleStyle: {
  fontWeight: 'bold',
},
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
      <View style = {styles.colorBar, {backgroundColor: "#70a43f"}}>
        <Text style = {styles.scientificTitles}>Hyalinobatrachium
chirripoi{"\n"}</Text>
        <Text style = {styles.commonTitles}>Palm Glass Frog{"\n"}</Text>
      </View>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/23a_Hyalinobatrachium_chirripoi/Hyalinobatrach
ium-chirripoi-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
      <Text style = {styles.paragraphs}>A small frog (~24-29mm, ~0.9-1.1in).
The dorsum is light green with numerous fine yellow spots scattered throughout. The
ventral surface of the body is transparent due to a lack of pigmentation in the
parietal peritoneum. The pericardial sac lacks white iridophores, thus a red heart is
visible through the ventral skin. The bulb-shaped liver and digestive organs are
covered in a white visceral lining. Evident interdigital webbing is found between
fingers II-III and III-IV, being moderate to extensive. The pale, yellowish bones are
particularly visible in the limbs.{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
      <Text style = {styles.paragraphs}>Males often call from the underside of
smooth leaves overhanging streams. Nonetheless, they can also be found calling from
the upper surfaces at times. The advertisement call of <Text style={{fontStyle:
'italic'}}>Hyalinobatrachium chirripoi</Text> consists of a rapid high-pitched trill,
"brrrrrrrt."{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
      <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Hyalinobatrachium chirripoi</Text> is principally known to inhabit humid
forests in the lowlands and foothills in the southern and central Caribbean from ~50-
250m. This uncommon species was just recently rediscovered in Costa Rica after nearly
50 years since its last encounter within the country.{"\n"}</Text>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/23a_Hyalinobatrachium_chirripoi/Hyalinobatrach
ium-chirripoi-range-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
      <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Hyalinobatrachium chirripoi</Text> could be confused with <Text
style={{fontStyle: 'italic'}}>H. fleischmanni</Text> and <Text style={{fontStyle:
'italic'}}>H. colymbiphylum</Text>. <Text style={{fontStyle:
'italic'}}>Hyalinobatrachium fleischmanni</Text> has a white heart visible through the

```



```

ventral skin. <Text style={{fontStyle: 'italic'}}>Hyalinobatrachium
colymbiphyllum</Text> lacks evident webbing between fingers II-III.{"\n"}</Text>

    </ScrollView>
  );
}
}

class ColymbiphyllumPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#598332',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#70a43f"}}>
          <Text style = {styles.scientificTitles}>Hyalinobatrachium
colymbiphyllum{"\n"}</Text>
          <Text style = {styles.commonTitles}>Bare-Hearted Glass
Frog{"\n"}</Text>

          </View>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/23b_Hyalinobatrachium_colymbiphyllum/Hyalinoba
trachium-colymbiphyllum-2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
          <Text style = {styles.paragraphs}>A small frog (~23-29mm, ~0.9-1.1in).
The dorsum is light green with numerous fine to moderate-sized yellow spots scattered
throughout. The parietal peritoneum is not pigmented, nor is the pericardium,
consequently the red heart is visible through the ventral skin. The bulb-shaped liver
and digestive organs are covered in a white visceral lining. The most evident
interdigital webbing is found between fingers III-IV, which is moderate. The pale
yellow bones are particularly visible in the limbs.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
          <Text style = {styles.paragraphs}>Males usually call from the undersides
of smooth leaves overhanging streams. The advertisement call of <Text
style={{fontStyle: 'italic'}}>H. colymbiphyllum</Text> consists of a somewhat quiet,
high-pitched trill, "brrrrrrrt."{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
          <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Hyalinobatrachium colymbiphyllum</Text> is fairly common in the humid
forests of the lowlands and foothills of the central and southern Pacific, but
uncommon to rare in the cloud forests of the Caribbean versant. The elevational range
for <Text style={{fontStyle: 'italic'}}>H. colymbiphyllum</Text> is from near sea
level to ~1,600m.{"\n"}</Text>//Range
          and Habitat

```

```

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/23b_Hyalinobatrachium_colymbiphyllum/Hyalinoba
trachium-colymbiphyllum-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Hyalinobatrachium colymbiphyllum</Text> could be confused with <Text
style={{fontStyle: 'italic'}}>H. fleischmanni</Text> and <Text style={{fontStyle:
'italic'}}>H. chirripoi</Text>. <Text style={{fontStyle: 'italic'}}>Hylinobatrachium
fleischmanni</Text> has a white heart visible through the ventral skin. <Text
style={{fontStyle: 'italic'}}>Hyalinobatrachium chirripoi</Text> has nearly as
extensive webbing between both fingers II-III and III-IV, whereas <Text
style={{fontStyle: 'italic'}}>H. colymbiphyllum</Text> lacks webbing between fingers
II and III.{"\n"}</Text>

    </ScrollView>
  );
}
}

class DianaePage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#598332',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#70a43f"}}>
          <Text style = {styles.scientificTitles}>Hyalinobatrachium
dianae{"\n"}</Text>
          <Text style = {styles.commonTitles}>Diane's Bare-Hearted
Frog{"\n"}</Text>

        </View>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/24_Hyalinobatrachium_dianae/Hyalinobatrachium-
dianae-Brian-Kubicki-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.paragraphs}>(Photo by Brian Kubicki){'\n'}</Text>

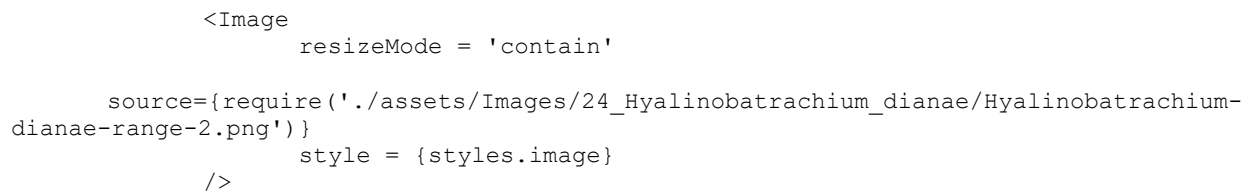
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small frog (~27-30mm, ~1.1-1.2in).
The dorsal coloration is uniform light green and lacks any light or dark spots. The
ventral surface of the body is transparent due to a lack of pigmentation in the
parietal peritoneum. The pericardial sac lacks white iridophores, resulting in a red

```

heart being visible through the ventral skin. The bulb-shaped liver and digestive organs are covered in a white visceral lining. The skin of the dorsum is granular. The most evident interdigital webbing is found between fingers III-IV, which is moderate. The iris is white, with fine darker pigmentation scattered throughout.

**Calls**  
Males call from the underside of leaves on streamside vegetation; however, it is possible they also call from upper leaf surfaces. The call of *Hyalinobatrachium diana* is a long metallic whistle with a weakly pulsed intensity.

**Range and Habitat**  
*Hyalinobatrachium diana* is currently known to be endemic to Costa Rica, inhabiting the humid forests along the foothills of the central Caribbean region from roughly Limón to Río Frio. The known elevational range for *H. diana* is ~400- 900m.



**Similar Species**  
*Hyalinobatrachium diana* is quite unique, but it could be confused with *H. chirripoi*, *H. colymbiphyllum*, and *H. fleischmanni*. The species that most closely resembles *H. diana* is *H. colymbiphyllum*, but the latter has yellow dorsal spots, and a smoother dorsal skin texture. *Hyalinobatrachium chirripoi* is easily distinguished from *H. diana* by its yellow dorsal spots and having extensive interdigital webbing between both fingers II-III and III-IV. *Hyalinobatrachium fleischmanni* has a white heart and yellow spots on the dorsum.

```

    </ScrollView>
  );
}
}

class CentrolenidaeFleischmanniPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#598332',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#70a43f"}}>
          <Text style = {styles.scientificTitles}>Hyalinobatrachium
fleischmanni{"\n"}</Text>

```

```

        <Text style = {styles.commonTitles}>Fleischmann's Glass
Frog{"\n"}</Text>

    </View>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/25_Hyalinobatrachium_fleischmanni/Hyalinobatra
chium-fleischmanni-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A small frog (~22-27mm, ~0.9-1.1in).
The dorsum is light green with numerous fine to moderate-sized yellow spots scattered
throughout. The ventral surface of the body is transparent due to a lack of
pigmentation in the parietal peritoneum. The pericardial sac is covered in white
iridophores, thus a white heart is visible through the ventral skin. The bulb-shaped
liver and digestive organs are covered in a white visceral lining. The most evident
interdigital webbing is found between fingers III-IV, which is moderate to extensive.
The whitish-yellow bones are particularly evident in the limbs.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males usually call from the
undersurfaces of leaves on streamside vegetation. The call of <Text style={{fontStyle:
'italic'}}>Hyalinobatrachium fleischmanni</Text> is a single short high-pitched rising
whistle, "shweet.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Hyalinobatrachium fleischmanni</Text> is common throughout the humid
forests of the Caribbean lowlands and foothills, the Central Valley, and sections
along the ridges of Tilarán and Guanacaste. This species is also found, but less
commonly, in the valleys of the Río General and Río Coto Brus on the Pacific versant.
The known elevational range for <Text style={{fontStyle: 'italic'}}>H.
fleischmanni</Text> is from near sea level to ~1,900m.{"\n"}</Text>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/25_Hyalinobatrachium_fleischmanni/Hyalinobatra
chium-fleischmanni-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}>Because of similarity in overall dorsal
coloration in some <Text style={{fontStyle: 'italic'}}>Hyalinobatrachium
fleischmanni</Text>, it could be possible to confuse them with <Text
style={{fontStyle: 'italic'}}>H. chirripoi</Text>, <Text style={{fontStyle:
'italic'}}>H. colymbiphyllum</Text>, and <Text style={{fontStyle: 'italic'}}>H.
talamancae</Text>. But these latter species all have a red heart visible through the
ventral skin.{"\n"}</Text>

  </ScrollView>
);
}
}

class HyTalamancaePage extends React.Component {
  static navigationOptions = {

```

```

headerStyle: {
  backgroundColor: '#598332',
},
headerTintColor: '#fff',
headerTitleStyle: {
  fontWeight: 'bold',
},
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
      <View style = {styles.colorBar, {backgroundColor: "#70a43f"}}>
        <Text style = {styles.scientificTitles}>Hyalinobatrachium
talamancae{"\n"}</Text>
        <Text style = {styles.commonTitles}>Talamanca Glass
Frog{"\n"}</Text>

      </View>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/26_Hyalinobatrachium_talamancae/Hyalinobatrach
ium-talamancae-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
      <Text style = {styles.paragraphs}>A small frog (~22-27mm, ~0.9-1.1in).
The dorsum is light green with numerous fine to moderate-sized yellow spots scattered
throughout. In the center of the dorsum there is a distinct green middorsal
longitudinal stripe, which runs from the base of the head to near the anal vent. The
ventral surface of the body is transparent due to a lack of pigmentation in the
parietal peritoneum. The pericardial sac lacks white iridophores, thus a red heart is
visible through the ventral skin. The bulb-shaped liver and digestive organs are
covered in a white visceral lining. The pale, yellowish white bones are particularly
visible in the limbs.{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
      <Text style = {styles.paragraphs}>Males usually call from the
undersurfaces of leaves overhanging small streams and seepages. The call of <Text
style={{fontStyle: 'italic'}}>Hyalinobatrachium talamancae</Text> is a single long
whistle-like note "shhhhhhhhr."{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
      <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Hyalinobatrachium talamancae</Text> is only known to inhabit humid forests
in the foothills along the Caribbean versant, at elevations ranging from ~400-1,500m.
This uncommon species was just recently rediscovered in Costa Rica after nearly 50
years since its last encounter within the country.{"\n"}</Text>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/26_Hyalinobatrachium_talamancae/Hyalinobatrach
ium-talamancae-range-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
      <Text style = {styles.paragraphs}>Due to the presence of a distinct green
mid-dorsal line, <Text style={{fontStyle: 'italic'}}>Hyalinobatrachium

```

talamancae

is quite unique, but nonetheless this species could possibly be confused with the *H. vireovittatum*. *Hyalinobatrachium talamancae* is actually quite similar to *H. vireovittatum* in overall appearance, but these two species are known to be allopatric; *H. talamancae* is found on the Caribbean versant, whereas *H. vireovittatum* is only known from the central-southern Pacific foothills of Costa Rica.

```

    </ScrollView>
  );
}

class ValerioiiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#598332',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#70a43f"}}>
          <Text style = {styles.scientificTitles}>Hyalinobatrachium
valerioii{"\n"}</Text>
          <Text style = {styles.commonTitles}>Reticulated Glass
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/27_Hyalinobatrachium_valerioii/Hyalinobatrachiu
m-valerioii-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small frog (~22-26mm, ~0.9-1.0in).
The dorsal surface is translucent pale yellow with a contrasting green reticulation.
The ventral surface of the body is transparent due to a lack of pigmentation in the
parietal peritoneum. The pericardial sac is partially or fully pigmented by white
iridophores, thus a fully white heart or one that has red patches is visible through
the ventral skin. The bulb-shaped liver and digestive organs are covered in a white
visceral lining. The bones are pale in color and are particularly visible in the
limbs.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from the surfaces of leaves
on streamside vegetation. The advertisement call of <Text style={{fontStyle:
'italic'}}>Hyalinobatrachium valerioii</Text> is a single short whistle-like note
"peep."{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Hyalinobatrachium valerioii</Text> can be found along the lowlands and

```

foothills on both the Caribbean and Pacific versants in a variety of habitats including both forests as well as disturbed areas. On the Caribbean versant `<Text style={{fontStyle: 'italic'}}>H. valerioi</Text>` is known from roughly Arenal Lake south, whereas on the Pacific slopes this species is known from roughly Río Tarcoles south. This relatively common species is principally known to inhabit humid forests below ~1,000m.`{"\n"}</Text>`

```

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/27_Hyalinobatrachium_valerioi/Hyalinobatrachiu
m-valerioi-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Hyalinobatrachium valerioi</Text> is quite unique and should not be
confused with any frog species within Costa Rica.{"\n"}</Text>

```

```

  </ScrollView>
);
}
}

```

```

class VireovittatumPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#598332',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#70a43f"}}>
          <Text style = {styles.scientificTitles}>Hyalinobatrachium
vireovittatum{"\n"}</Text>
          <Text style = {styles.commonTitles}>Striped Glass
Frog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/28_Hyalinobatrachium_vireovittatum/28-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.paragraphs}>(Photo by Brian Kubicki){'\n'}</Text>

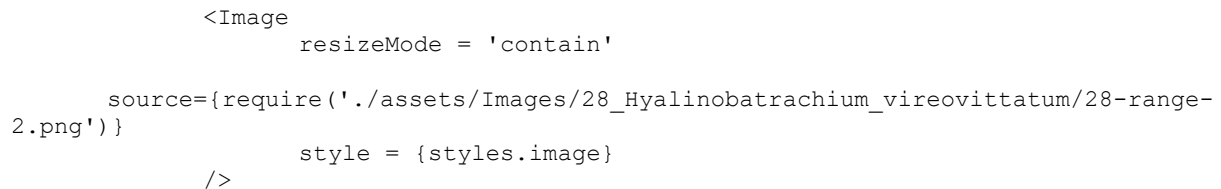
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small frog (~21-25mm, ~0.8-1.0in).
The dorsum is lime-green with moderate to fine canary yellow spots. Running through
the center of the back, from the base of the head to near the anal vent, is a distinct
green mid-dorsal stripe, which is often bordered on both sides by uniform yellow para-
vertebral lines. The ventral surface of the body is transparent due to a lack of
pigmentation in the parietal peritoneum. The pericardial sac lacks white iridophores,

```

thus a red heart is visible through the ventral skin. The bulb-shaped liver and digestive organs are covered in a white visceral lining. The pale yellowish bones are particularly visible in the limbs.

**Calls**  
Males usually call from the undersurfaces of leaves overhanging small streams and seepages. The advertisement call of *Hyalinobatrachium vireovittatum* is a long whistle-like note "shhhhhhhhr", very similar to that of *H. talamancae*.

**Range and Habitat**  
*Hyalinobatrachium vireovittatum* is currently only known to inhabit the coastal foothills of the central-southern Pacific, from roughly Parrita to Palmar Norte. This uncommon to rare nocturnal species has been found in a narrow altitudinal band from ~250– 1,000m.

The image placeholder shows a range map for Hyalinobatrachium vireovittatum, with the source file named 28\_Hyalinobatrachium\_vireovittatum/28-range-2.png.

**Similar Species**  
*Hyalinobatrachium vireovittatum* is actually quite similar to *H. talamancae* in overall appearance. However, *H. vireovittatum* usually has yellow paravertebral lines. Perhaps more importantly, these two species are known to be allopatric; *H. talamancae* is found on the Caribbean versant, whereas *H. vireovittatum* is only known from the central-southern Pacific foothills of Costa Rica.

```
    </ScrollView>
  );
}
}

class AlbomaculataPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#496C2C',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#5b8738"}}>
          <Text style = {styles.scientificTitles}>Sachatamia
albomaculata{"\n"}</Text>
          <Text style = {styles.commonTitles}>Cascade Glass
Frog{"\n"}</Text>
        </View>
      </ScrollView>
    );
  }
}
```



```

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/29_Sachatamia_albomaculata/Sachatamia-
albomaculata-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small to moderate-sized frog (~24-
32mm, ~0.9-1.3in). This species has a light green to emerald green dorsum with yellow
spots scattered throughout. The dorsal spotting of this species can vary among
individuals, and especially between the populations on the Caribbean and Pacific
versants. Pacific populations have finer and more neatly defined spots, whereas
Caribbean populations tend to have larger and more diffuse dorsal spotting. A
partially pigmented white parietal peritoneum covers one-half to two-thirds of the
ventral surface. In the lower section of the abdomen, the viscera are visible and lack
a white visceral lining. Moderate webbing is found between fingers III-IV. The Snout
of <Text style={{fontStyle: 'italic'}}>S. albomaculata</Text> is truncate in profile.
The green bones are particularly visible in the limbs{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from the upper surfaces of
leaves, as well as from branches and rocks in or near streams and cascades. The
advertisement call consists of a rapid, high-pitched single note, "tik" often repeated
with a second or two pause between notes.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Sachatamia albomaculata</Text> occurs in humid and semi-humid forests along
lowlands and foothills of the Caribbean and Pacific versants. This relatively common
species is found from near sea level to ~1,450m.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/29_Sachatamia_albomaculata/Sachatamia-
albomaculata-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}>It could be possible to confuse <Text
style={{fontStyle: 'italic'}}>Sachatamia albomaculata</Text> with <Text
style={{fontStyle: 'italic'}}>Cochranella euknemos</Text> or <Text style={{fontStyle:
'italic'}}>Teratohyla pulverata</Text>. <Text style={{fontStyle:
'italic'}}>Cochranella euknemos</Text> has a strongly sloping snout profile and a
white lining of the digestive organs. <Text style={{fontStyle: 'italic'}}>Teratohyla
pulverata</Text> lacks pigmentation in the parietal peritoneum, has extensive webbing
between fingers II-III and III-IV, and has a sloping snout profile.{"\n"}</Text>

    </ScrollView>
  );
}
}

class IlexPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#496C2C',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {

```

```

fontWeight: 'bold',
},
};
render() {
return (
<ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
  <View style = {styles.colorBar, {backgroundColor: "#5b8738"}}>
    <Text style = {styles.scientificTitles}>Sachatamia
ilex{"\n"}</Text>
    <Text style = {styles.commonTitles}>Ghost Glass Frog{"\n"}</Text>
  </View>

  <Image
    resizeMode = 'contain'
    source={require('./assets/Images/30_Sachatamia_ilex/Sachatamia-
ilex-2.png')}
    style = {styles.image}
  />

  <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
  <Text style = {styles.paragraphs}>A moderate-sized frog (~27-34mm, ~1.1-
1.3in). This is the largest glass frog not only in Costa Rica but also Central
America. The dorsum has a very smooth texture and a uniform green coloration. One of
the most noticeable characteristics of this species is a white iris with a strong dark
gray reticulation. <Text style={{fontStyle: 'italic'}}>Sachatamia ilex</Text> has a
partially-pigmented parietal peritoneum that covers the upper three-fourths to four-
fifths of the ventral surface. The digestive organs lack a white visceral lining, and
are partially visible externally through the skin of the lower abdomen. The green
bones are particularly visible in the limbs, and males have a small humeral
spine.{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
  <Text style = {styles.paragraphs}>Males call from the upper surfaces of
leaves on streamside vegetation usually several meters above the stream. The
advertisement call of <Text style={{fontStyle: 'italic'}}>Sachatamia ilex</Text> is a
single note, a loud high-pitched "tik"{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
  <Text style = {styles.paragraphs}>Within Costa Rica, <Text
style={{fontStyle: 'italic'}}>Sachatamia ilex</Text> can be relatively common and is
found in the humid forests along the foothills of the Caribbean versant, typically
between ~250 to nearly 1,000m.{"\n"}</Text>

  <Image
    resizeMode = 'contain'
    source={require('./assets/Images/30_Sachatamia_ilex/Sachatamia-
ilex-range-2.png')}
    style = {styles.image}
  />

  <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
  <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Sachatamia ilex</Text> is quite unique, but it could be possible to confuse
it with <Text style={{fontStyle: 'italic'}}>Teratohyla spinosa</Text>. One of the most
obvious differences between adult individuals of <Text style={{fontStyle:
'italic'}}>T. spinosa</Text> and <Text style={{fontStyle: 'italic'}}>S. ilex</Text> is
the size; <Text style={{fontStyle: 'italic'}}>T. spinosa</Text> is the smallest
centrolenid in Costa Rica, while <Text style={{fontStyle: 'italic'}}>S. ilex</Text> is
the largest. Additionally, <Text style={{fontStyle: 'italic'}}>T. spinosa</Text> has a
small protruding prepollical spine at the base of Finger I, and the iris coloration is
often gold rather than white.{"\n"}</Text>

```

```

    </ScrollView>
  );
}
}

class PulverataPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#576427',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#6c7d31"}}>
          <Text style = {styles.scientificTitles}>Teratohyla
pulverata{"\n"}</Text>
          <Text style = {styles.commonTitles}>Dusty Glass Frog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/31_Teratohyla_pulverata/31-
2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small to moderate-sized frog (~24-
31mm, ~0.9-1.2in). The dorsum is relatively smooth and light green to emerald green,
with numerous fine to moderate-sized white spots scattered throughout. The parietal
peritoneum lacks pigmentation and is transparent. The liver, heart and digestive
organs are covered with a white visceral lining. The snout is sloping in profile. This
species has a slight white fleshy fringe along the outer edges of the forearm and
lower leg. Evident webbing is found between fingers II-III and III-IV, which is
moderate to extensive. The pale green bones are particularly visible in the
limbs.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from the upper surfaces of
leaves on streamside vegetation, often several meters above the stream. The
advertisement call of <Text style={{fontStyle: 'italic'}}>Teratohyla pulverata</Text>
is a quick high-pitched "tik," which is often repeated in a series of three notes with
a brief pause between each note.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Teratohyla pulverata</Text> inhabits the humid forests along most of the
lowlands and foothills of both the Caribbean and the Pacific versants. The elevational
range for this common species is from near sea level to ~1,000m.{"\n"}</Text>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/31_Teratohyla_pulverata/31-range-
2.png')}
          style = {styles.image}

```

```

    />
    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}>This species is unique among Costa
Rican Glass Frogs, but nonetheless could potentially be confused with <Text
style={{fontStyle: 'italic'}}>Cochranella euknemos</Text>. <Text style={{fontStyle:
'italic'}}>Cochranella euknemos</Text> has a sloping snout in profile, similar to that
of <Text style={{fontStyle: 'italic'}}>T. pulverata</Text>, but has a partially
pigmented parietal peritoneum obscuring the anterior internal organs, and lacks
evident webbing between fingers II-III.{"\n"}</Text>

    </ScrollView>
  );
}
}

class SpinosaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#576427',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#6c7d31"}}>
          <Text style = {styles.scientificTitles}>Teratohyla
spinosa{"\n"}</Text>
          <Text style = {styles.commonTitles}>Dwarf Glass Frog{"\n"}</Text>

        </View>

        <Image
spinosa-2.png')
          resizeMode = 'contain'
          source={require('./assets/Images/32_Teratohyla_spinosa/Teratohyla-
spinosa-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small frog (~18-22mm, ~0.7-0.9in).
This species is not only the smallest Glass Frog in Costa Rica, but also Central
America. The dorsum is uniform green, lacking dark or light spots. A partially white-
pigmented parietal peritoneum covers approximately half to two-thirds of the ventral
surface of the body. <Text style={{fontStyle: 'italic'}}>Teratohyla spinosa</Text>
lacks a white lining of the digestive organs, and they are partially visible through
the lower abdomen. <Text style={{fontStyle: 'italic'}}>Teratohyla spinosa</Text> is
the only species in Costa Rica that has a protruding prepollical spine at the base of
finger I, which is often visible upon close inspection with a hand lens. The green
bones are particularly visible in the limbs{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Teratohyla spinosa</Text> is a fast high-pitched trill,
typically consisting of one or two distinctly pulsed notes, "treet" or "treet, treet".
Males call from the upper surfaces of vegetation bordering small streams.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

```

```

        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Teratohyla spinosa</Text> is found in the humid forests along the lowlands
and foothills of much of the Caribbean versant, from near sea level to
~900m.{"\n"}</Text>

        <Image
            resizeMode = 'contain'
            source={require('./assets/Images/32_Teratohyla_spinosa/Teratohyla-
spinosa-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}>Other species of Glass Frogs that could
possibly be confused with <Text style={{fontStyle: 'italic'}}>Teratohyla
spinosa</Text> are <Text style={{fontStyle: 'italic'}}>Cochranella granulosa</Text>,
<Text style={{fontStyle: 'italic'}}>Espadarana prosoblepon</Text> and <Text
style={{fontStyle: 'italic'}}>Sachatamia illex</Text>, but these latter species lack a
prepollical spine structure at the base of finger I. Further, <Text style={{fontStyle:
'italic'}}>C. granulosa </Text>has raised granules on the dorsum that often have a
bluish hue, <Text style={{fontStyle: 'italic'}}>E. prosoblepon</Text> usually has dark
dorsal spotting, and <Text style={{fontStyle: 'italic'}}>S. illex</Text> is much
larger, and has a silver-white iris with a strongly contrasting dark
reticulation.{"\n"}</Text>

    </ScrollView>
  );
}
}

/**** END CENTROLENIDAE PAGES *****/
/*****
*****/

/*****
*****/
/** BEGIN CRAUGASTORIDAE PAGES *****/
class Craugastoridae extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f9f9f9"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.familyTitles}>Craugastoridae (Flesh-Bellied
Frogs){"\n"}</Text>
        </View>

        <Image
            resizeMode = 'contain'
            source={require('./assets/Images/craugastoridae-main.png')}
            style = {styles.image}
        />

        <Text style = {styles.paragraphs}>

```

Craugastoridae is a very large family of frogs known by various common names such as Dirt Frogs, Flesh-belly Frogs, Northern Rain Frogs, or Robber Frogs. Nearly 770 species are currently recognized in this family (Frost, 2017). In Costa Rica 39 species of Craugastorids occur in three genera; the most speciose is *Craugastor* (29 species), followed by *Pristimantis* (9 species), and *Strabomantis* (1 species). Recent taxonomic revisions suggested by Crawford and Smith (2005), and Hedges et al. (2008) resulted in the application of these 3 genera for Costa Rica's Craugastorids rather than the former *Eleutherodactylus*.

The distribution of the family Craugastoridae extends from the USA, south throughout much of Central America, and across the northern half of South America. Craugastorids are widely distributed in Costa Rica, and range in elevation from near sea level to ~2700m *Craugastor melanostictus*). Costa Rican craugastorids occur in many different habitat types. Some species are terrestrial and usually found in leaf litter, but some species are found in semi-arboreal, and arboreal habitats. Most species are associated with forest habitats, but other species are quite tolerant of disturbance and can be found in pastures, fields and gardens.

Species of Craugastoridae in Costa Rica vary widely in both size and shape, ranging from the small, short-limbed *Craugastor transfordii* (~20mm) to the large, long-legged *Craugastor taurus* (~75mm). Regardless of size or shape, a major characteristic of this family is that all known species exhibit direct development (froglets hatch from eggs). The lack of free-living larvae allows Craugastorids to utilize many different moist microhabitats for potential sites to deposit their eggs without being dependent on standing water. Nonetheless, several species are primarily associated with riparian habitats, for example *Craugastor ranoides*. Craugastorids do not form large breeding congregations like those seen in many other anuran families, and the faint calls of some species, and the fact that most species produce only faint advertisement calls makes locating individuals based on auditory cues difficult at times. Other external features of this family are that finger I is longer than finger II, and a circumferential groove is present on the terminal pads of the digits, although this feature may be difficult to see in the field.

</Text>

<Text style = {styles.speciesInFamilyTitle}>Species in this Family:</Text>

```

<Button color = "#7ca2d0"
  title="Craugastor andi"
  onPress={() => this.props.navigation.navigate('AndiPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor angelicus"
  onPress={() => this.props.navigation.navigate('AngelicusPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor transfordii"
  onPress={() => this.props.navigation.navigate('BransfordiiPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor catalinae"
  onPress={() => this.props.navigation.navigate('CatalinaePage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor crassidigitus"
  onPress={() =>
this.props.navigation.navigate('CrassidigitusPage')}
/>

```

```

<Button color = "#7ca2d0"
  title="Craugastor cuaquero"
  onPress={() => this.props.navigation.navigate('CuaqueroPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor escoces"
  onPress={() => this.props.navigation.navigate('EscocesPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor fitzingeri"
  onPress={() => this.props.navigation.navigate('FitzingeriPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor fleischmanni"
  onPress={() =>
this.props.navigation.navigate('CraugastoridaeFleischmanniPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor gabbi"
  onPress={() => this.props.navigation.navigate('GabbiPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor gollmeri"
  onPress={() => this.props.navigation.navigate('GollmeriPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor gulosus"
  onPress={() => this.props.navigation.navigate('GulosusPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor megacephalus"
  onPress={() => this.props.navigation.navigate('MegacephalusPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor melanostictus"
  onPress={() =>
this.props.navigation.navigate('MelanostictusPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor mimus"
  onPress={() => this.props.navigation.navigate('MimusPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor noblei"
  onPress={() => this.props.navigation.navigate('NobleiPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor obesus"
  onPress={() => this.props.navigation.navigate('ObesusPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor persimilis"
  onPress={() => this.props.navigation.navigate('PersimilisPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor phasma"
  onPress={() => this.props.navigation.navigate('PhasmaPage')}
/>
<Button color = "#7ca2d0"
  title="Craugastor podiciferus"
  onPress={() => this.props.navigation.navigate('PodiciferusPage')}
/>
<Button color = "#7ca2d0"

```

```

        title="Craugastor polyptychus"
        onPress={() => this.props.navigation.navigate('PolyptychusPage')}
    />
    <Button color = "#7ca2d0"
        title="Craugastor ranoides"
        onPress={() => this.props.navigation.navigate('RanoidesPage')}
    />
    <Button color = "#7ca2d0"
        title="Craugastor rayo"
        onPress={() => this.props.navigation.navigate('RayoPage')}
    />
    <Button color = "#7ca2d0"
        title="Craugastor rhyacobatrachus"
        onPress={() =>
this.props.navigation.navigate('RhyacobatrachusPage')}
    />
    <Button color = "#7ca2d0"
        title="Craugastor rugosus"
        onPress={() => this.props.navigation.navigate('RugosusPage')}
    />
    <Button color = "#7ca2d0"
        title="Craugastor stejnerianus"
        onPress={() =>
this.props.navigation.navigate('StejnegerianusPage')}
    />
    <Button color = "#7ca2d0"
        title="Craugastor talamancae"
        onPress={() =>
this.props.navigation.navigate('CraugastoridaeTalamancaePage')}
    />
    <Button color = "#7ca2d0"
        title="Craugastor taurus"
        onPress={() => this.props.navigation.navigate('TaurusPage')}
    />
    <Button color = "#7ca2d0"
        title="Craugastor underwoodi"
        onPress={() => this.props.navigation.navigate('UnderwoodiPage')}
    />
    <Button color = "#7ca2d0"
        title="Pristimantis altae"
        onPress={() => this.props.navigation.navigate('AltaePage')}
    />
    <Button color = "#7ca2d0"
        title="Pristimantis caryophyllaceus"
        onPress={() =>
this.props.navigation.navigate('CaryophyllaceusPage')}
    />
    <Button color = "#7ca2d0"
        title="Pristimantis cerasinus"
        onPress={() => this.props.navigation.navigate('CerasinusPage')}
    />
    <Button color = "#7ca2d0"
        title="Pristimantis cruentus"
        onPress={() => this.props.navigation.navigate('CruentusPage')}
    />
    <Button color = "#7ca2d0"
        title="Pristimantis gaigei"
        onPress={() => this.props.navigation.navigate('GaigeiPage')}
    />
    <Button color = "#7ca2d0"
        title="Pristimantis moro"
        onPress={() => this.props.navigation.navigate('MoroPage')}
    />

```



```

        <Button color = "#7ca2d0"
            title="Pristimantis pardalis"
            onPress={() => this.props.navigation.navigate('ParadalisPage')}
        />
        <Button color = "#7ca2d0"
            title="Pristimantis ridens"
            onPress={() => this.props.navigation.navigate('RidensPage')}
        />
        <Button color = "#7ca2d0"
            title="Pristimantis taeniatus"
            onPress={() => this.props.navigation.navigate('TaeniatusPage')}
        />
        <Button color = "#7ca2d0"
            title="Strabomantis bufoniformis"
            onPress={() => this.props.navigation.navigate('BufoniformisPage')}
        />
    </ScrollView>
    );
}
}
class AndiPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#AF7235',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
                <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
                    <Text style = {styles.scientificTitles}>Craugastor
andi{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Starrett's Flesh-bellied
Frog{"\n"}</Text>
                </View>
                <Image
                    resizeMode = 'contain'
                    source={require('./assets/Images/33_Craugastor_andi/Craugastor-
andi-2.png')}
                    style = {styles.image}
                />
                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A medium to large-sized frog (~40-55mm,
~1.6-2.2in males; ~65- 80mm, ~2.6- 3.2in females), with a slim build, tapered snout
and long limbs. The skin is smooth. The eyes are large with horizontal pupils and
light-colored irises with a darker horizontal band. Tympanic membranes (larger in
males) are visible below a supratympanic fold. Dorsal coloration is brown often with a
pale vertebral stripe. Bright yellow spots occur on the groin and posterior thigh.
Contrasting dark and white markings occur on the lips and onto the shoulder. The
venter is cream-colored anteriorly and yellow posteriorly with dark mottling. The
throat is dark, but the absence of pigment medially creates a pale line. Fingers and
toes have expanded emarginate terminal pads. Fingers lack webbing, and toes have
moderate webbing. Males have brown nuptial pads and a small, internal vocal
sac.{"\n"}</Text>
            </ScrollView>
        );
    }
}

```

```
    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call from stream sides during the
first heavy rains of the wet season. The call is described as a single note, low-
pitched "glug" produced at long intervals.{"\n"}</Text>
```

```
    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor andi</Text> is an uncommon nocturnal frog found in riparian
habitats. Outside of the breeding season, they are found in streamside vegetation and
forest canopy at elevations ranging from ~450 to ~1,400m. Historically, this species
had a limited distribution, but like many other species experienced severe declines in
the late 1980s and is now rare, if not extinct. Encounters with this species should be
carefully documented.{"\n"}</Text>
```

```
    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/33_Craugastor_andi/Craugastor-
andi-range-2.png')}
      style = {styles.image}
    />
```

```
    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor andi</Text> may be confused with other Craugastor species. <Text
style={{fontStyle: 'italic'}}>Craugastor cuaquero</Text> is most similar, but is
smaller in size and has very limited toe webbing. <Text style={{fontStyle:
'italic'}}>Craugastor fitzingeri</Text> has a slightly rougher texture dorsally,
smaller pale spots on the posterior thighs, and lacks emarginate pads on the
digits.{"\n"}</Text>
```

```
  </ScrollView>
  );
}
}
class AngelicusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
angelicus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Angel Flesh-bellied
Frog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/34_Craugastor_angelicus/Craugastor-angelicus-
kubicki-2.png')}
          style = {styles.image}
        />
      </ScrollView>
    );
  }
}
```

```

/>
<Text style = {styles.paragraphs}>(Photo by Brian Kubicki){'\n'}</Text>

<Text style = {styles.sectionTitles}>Description{"\n"}</Text>
<Text style = {styles.paragraphs}>A medium to large-sized frog (~26-46mm,
~1-1.8in males; ~38-75mm, ~1.5-3in females) with a robust build, and rounded snout.
The skin is smooth to slightly granular. The eyes are large with horizontal pupils and
light-colored irises with a darker horizontal band. Tympanic membranes (larger and
round in males vs smaller and oval in females) are visible below a supratympanic fold.
Dorsal coloration is brown to gray, usually with dark spots. The groin and posterior
thigh are darkly pigmented, with faint pale markings present, but lacking bright,
contrasting colors. The venter is yellowish orange to red with dark mottling. The
throat varies in extent of pigmentation, but lacks the pale median line. Fingers and
toes have slightly expanded terminal pads. Fingers lack webbing and toes have very
limited webbing, but a distinct tarsal fold. Males have brown nuptial pads, but lack a
vocal sac.{"\n"}</Text>

<Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
<Text style = {styles.paragraphs}>The advertisement call for this species
is unknown.{"\n"}</Text>

<Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
<Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor angelicus</Text> is a formerly common nocturnal frog that
occurred near streams in forests ranging in elevation from ~650 to 1600m. Individuals
forage and reproduce on steep streamside banks. This is another species that has
disappeared from pristine habitat and is now very rare or extinct. Encounters should
be carefully documented.{"\n"}</Text>

<Image
  resizeMode = 'contain'

  source={require('./assets/Images/34_Craugastor_angelicus/Craugastor-angelicus-
range-2.png')}
  style = {styles.image}
/>

<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
<Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor angelicus</Text> may be confused with closely related Craugastor
species. <Text style={{fontStyle: 'italic'}}>Craugastor escoces</Text> is most
similar, but differs in having wider terminal finger pads. <Text style={{fontStyle:
'italic'}}>Craugastor fleischmanni</Text> differs in having slight terminal pads on
the digits and lacking the bright ventral colors of <Text style={{fontStyle:
'italic'}}>C. angelicus</Text>.{"\n"}</Text>

</ScrollView>
);
}
}
class BransfordiiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>

```

```

        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
            <Text style = {styles.scientificTitles}>Craugastor
bransfordii{"\n"}</Text>
            <Text style = {styles.commonTitles}>Bransford's Flesh-bellied
Frog{"\n"}</Text>
        </View>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/35_Craugastor_bransfordii/Craugastor-
bransfordii-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A tiny to small (~18-25mm, ~0.7-1in),
but robust frog. The dorsal coloration is extremely variable, ranging from tan to dark
brown, with a mixture of spots, bands, or irregular markings in assorted earthy tones.
On the groin, thighs, and ventral surface of the lower leg, there is often a reddish-
orange suffusion. The dorsal skin is granular, with some specimens also having
numerous longitudinal ridges. The eyes have horizontal pupils, with a gold to copper
iris. The ventral surfaces are light tan to gray with numerous lighter markings,
especially on the throat. The hands and feet lack both expanded discs on the tips of
the digits, and interdigital webbing.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor bransfordii</Text> consists of a quick chirp-
like squeak.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor bransfordii</Text> occurs throughout much of the lowlands and
foothills of the northern and central Caribbean, from ~50 to 900m. This common diurnal
species can be found in a variety of habitats from old-growth forest to young
secondary forest. <Text style={{fontStyle: 'italic'}}>Craugastor bransfordii</Text> is
terrestrial, and is often seen hopping among the leaf litter on the forest
floor.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/35_Craugastor_bransfordii/Craugastor-
bransfordii-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor bransfordii</Text> might be confused with <Text
style={{fontStyle: 'italic'}}>C. underwoodi</Text> and <Text style={{fontStyle:
'italic'}}>C. polyptychus</Text>. <Text style={{fontStyle: 'italic'}}>Craugastor
underwoodi</Text> is slightly larger and typically has smoother, less projecting
tubercles on the ventral surfaces of the hands and feet. <Text style={{fontStyle:
'italic'}}>Craugastor polyptychus</Text> is slightly larger, and males completely lack
nuptial pads.{"\n"}</Text>

    </ScrollView>
);
}

```

```

}
class CatalinaePage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craigastor
catalinae{"\n"}</Text>
          <Text style = {styles.commonTitles}>Karen's Flesh-bellied
Frog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/36_Craigastor_catalinae/Craigastor-catalinae-
2.png')}
          style = {styles.image}
        />
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium to large-sized frog (~30-45mm,
~1.2-1.8in males; ~45-75mm, ~1.2-3in females), with a robust build and rounded snout.
The skin is smooth to slightly granular. The eyes are large with horizontal pupils,
and light-colored irises with a darker horizontal band. Tympanic membranes are visible
below a slight supratympanic fold (larger in males). Dorsal coloration is brown,
greenish brown, or gray, usually with dark spots. The posterior thighs are dark with
small yellow spots. The venter is white to cream-colored. Fingers and toes have
slightly expanded terminal pads. Fingers lack webbing, and Finger I is longer than
Finger II. Toes have a lateral fringe and moderate webbing; a tarsal fold also occurs.
Males have nuptial pads and a vocal sac.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craigastor catalinae</Text> is unknown.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craigastor catalinae</Text> is found on the Pacific versant at elevations
ranging from ~1200 to 1800m. This nocturnal species is associated with riparian
habitats and is usually found on rocks in the stream or streamside vegetation. <Text
style={{fontStyle: 'italic'}}>Craigastor catalinae</Text> was never widespread, but
was locally common, prior to declines. They have now disappeared from much of their
known range. Any encounters with this species should be carefully
documented.{"\n"}</Text>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/36_Craigastor_catalinae/Craigastor-catalinae-
range-2.png')}
          style = {styles.image}

```

```

/>
    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor catalinae</Text> may be confused with <Text style={{fontStyle:
'italic'}}>C. taurus</Text>, <Text style={{fontStyle: 'italic'}}>C.
fleischmanni</Text>, <Text style={{fontStyle: 'italic'}}>C. obesus</Text>, and <Text
style={{fontStyle: 'italic'}}>C. rhyacobatrachus</Text>. Both <Text style={{fontStyle:
'italic'}}>C. fleischmanni</Text> and <Text style={{fontStyle: 'italic'}}>C.
taurus</Text> have smaller discs on the digits, and <Text style={{fontStyle:
'italic'}}>C. taurus</Text> is restricted to low elevations. Both <Text
style={{fontStyle: 'italic'}}>C. obesus</Text> and <Text style={{fontStyle:
'italic'}}>C. rhyacobatrachus</Text> have larger discs on the digits and more toe
webbing.{"\n"}</Text>

    </ScrollView>
  );
}
}
class CrassidigitusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
crassidigitus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Thick-fingered Flesh-bellied
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/37_Craugastor_crassidigitus/Craugastor-
crassidigitus-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~20-50mm; ~0.8-
2in), with a slim build, tapered snout and long legs. The skin is slightly granular
with scattered tubercles dorsally; ventral skin is smooth. The eyes are large with
horizontal pupils, and light-colored irises with a darker horizontal band. Tympanic
membranes are large (~ the size of the eye in males) and readily visible below
supratympanic folds. Males have brown nuptial pads and a small, internal vocal sac.
Fingers and toes have expanded terminal pads. Fingers lack webbing, and toes have
moderate webbing. Dorsal coloration is extremely variable, but usually a shade of
brown or gray with scattered darker (occasionally green) blotches and/ or a light mid-
dorsal stripe. Dark markings occur on/below the supratympanic fold, and dark bars
occur on the limbs dorsally. The posterior thigh is uniform in color (brown, orange,
or red). The venter is white, but may have scattered dark spots.{"\n"}</Text>

```

```

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from low vegetation, often
in early evening after heavy rains. They produce a "squeak" or "squawk" like calls
that range from a single to several notes.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>A very common species occurring in
nearly all moist to wet habitats (absent from dry forests of Guanacaste) on both
slopes from near sea level to ~2000m. They are usually found while active (night) on
low vegetation, but may also be found diurnally in leaf litter.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/37_Craugastor_crassidigitus/Craugastor-
crassidigitus-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor crassidigitus</Text> is most likely to be confused with <Text
style={{fontStyle: 'italic'}}>C. fitzingeri</Text>, however the latter species has
large, light spots on the posterior thigh, minimal toe webbing, and a white stripe on
the throat. Other similar species include <Text style={{fontStyle: 'italic'}}>C.
talamancae</Text>, and <Text style={{fontStyle: 'italic'}}>C. mimus</Text>. However,
these both have a dark eye mask that may extend onto the body, and <Text
style={{fontStyle: 'italic'}}>C. talamancae</Text> has a light lip
stripe.{"\n"}</Text>

    </ScrollView>
  );
}
}
class CuaqueroPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
cuaquero{"\n"}</Text>
          <Text style = {styles.commonTitles}>Quaker Flesh-bellied
Frog{"\n"}</Text>

        </View>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/38_Craugastor_cuaquero/Craugastor-cuaquero-
2.png')}
            style = {styles.image}
        />

```

```

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A medium-sized frog (~33-48mm, ~1.3-1.9in female). The skin is smooth with a few scattered low, rounded tubercles and a supraocular tubercle. The dorsal coloration is dark brown with lighter brown limbs. A supratympanic fold colored darkly on the inferior margin extends from the eye over the tympanic membrane and down to the shoulder. The posterior thighs are brown with yellowish-cream spots or vertical bars. The venter is smooth and pale in color with a pink wash in the groin. The throat is dark with a white median stripe. The eyes are large with horizontal pupils and light-colored irises with a darker horizontal band. The digits have enlarged terminal discs. Fingers lack webbing, and the toes have limited webbing.{"\n"}</Text>

```

```

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>The advertisement call of <Text style={{fontStyle: 'italic'}}>Craugastor cuaquero</Text> is unknown.{"\n"}</Text>

```

```

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Craugastor cuaquero</Text> is endemic to Costa Rica, and only known to inhabit lower montane cloud forests near Monteverde at elevations of ~1,500 to 1650m. This species is only known from two female specimens both found at night on low vegetation. Any encounters with this species should be carefully documented.{"\n"}</Text>

```

```

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/38_Craugastor_cuaquero/Craugastor-cuaquero-range-2.png')}
      style = {styles.image}
    />

```

```

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Craugastor cuaquero</Text> is similar to <Text style={{fontStyle: 'italic'}}>C. andi</Text>, <Text style={{fontStyle: 'italic'}}>C. fitzingeri</Text>, <Text style={{fontStyle: 'italic'}}>C. talamancae</Text>, and <Text style={{fontStyle: 'italic'}}>C. crassidigitus</Text>. Both <Text style={{fontStyle: 'italic'}}>C. andi</Text> and <Text style={{fontStyle: 'italic'}}>C. fitzingeri</Text> differ in having substantial toe webbing. <Text style={{fontStyle: 'italic'}}>Craugastor crassidigitus</Text>, <Text style={{fontStyle: 'italic'}}>C. rayo</Text> and <Text style={{fontStyle: 'italic'}}>C. talamancae</Text> all differ in having a uniformly colored posterior thigh, and <Text style={{fontStyle: 'italic'}}>C. crassidigitus</Text> has slightly more toe webbing and lacks the pink coloration in the groin.{"\n"}</Text>

```

```

    </ScrollView>
  );
}
}
class EscocesPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (

```



```

        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
            <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
                <Text style = {styles.scientificTitles}>Craugastor
escoces{"\n"}</Text>
                <Text style = {styles.commonTitles}>Scott's Flesh-bellied
Frog{"\n"}</Text>
            </View>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/39_Craugastor_escoces/Craugastor-
escoces-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A medium-sized frog (~26-46mm, ~1-1.8in
males; ~38-72mm, ~1.5-2.8in females) with a robust build and rounded snout. The skin
is smooth to slightly granular. The eyes are large with horizontal pupils and gold
colored irises with a darker lower half. Tympanic membranes (larger and round in males
vs smaller and oval in females) are visible below a supratympanic fold. Dorsal
coloration is dark olive and the posterior thigh is uniformly colored. The venter is
red with dark mottling. Fingers and toes have expanded terminal pads. The fingers lack
webbing and toes have very limited webbing, but a distinct tarsal fold. Males have
nuptial pads and a subgular vocal sac.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor escoces</Text> is unknown.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor escoces</Text> is a formerly common frog found in the premontane
and lower montane forests of the Central Volcanics at elevations ranging from 1,100 to
2,100m. They are a riparian species and were usually found foraging along stream
banks. This is another amphibian species that disappeared from intact habitat and is
now considered extinct. Any encounter with this species should be carefully
documented.{"\n"}</Text>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/39_Craugastor_escoces/Craugastor-
escoces-range-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor escoces</Text> is most likely to be confused with <Text
style={{fontStyle: 'italic'}}>C. angelicus</Text> and <Text style={{fontStyle:
'italic'}}>C. fleischmanni</Text>. <Text style={{fontStyle: 'italic'}}>Craugastor
angelicus</Text> differs in having minimally expanded terminal pads on the digits, and
the ventral color is subtly different being yellow, orange or orangish-red. <Text
style={{fontStyle: 'italic'}}>Craugastor fleischmanni</Text> differs in having a more
granular dorsum, pale colors (gray dorsally and yellow ventrally), marked posterior
thigh, more toe webbing, and minimally expanded terminal pads on the
digits.{"\n"}</Text>

        </ScrollView>
    );
}

```

```

}
class FitzingeriPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
fitzingeri{"\n"}</Text>
          <Text style = {styles.commonTitles}>Fitzinger's Flesh-bellied
Frog{"\n"}</Text>

          </View>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/40_Craugastor_fitzingeri/Craugastor-
fitzingeri-2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
          <Text style = {styles.paragraphs}>A medium-sized frog (~25-55mm; ~0.9-
2.1in), with a slim build, tapered snout and long legs. The skin is slightly granular
with scattered tubercles dorsally; ventral skin is smooth. The eyes are large with
horizontal pupils and light-colored irises with a darker horizontal band. Tympanic
membranes are large (~equal to the size of the eye in males, smaller in females) and
readily visible below supratympanic folds that curve down towards the shoulder. Males
have brown nuptial pads and a small, internal vocal sac. Fingers and toes have
expanded terminal pads. Fingers lack webbing and toes have limited webbing. Dorsal
coloration is extremely variable, but usually a shade of brown or gray with scattered
darker blotches and often a light mid-dorsal stripe. The supratympanic fold is darkly
pigmented, and dark bars occur on the limbs dorsally. The posterior thigh is dark with
distinct light spots. The venter is white with blotches of diffuse dark pigment. The
pigment is lacking on the middle of the throat, creating a pale median
stripe.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
          <Text style = {styles.paragraphs}>Males call from leaf litter or low
vegetation producing a series of short, harsh notes in quick succession, sounding like
"chek, chek, chek, chek...".{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
          <Text style = {styles.paragraphs}>A very common species occurring in
nearly all moist/wet habitats on both slopes from near sea level to ~1500m. They are
usually found while active (night) on the forest floor or on low
vegetation.{"\n"}</Text>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/40_Craugastor_fitzingeri/Craugastor-
fitzingeri-range-2.png')}

```

```

        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor fitzingeri</Text> is most likely to be confused with <Text
style={{fontStyle: 'italic'}}>C. crassidigitus</Text>. However the latter species
differs in lacking both the large, light spots on the posterior thigh, and a white
stripe on the throat, as well as having more toe webbing. <Text style={{fontStyle:
'italic'}}>Craugastor ranoides</Text> is also similar, but differs in being more
granular and having yellow on the posterior half of the venter and on the ventral
surface of the thighs>{"\n"}</Text>

    </ScrollView>
  );
}
}
class CraugastoridaeFleischmanniPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
fleischmanni{"\n"}</Text>
          <Text style = {styles.commonTitles}>Fleischmann's Flesh-bellied
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/41_Craugastor_fleischmanni/Craugastor-
fleischmanni-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~29-47mm, ~1.1-
1.9in males; ~38-75mm, ~1.5-3in females). They have a robust build, wide head, and
rounded snout. The dorsal skin is variable in texture, ranging from smooth to
granular. The eyes have horizontal pupils and brass colored irises with a darker lower
half. Tympanic membranes (larger and round in males vs smaller and oval in females)
are visible below a supratympanic fold. Dorsal coloration is gray to dark brown and
may have scattered black spots. The posterior thigh is blotched or mottled. The venter
is pale yellow with dark mottling. Fingers and toes have only slightly expanded
terminal pads. The fingers lack webbing and toes have very limited to moderate
webbing, lateral fringes, and a distinct tarsal fold is present. Males have nuptial
pads and a subgular vocal sac>{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor fleischmanni</Text> is unknown>{"\n"}</Text>

```

```

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}> Craugastor fleischmanni</Text> is a formerly common frog found in the
premontane and lower montane forests of the Central Volcanics and western Talamanca
at elevations ranging from ~1,050 to 2,500m. They are a riparian species usually found
foraging along stream banks. This species has disappeared from intact habitat and is
now considered critically endangered.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/41_Craugastor_fleischmanni/Craugastor-
fleischmanni-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}> Craugastor fleischmanni</Text> is most likely to be confused with <Text
style={{fontStyle: 'italic'}}>C. angelicus</Text> and <Text style={{fontStyle:
'italic'}}>C. escoces</Text>. <Text style={{fontStyle: 'italic'}}> Craugastor
angelicus</Text> differs in having larger terminal pads on the digits (they are barely
wider than toes on <Text style={{fontStyle: 'italic'}}>C. fleischmanni</Text>), and a
yellow, orange or orangish-red venter. <Text style={{fontStyle: 'italic'}}> Craugastor
escoces</Text> differs in having a smoother dorsum, a bright red venter, uniformly
colored posterior thigh, more toe webbing, and larger terminal pads on the
digits.{"\n"}</Text>

    </ScrollView>
  );
}
}
class GabbiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
gabbi{"\n"}</Text>
          <Text style = {styles.commonTitles}>Gabb's Flesh-bellied
Frog{"\n"}</Text>

        </View>

        <Image
            resizeMode = 'contain'
            source={require('./assets/Images/42_Craugastor_gabbi/Craugastor-
gabbi-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>

```

```
    <Text style = {styles.paragraphs}>A small-sized frog (~14-22mm, ~0.6-0.8in). The skin is relatively granular. The head is smooth with a short snout. The eyes are large with a horizontal pupil and a copper or brassy iris. Tympanic membranes are readily visible below a darkly pigmented supratympanic stripe/ridge. The variable dorsal coloration is usually brown or gray. Darker blotches are often present on the limbs and a pale middorsal stripe may occur. The venter is cream-colored with dark pigment reaching the midline. The fingers are unwebbed but the toes have basal webbing. Distinct tubercles occur on the digits, feet and hands, including a palmar tubercle that is distinctly larger than the thenar tubercle. Males lack both vocal sacs and nuptial pads.{ "\n" }</Text>
```

```
    <Text style = {styles.sectionTitles}>Calls{ "\n" }</Text>
    <Text style = {styles.paragraphs}>The advertisement call of <Text style={{fontStyle: 'italic'}}>Craugastor gabbi</Text> is a short, high-pitched squeak.{ "\n" }</Text>
```

```
    <Text style = {styles.sectionTitles}>Range and Habitat{ "\n" }</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Craugastor gabbi</Text> is locally abundant occurring on the Pacific versant of the eastern Talamancas at elevations of ~1,100 to 1,300m. They can be found in premontane forests as well as disturbed sites. They are usually found in the day hopping in the leaf litter, but similar to <Text style={{fontStyle: 'italic'}}>C. stejnegerianus</Text> they may also be active at night.{ "\n" }</Text>
```

```
    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/42_Craugastor_gabbi/Craugastor-gabbi-range-2.png')}
      style = {styles.image}
    />
```

```
    <Text style = {styles.sectionTitles}>Similar Species{ "\n" }</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Craugastor gabbi</Text> appears similar to other small Craugastor species. Nonetheless <Text style={{fontStyle: 'italic'}}>C. underwoodi</Text> differs in having palmar and thenar tubercles of nearly equal size and males have nuptial pads. <Text style={{fontStyle: 'italic'}}>Craugastor podiciferus</Text> differs in having a distinct heel tubercle (absent on <Text style={{fontStyle: 'italic'}}>C. gabbi</Text>). <Text style={{fontStyle: 'italic'}}>Craugastor stejnegerianus</Text> is most similar but differs in usually lacking the ventral dark pigment reaching the midline, and occurring at lower elevations. Other similar species differ in occurring on the Atlantic slope (<Text style={{fontStyle: 'italic'}}>C. bransfordii</Text>, <Text style={{fontStyle: 'italic'}}>C. persimilis</Text>, and <Text style={{fontStyle: 'italic'}}>C. polyptychus</Text>).{ "\n" }</Text>
```

```
  </ScrollView>
  );
}
}
class GollmeriPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
```

```

                <Text style = {styles.scientificTitles}>Craugastor
gollmeri{"\n"}</Text>
                <Text style = {styles.commonTitles}>Gollmer's Masked Flesh-bellied
Frog{"\n"}</Text>

                </View>

                <Image
                    resizeMode = 'contain'

                    source={require('./assets/Images/43_Craugastor_gollmeri/Craugastor-gollmeri-
2.png')}
                    style = {styles.image}
                />

                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A moderate-sized (~25-55mm, ~1-2.2in),
and robust frog. The dorsal coloration typically ranges from gray, tan or reddish
orange, often having a fine light middorsal stripe and numerous darker irregular
bands, especially on the arms and legs. A dark brown to black mask extends from the
snout below the canthal ridge, upper eyelid, supratympanic fold, and diagonally
downward onto the anterior flank. The dorsal skin is smooth to weakly granular with
some slightly larger rounded to conical tubercles scattered throughout, especially on
the arms and legs, on the upper eyelids, and on each of the shoulders. The eyes have a
horizontal pupil with the upper half of the iris being copper to red, while the lower
half is dark, principally black. The ventral surfaces of the body are cream-colored to
light tan, with the throat often being light gray. The hands and feet lack both
expanded terminal discs and evident interdigital webbing. On the heel there are
typically one or two evident tubercles.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
                <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor gollmeri</Text> is a fast series of 13 soft,
short "ah" notes.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
                <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor gollmeri</Text> occurs throughout much of the Caribbean
foothills, at elevations ranging from near sea level to ~1500m, but is most commonly
encountered in premontane forests (>500m). This uncommon species is most often
observed during the day, hopping among the leaf litter on the forest floor, or at
times at night on low vegetation.{"\n"}</Text>

                <Image
                    resizeMode = 'contain'

                    source={require('./assets/Images/43_Craugastor_gollmeri/Craugastor-gollmeri-
range-2.png')}
                    style = {styles.image}
                />

                <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
                <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor gollmeri</Text> might be confused with <Text style={{fontStyle:
'italic'}}>C. noblei</Text> and <Text style={{fontStyle: 'italic'}}>C. mimus</Text>.
<Text style={{fontStyle: 'italic'}}>Craugastor mimus</Text> has weak to moderate
interdigital webbing on the feet, and fleshy fringes on the margins of the toes. <Text
style={{fontStyle: 'italic'}}>Craugastor noblei</Text> has expanded discs on the tips
of fingers III and IV.{"\n"}</Text>

                </ScrollView>
            );

```

```

    }
  }
}
class GulosusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}> Craugastor
gulosus{"\n"}</Text>
          <Text style = {styles.commonTitles}> Big-Throated Flesh-bellied
Frog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/44_Craugastor_gulosus/Craugastor-
gulosus-eduardo-boza-2.png')}
          style = {styles.image}
        />
        <Text style = {styles.paragraphs}> (Photo by Eduardo Boza){'\n'}</Text>
        <Text style = {styles.sectionTitles}> Description{"\n"}</Text>
        <Text style = {styles.paragraphs}> A medium to large-sized frog (estimated
as ~40-60mm, ~1.6-2.4in males; ~72-103mm, ~2.8-4.1in females). These frogs have a very
large head and a smooth dorsum. Cranial crests are present, as are supratympanic folds
that curve down to the shoulder. Tympanic membranes are visible. Dorsal coloration is
brown to dark brown, with a dark mark along the supratympanic fold, and dark spots on
the tympanic membrane, under the eye, and occasionally a few on the dorsum. The eyes
are large and have horizontal pupils and gold irises with heavy, dark reticulations.
The venter is pale yellow with brown mottling. The arms are relatively short and
stocky. There is no webbing on the hands or feet. The fingers lack expanded terminal
pads, whereas those on the toes are slightly expanded. Males lack nuptial
pads.{"\n"}</Text>
        <Text style = {styles.sectionTitles}> Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}> The advertisement call of <Text
style={{fontStyle: 'italic'}}> Craugastor gulosus</Text> is unknown.{"\n"}</Text>
        <Text style = {styles.sectionTitles}> Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}> <Text style={{fontStyle:
'italic'}}> Craugastor gulosus</Text> is a rare frog that may be found in premontane
and lower montane forests of the Talamanca at elevations ranging from ~1000 to 1900m.
They are terrestrial species found on the forest floor. <Text style={{fontStyle:
'italic'}}> Craugastor gulosus</Text> is a poorly known species in Costa Rica and any
encounters should be carefully documented.{"\n"}</Text>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/44_Craugastor_gulosus/Craugastor-
gulosus-range-2.png')}
          style = {styles.image}
        />

```

```

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor gulosus</Text> may be confused with the other broad-headed frogs
in Costa Rica, including <Text style={{fontStyle: 'italic'}}>C. megacephalus</Text>,
<Text style={{fontStyle: 'italic'}}>C. rugosus</Text>, and <Text style={{fontStyle:
'italic'}}>Strabomantis bufoniformis</Text>. Both Craugastor species differ in having
distinct dorsal folds extending posteriorly from the supratympanic fold. <Text
style={{fontStyle: 'italic'}}>Craugastor megacephalus</Text> differs further in also
having folds above the pelvis, whereas <Text style={{fontStyle: 'italic'}}>C.
rugosus</Text> differs further in having a posterior thigh marked with red and black
blotches (white and black in juveniles). <Text style={{fontStyle:
'italic'}}>Strabomantis bufoniformis</Text> differs in having a granular or
tuberculate dorsum and toe webbing.{"\n"}</Text>

    </ScrollView>
  );
}
}
class MegacephalusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
megacephalus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Big-headed Flesh-bellied
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/45_Craugastor_megacephalus/Craugastor-
megacephalus-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A moderate to large-sized (~30-43mm,
~1.2-1.7in males; 50-70 mm, ~2-2.8in females), and robust frog. The dorsal coloration
ranges from tannish gray to reddish orange, often having a fine light middorsal stripe
and numerous darker irregular bands, especially on the arms and legs. In the center of
the back, between the base of the head and sacrum, there are a pair of dermal ridges
that form an hourglass pattern. There is a black supratympanic line. The dorsal skin
is granular, with some slightly larger tubercles scattered throughout, especially on
the arms and legs. On the upper eyelids there are a group of larger rounded to conical
tubercles. The eyes have a horizontal pupil, with a golden yellow to goldish-orange
iris having a dark reticulation. The ventral surface of the body and legs is dark with
numerous large light spots or irregular markings. The throat is similar in color to
the ventral surface of the body, but finely speckled. The hands and feet lack both
webbing and greatly expanded terminal discs on the digits.{"\n"}</Text>

```



```

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor megacephalus</Text> is unknown.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor megacephalus</Text> inhabits most of the Caribbean lowlands and
foothills, from near sea level to ~1200m. This relatively common nocturnal species is
principally found in old-growth forest and secondary forest. <Text style={{fontStyle:
'italic'}}>Craugastor megacephalus</Text> is terrestrial and can often be observed at
night sitting on the forest floor.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/45_Craugastor_megacephalus/Craugastor-
megacephalus-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor megacephalus</Text>, with its evident hourglass-shaped dorsal
ridges and patterned ventral surface, is very distinct. <Text style={{fontStyle:
'italic'}}>Craugastor gulosus</Text> and <Text style={{fontStyle: 'italic'}}>C.
rugosus</Text> are similar in shape and habit, but both lack the patterned venter, and
<Text style={{fontStyle: 'italic'}}>C. gulosus</Text> lacks the dorsal folds, whereas
<Text style={{fontStyle: 'italic'}}>C. rugosus</Text> has red and black posterior
thighs.{"\n"}</Text>

    </ScrollView>
  );
}
}
class MelanostictusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
melanostictus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Black-spotted Flesh-bellied
Frog{"\n"}</Text>

        </View>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/46_Craugastor_melanostictus/Craugastor-
melanostictus-2.png')}
            style = {styles.image}

```

```

/>
    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A medium-sized frog (~35-55mm; ~1.4-
2.2in). There are scattered tubercles dorsally, whereas the ventral skin is slightly
granular. The eyes are large, with horizontal pupils, and reddish or copper/red
irises. Distinct supraocular tubercles are present. Tympanic membranes are obscure,
but visible below supratympanic folds. Dorsal coloration is variable, ranging from
brown, green, or gray. Dark markings radiate from the eye to the snout, lip, and along
the supratympanic fold. Dark bars alternate with lighter colors on the legs. Red,
magenta, orange or yellow occurs on groin and on thighs between dark bars. The venter
is pale in color, but may be heavily suffused with dark markings. Fingers and toes
lack webbing and have expanded terminal pads. Males have light colored nuptial pads
and a subgular vocal sac.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call after heavy rains from low
vegetation producing a musical, whistling "phooot" repeated in ~8 quick
notes.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor melanostictus</Text> is an uncommon species occurring mostly in
primary forests of the Cordilleras from ~1150 to 2700m. They are usually found while
active (night) on low vegetation.{"\n"}</Text>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/46_Craugastor_melanostictus/Craugastor-
melanostictus-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor melanostictus</Text> is most likely to be confused with
Craugastor or Pristimantis species. <Text style={{fontStyle: 'italic'}}>Craugastor
crassidigitus</Text>, <Text style={{fontStyle: 'italic'}}>C. fitzingeri</Text> and
<Text style={{fontStyle: 'italic'}}>C. andi</Text> are all similar in size, and have
dark markings on the face, but all lack the supraocular tubercles. <Text
style={{fontStyle: 'italic'}}>Craugastor escoces</Text> and <Text style={{fontStyle:
'italic'}}>C. fleischmanni</Text> are also similar, but both differ in having brightly
colored venters (yellow, or red respectively). <Text style={{fontStyle:
'italic'}}>Pristimantis cruentus</Text> has supraorbital tubercles, but differs in
having toe five longer than toe three.{"\n"}</Text>

  </ScrollView>
);
}
}
class MimusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  },
};
render() {
  return (

```

```

        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
            <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
                <Text style = {styles.scientificTitles}>Craugastor
mimus{"\n"}</Text>
                <Text style = {styles.commonTitles}>Mimic Masked Flesh-bellied
Frog{"\n"}</Text>
            </View>
            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/47_Craugastor_mimus/Craugastor-
mimus-2.png')}
                style = {styles.image}
            />
            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A moderate-sized (~30-60mm, ~1.2-
2.4in), and robust frog. The dorsal coloration ranges from tannish gray to reddish
orange, often having a fine, light middorsal stripe and numerous darker irregular
bands, especially on the arms and legs. A dark brown to black mask runs from the tip
of the snout, below the canthal ridge, upper eyelid, supratympanic fold, and
diagonally downward onto the anterior half of the flank. The dorsal skin is smooth to
weakly granular, with a few small rounded tubercles scattered throughout. The eyes
have a horizontally elliptical pupil, with the upper half of the iris being golden
yellowish gray to golden orange, while the lower half is dark. The ventral surfaces of
the body are cream-colored to light tan, and the throat often has a slight gray hue.
The digits lack expanded terminal discs, and weak to moderate webbing is only present
on the feet. The edges of the toes have weak fleshy fringes.{"\n"}</Text>
            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor mimus</Text> is unknown.{"\n"}</Text>
            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor mimus</Text> has been found at scattered locations throughout
most of the Caribbean lowlands and foothills, from near sea level to ~1000m. This
relatively common species is mostly diurnal, and is principally found in old-growth
forest and secondary forest. Craugastor mimus is most often observed during the day,
hopping among the leaf litter on the forest floor, or at times at night on the low-
lying vegetation.{"\n"}</Text>
            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/47_Craugastor_mimus/Craugastor-
mimus-range-2.png')}
                style = {styles.image}
            />
            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor mimus</Text> might be confused with <Text style={{fontStyle:
'italic'}}>C. gollmeri</Text> and <Text style={{fontStyle: 'italic'}}>C.
noblei</Text>. <Text style={{fontStyle: 'italic'}}>Craugastor mimus</Text> has weak to
moderate interdigital webbing on the feet, and fleshy fringes on the margins of the
toes, whereas both <Text style={{fontStyle: 'italic'}}>C. gollmeri</Text> and <Text
style={{fontStyle: 'italic'}}>C. noblei</Text> lack any evident webbing on the hands
or feet.{"\n"}</Text>
        </ScrollView>
    );

```

```

    }
  }
  class NobleiPage extends React.Component {
    static navigationOptions = {
      headerStyle: {
        backgroundColor: '#AF7235',
      },
      headerTintColor: '#fff',
      headerTitleStyle: {
        fontWeight: 'bold',
      },
    };
    render() {
      return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f9f9f9"}}>
          <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
            <Text style = {styles.scientificTitles}>Craugastor
noblei{"\n"}</Text>
            <Text style = {styles.commonTitles}>Noble's Masked Flesh-bellied
Frog{"\n"}</Text>

          </View>

          <Image
            resizeMode = 'contain'
            source={require('./assets/Images/48_Craugastor_noblei/48-
Craugastor-noblei-2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
          <Text style = {styles.paragraphs}>A moderate to large-sized (~30–70mm,
~1.2–2.8in), and robust frog. The dorsal coloration typically ranges from tannish gray
to reddish orange, often having a fine, light middorsal stripe and numerous darker
irregular bands, especially on the arms and legs. There is often a dark "X" pattern on
the dorsum. A dark mask extends from the tip of the snout onto the anterior flank. The
dark mask on <Text style={{fontStyle: 'italic'}}>C. noblei</Text> is often weaker than
those found on <Text style={{fontStyle: 'italic'}}>C. gollmeri</Text> and <Text
style={{fontStyle: 'italic'}}>C. mimus</Text>. The dorsal skin is smooth to weakly
granular. The eyes have a horizontal pupil, with the upper half of the iris is golden
yellow, whereas the lower half is orangish-red; there is a dark reticulation
throughout. The ventral surfaces are creamish white (head/body), or reddish orange
(limbs). The hands and feet lack evident interdigital webbing. The terminal discs on
finger fingers III and IV are noticeably wider than those on the other digits. The
groin, anterior thigh, and posterior dorsal thigh typically have a reddish-orange
coloration.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
          <Text style = {styles.paragraphs}>Males call from hidden locations on the
forest floor near sunset between November and January. The call consists of two loud
rapidly repeated notes in long series of up to 400 distinct calls.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
          <Text style = {styles.paragraphs}>Craugastor noblei inhabits much of the
Caribbean lowlands and foothills, and scattered locations of the southern Pacific
versant, from near sea level to ~1200m. This relatively common species is usually
found in the day, hopping among the leaf litter of old-growth forest and secondary
forest, or at night on low lying vegetation.{"\n"}</Text>

          <Image
            resizeMode = 'contain'

```

```

        source={require('./assets/Images/48_Craugastor_noblei/Craugastor-
noblei-range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor noblei</Text> may be confused with <Text style={{fontStyle:
'italic'}}>C. gollmeri</Text> and <Text style={{fontStyle: 'italic'}}>C. mimus</Text>.
However, they both lack the expanded discs on the tips of fingers III and IV present
in <Text style={{fontStyle: 'italic'}}>C. noblei</Text>.{ "\n"}</Text>

    </ScrollView>
  );
}
}
class ObesusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
obesus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Obese Flesh-bellied
Frog{"\n"}</Text>

        </View>

        <Image
obesus-2.png')
          resizeMode = 'contain'
          source={require('./assets/Images/49_Craugastor_obesus/Craugastor-
obesus-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~35-62mm, ~1.4-
2.4in males; ~62-86mm, ~2.4-3.4in females). The skin is covered in low, rounded
tubercles producing a rough texture. The eyes are large and have horizontal pupils and
bronze, gray irises. Tympanic membranes are visible below supratympanic folds. The
dorsal coloration is dark brown with scattered dark markings. The posterior thigh is
dark with small yellow spots. The venter is granular with a yellow coloration, and the
throat may be heavily pigmented. The digits have expanded terminal pads and lateral
fringes. The fingers lack webbing, but the toes have moderate to extensive webbing. A
well-developed tarsal fold is also present. Males have a subgular vocal sac and
nuptial pads.{ "\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor obesus</Text> is unknown.{ "\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

```

```

    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor obesus</Text> is found in premontane forest of the eastern
Talamancas at elevations of ~400 to 1450m. This species is associated with steep
gradient streams and is often found on rocks in the spray zone of cascades and
waterfalls. Craugastor obesus has not been seen in Costa Rica since the 1980's and any
encounters with this species should be carefully documented.{"\n"}</Text>

```

```

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/49_Craugastor_obesus/Craugastor-
obesus-range-2.png')}
      style = {styles.image}
    />

```

```

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor obesus</Text> is most similar to <Text style={{fontStyle:
'italic'}}>C. rhyacobatrachus</Text>, but the latter has smaller terminal pads and
less webbing. Other rugose, stream associated species include <Text style={{fontStyle:
'italic'}}>C. catalinae</Text>, <Text style={{fontStyle: 'italic'}}>C. ranoides</Text>
and <Text style={{fontStyle: 'italic'}}>C. taurus</Text>. <Text style={{fontStyle:
'italic'}}>Craugastor catalinae</Text> has small toe discs, <Text style={{fontStyle:
'italic'}}>C. ranoides</Text> has less toe webbing and the tubercles of the dorsum are
smaller, and <Text style={{fontStyle: 'italic'}}>C. taurus</Text> has a white venter
and males lack nuptial pads.{"\n"}</Text>

```

```

  </ScrollView>

```

```

  );
}
}
class PersimilisPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
persimilis{"\n"}</Text>
          <Text style = {styles.commonTitles}>Similar Flesh-bellied
Frog{"\n"}</Text>

```

```

        </View>

```

```

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/50_Craugastor_persimilis/Craugastor-
persimilis-2.png')}
          style = {styles.image}
        />

```

```

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A tiny to small-sized (~12-22mm, ~0.5-
0.9in), but robust frog. The dorsal coloration is usually uniform, ranging from

```

tannish orange to purplish gray. A fine, light middorsal stripe is often present, and contrasting, irregular marking can sometimes be found on the flanks and dorsal surfaces of the body and limbs. There is a dark triangular seat patch surrounding and below the vent. On the side of the head there is relatively thick black supratympanic line. The dorsal skin is slightly granular, with some individuals having distinct rows of low tubercles. The eyes have a horizontal pupil with a golden yellow to goldish-orange iris having a dark reticulation. The venter is light grayish-white and greatly expanded terminal discs on the digits; weakly expanded toe discs are spade-shaped. The thenar tubercle is smaller than the palmar tubercle.

<Text style = {styles.sectionTitles}>Calls{"\n"}</Text>

<Text style = {styles.paragraphs}>Males call at night from the tops of leaves on low growing plants, and leaf litter. The advertisement call is a single, faint squeak repeated after a pause.

<Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

<Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Craugastor persimilis</Text> is endemic to Costa Rica, known to inhabit the lowlands and foothills of the central and southern Caribbean, from near sea level to ~1200m. This relatively uncommon species is principally found in old-growth forest and secondary forest. They are often observed in the day hopping among the leaf litter of the forest floor upon being disturbed, or on leaves at night.

<Image  
resizeMode = 'contain'

source={require('./assets/Images/50\_Craugastor\_persimilis/Craugastor-persimilis-range-2.png')}  
style = {styles.image}

/>

<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

<Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Craugastor persimilis</Text> could be confused with <Text style={{fontStyle: 'italic'}}>C. stejnegerianus</Text>, but they are not known to be sympatric, as <Text style={{fontStyle: 'italic'}}>C. stejnegerianus</Text> occurs on the Pacific slope. <Text style={{fontStyle: 'italic'}}>Craugastor bransfordii</Text> is similar in form and habit, but differs in having thenar and palmar tubercles of roughly the same size, and lacking the black seat patch.

</ScrollView>

);

}

}

class PhasmaPage extends React.Component {

static navigationOptions = {

headerStyle: {

backgroundColor: '#AF7235',

},

headerTintColor: '#fff',

headerTitleStyle: {

fontWeight: 'bold',

},

};

render() {

return (

<ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>

<View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>

<Text style = {styles.scientificTitles}>Craugastor

phasma{"\n"}</Text>

<Text style = {styles.commonTitles}>Ghost Flesh-bellied

Frog{"\n"}</Text>

```

</View>

<Image
  resizeMode = 'contain'
  source={require('./assets/Images/51_Craugastor_phasma/Craugastor-
phasma-2.png')}
  style = {styles.image}
/>

  <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
  <Text style = {styles.paragraphs}>A medium-sized frog (estimated size
~25-30mm, ~1-1.2in males; estimated ~35-50mm, ~1.4-2in females). The dorsal skin is
smooth with a whitish gray ground color and a few small scattered dark spots. Tympanic
membranes are small but visible below a supratympanic fold. The eyes are large and
black in color. The venter is also whitish gray. The limbs are long and slender and
both the hands and feet lack webbing. The digits have expanded terminal pads, and
those of Fingers III and IV are largest.{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
  <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor phasma</Text> is unknown.{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
  <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor phasma</Text> is only known from the single (type) specimen
collected from the lower montane rainforest of the Talamancas at an elevation of
~1850m. The female frog was collected from banks of the Rio Coton at the beginning of
the rainy season. No other individuals of this species have been found despite
extensive search effort at the type locality. Any encounters with this species should
be carefully documented.{"\n"}</Text>

  <Image
    resizeMode = 'contain'
    source={require('./assets/Images/51_Craugastor_phasma/Craugastor-
phasma-range-2.png')}
    style = {styles.image}
  />

  <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
  <Text style = {styles.paragraphs}>With its gray/white color and black
eyes, <Text style={{fontStyle: 'italic'}}>Craugastor phasma</Text> is not likely to be
confused with any other anuran in Costa Rica.{"\n"}</Text>

  </ScrollView>
);
}
}
class PodiciferusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>

```



```

        <Text style = {styles.scientificTitles}>Craugastor
podiciferus{"\n"}</Text>
        <Text style = {styles.commonTitles}>Piglet Flesh-bellied
Frog{"\n"}</Text>

    </View>

    <Image
        resizeMode = 'contain'

        source={require('./assets/Images/52_Craugastor_podiciferus/Craugastor-
podiciferus-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A small to medium-sized frog (~20-40
mm, ~0.8-1.6in). The skin is relatively smooth, often with paired dorsal folds and
scattered, low tubercles. The eyes are large with horizontal pupils. Tympanic
membranes are large, 1/2 - 3/4 the diameter of the eye on females and males
respectively. The dorsal coloration is extremely variable, ranging from black to buff,
but is usually brown or gray. A pale mid-dorsal stripe may occur. A dark eye mask
extends onto the body, bordered above by a fleshy fold. Dark spots or bars may occur
on the lips and hind limbs. Ventral coloration of the head and body is pale, but the
bottoms of the feet and tarsi are dark. Males have a single, small vocal sac, but no
nuptial pads. The digits lack greatly expanded pads. The tubercles on the digits, feet
and hands are low and rounded, including the palmar tubercle that is larger than the
thenar tubercle.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call at night from the leaf
litter, producing a single "squeak", or short trill as advertisement and courtship
calls respectively.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>This locally common species occurs in
moist to wet primary forests of the Cordilleras ranging in elevation from ~1100 to
2650m. They are usually found in the day hopping through the leaf litter, or at night
on the surface of leaf litter.{"\n"}</Text>

    <Image
        resizeMode = 'contain'

        source={require('./assets/Images/52_Craugastor_podiciferus/Craugastor-
podiciferus-range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor podiciferus</Text> may be confused with other small Craugastor
species including co-occurring <Text style={{fontStyle: 'italic'}}>C.
underwoodi</Text>, or <Text style={{fontStyle: 'italic'}}>C. gollmeri</Text>. However,
<Text style={{fontStyle: 'italic'}}>C. underwoodi</Text> is bumpier, has hand
tubercles (palmar and thenar) of equal size and males have nuptial pads. <Text
style={{fontStyle: 'italic'}}>Craugastor gollmeri</Text> has expanded terminal pads on
the digits and is not as squat or robust.{"\n"}</Text>

    </ScrollView>
);
}
}

```

```

class PolyptychusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
polyptychus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Many Folds Flesh-bellied
Frog{"\n"}</Text>

          </View>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/53_Craugastor_polyptychus/Craugastor-
polyptychus-2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
          <Text style = {styles.paragraphs}>A small (~20-30mm, ~0.8-1.2in), but
robust frog. The dorsal coloration is extremely variable among individuals, ranging
from tan to dark brown, with a mixture of spots, bands, or irregular markings in
assorted earthy tones. On the groin, thighs, and ventral surface of the lower leg,
there is often a reddish orange suffusion. The dorsal skin is granular with some
specimens also having numerous longitudinal ridges. The eyes have a horizontal pupil
with a gold to copper iris that often has dark spots or reticulation. The tympanic
membrane is evident. The venter is light tan to gray with numerous lighter markings,
especially on the throat. The hands and feet lack both expanded terminal discs and
interdigital webbing. Males lack an enlarged nuptial pad at the base of Finger I. The
thenar and palmar tubercles are either nearly equal in size or the palmar tubercle is
slightly larger. The ventral surfaces of the hands and feet have numerous large
projecting tubercles.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
          <Text style = {styles.paragraphs}>Males call at night from leaf litter.
The advertisement call consists of a quick chirp-like squeak{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
          <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor polyptychus</Text> has been found throughout much of the eastern
Caribbean lowlands, from near sea level to ~100m. This common diurnal species can be
found in a variety of habitats from old-growth forest to young secondary forest and
cacao plantations. <Text style={{fontStyle: 'italic'}}>Craugastor polyptychus</Text>
is terrestrial and is often seen hopping among the leaf litter on the forest
floor.{"\n"}</Text>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/53_Craugastor_polyptychus/Craugastor-
polyptychus-range-2.png')}

```

```

        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor polyptychus</Text> might be confused with <Text
style={{fontStyle: 'italic'}}>C. bransfordii</Text> and <Text style={{fontStyle:
'italic'}}>C. underwoodi</Text>. <Text style={{fontStyle: 'italic'}}>Craugastor
bransfordii</Text> males have an enlarged nuptial pad at the base of Finger I (absent
in <Text style={{fontStyle: 'italic'}}>C. polyptychus</Text>). <Text
style={{fontStyle: 'italic'}}>Craugastor underwoodi</Text> differs in having rounded,
less projecting tubercles on the ventral surfaces of the hands and feet.{"\n"}</Text>

    </ScrollView>
  );
}
}
class RanoidesPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
ranoides{"\n"}</Text>
          <Text style = {styles.commonTitles}>Ranid-like Flesh-bellied
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/54_Craugastor_ranoides/Craugastor-ranoides-
2.png')}

          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~26-45mm, ~1-1.8in
males; ~40-74mm, ~1.6-2.9in females). The dorsum has scattered tubercles giving a
rough appearance. The tympanic membranes are visible below a supratympanic fold.
Dorsal coloration is variable, usually a shade of brown or gray, with scattered dark
blotches. The posterior thigh is dark with pale spots. The eyes have horizontal pupils
and gold and brown irises. The venter is smooth and cream colored with more yellowish
hues posteriorly and on the ventral surface of the thighs. The limbs are relatively
short and stocky. The fingers lack webbing, but the toes have limited webbing and a
distinct medial tarsal fold. The digits have slightly expanded terminal pads, but
males lack both nuptial pads and a vocal sac.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor ranoides</Text> is unknown.{"\n"}</Text>

```

```

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor ranoides</Text> was formerly a very common nocturnal frog found
at elevations from near sea level to ~1300m on both the Pacific and Atlantic slopes.
They are usually found in or near streams and can be found sitting on rocks or
foraging in streamside forests. <Text style={{fontStyle: 'italic'}}>Craugastor
ranoides</Text> has disappeared from most of its former range, but small populations
still occur in the Guanacaste region. Encounters with this species in other portions
of their range should be carefully documented.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/54_Craugastor_ranoides/Craugastor-ranoides-
range-2.png')}

            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor ranoides</Text> may be confused with <Text style={{fontStyle:
'italic'}}>C. crassidigitus</Text>, <Text style={{fontStyle: 'italic'}}>C.
fitzingeri</Text>, and <Text style={{fontStyle: 'italic'}}>C. fleischmanni</Text>.
<Text style={{fontStyle: 'italic'}}>Craugastor crassidigitus</Text> has longer limbs,
more toe webbing, and a solid brown posterior thigh. <Text style={{fontStyle:
'italic'}}>Craugastor fitzingeri</Text> differs in having larger terminal pads on the
digits and a white mid-gular stripe. <Text style={{fontStyle: 'italic'}}>Craugastor
fleischmanni</Text> has smaller terminal pads on the digits, and lacks the dark
posterior thigh marked with pale spots.{"\n"}</Text>

    </ScrollView>
  );
}
}
class RayoPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
rayo{"\n"}</Text>
          <Text style = {styles.commonTitles}>Lightning Flesh-bellied
Frog{"\n"}</Text>
        </View>

        <Image
            resizeMode = 'contain'
            source={require('./assets/Images/55_Craugastor_rayo/Craugastor-
rayo-2.png')}

            style = {styles.image}
        />

```

```

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~37-45mm, ~1.5-
1.8in males; ~38-71mm, ~1.5-2.8in females). The dorsum is smooth and dark brown with a
bluish-purple tint in males and more brown to tan in females. The tympanic membranes
are obscure below a darkly pigmented supratympanic fold. A pale vertebral stripe may
occur, and the posterior thigh is dark purple with small, pale dots. The venter is
smooth and pale, colored with dark mottling. The throat has a mid-gular light stripe.
The digits have expanded terminal pads and lateral fringes. The fingers lack webbing,
and the toes have very limited webbing. There is a tarsal fold and a calcar on the
heel. Males have a subgular vocal sac and pale nuptial pads.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The male holotype of <Text
style={{fontStyle: 'italic'}}>Craugastor rayo</Text> was calling from a bromeliad
during a heavy daytime rain. However, the characteristics of the advertisement call
for this species are unknown.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor rayo</Text> is a rare frog found on the Pacific versant in the
premontane and lower montane forests of the Talamancas. Individuals have been found in
or near streams. This species has not been reported since the 1980s, and any
encounters should be carefully documented.{"\n"}</Text>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/55_Craugastor_rayo/Craugastor-
rayo-range-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor rayo</Text> is similar to <Text style={{fontStyle: 'italic'}}>C.
andi</Text>, and <Text style={{fontStyle: 'italic'}}>C. talamancae</Text>, both of
these species lack the calcar. Further, <Text style={{fontStyle: 'italic'}}>C.
andi</Text> has a more vividly marked posterior thigh, and <Text style={{fontStyle:
'italic'}}>C. talamancae</Text> has a dark eye mask and white lip stripe.{"\n"}</Text>

    </ScrollView>
  );
}
}
class RhyacobatrachusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
rhyacobatrachus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Torrent Flesh-bellied
Frog{"\n"}</Text>
        </View>
      </ScrollView>
    );
  }
}

```

```

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/56_Craugastor_rhyacobatrachus/Craugastor-
rhyacobatrachus-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium to large-sized frog (~40-50mm,
~1.6-2in males; ~50-80mm, ~2-3.2in females). The skin has a rough or bumpy appearance
due to the numerous tubercles of various sizes. The eyes have horizontal pupils and a
dark/black iris. Tympanic membranes are visible under supratympanic folds. The dorsal
coloration is dark brown with dark markings and the posterior thigh is brown with pale
yellow spots. The venter is pale yellow with dark markings. The digits have expanded
terminal discs. The fingers lack webbing, but the toes are webbed and have lateral
fringes. There is also a tarsal fold present. Males have nuptial pads and a vocal
sac.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor rhyacobatrachus</Text> is not
known.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor rhyacobatrachus</Text> occurs in premontane and lower montane
forests on the Pacific slope of the Talamancas at elevations ranging from ~950 to
1800m. They are nocturnal and may be found on rocks in high gradient streams. Although
<Text style={{fontStyle: 'italic'}}>C. rhyacobatrachus</Text> has a limited range, it
was locally abundant. However, it has declined across its range, and may be extirpated
from Costa Rica. Any encounters with the species should be carefully
documented.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/56_Craugastor_rhyacobatrachus/Craugastor-
rhyacobatrachus-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor rhyacobatrachus</Text> may be confused with closely related
<Text style={{fontStyle: 'italic'}}>C. catalinae</Text>, <Text style={{fontStyle:
'italic'}}>C. fleischmanni</Text>, <Text style={{fontStyle: 'italic'}}>C.
obesus</Text>, or <Text style={{fontStyle: 'italic'}}>C. taurus</Text>. The terminal
pads on the digits of <Text style={{fontStyle: 'italic'}}>Craugastor catalinae</Text>,
<Text style={{fontStyle: 'italic'}}>C. fleischmanni</Text>, and <Text
style={{fontStyle: 'italic'}}>C. taurus</Text> are smaller than those of <Text
style={{fontStyle: 'italic'}}>C. rhyacobatrachus</Text>, and <Text style={{fontStyle:
'italic'}}>C. catalinae</Text> also has less toe webbing. The toes of <Text
style={{fontStyle: 'italic'}}>C. obesus</Text> are slightly more webbed and have
larger terminal discs than <Text style={{fontStyle: 'italic'}}>C.
rhyacobatrachus</Text>.{"\n"}</Text>

    </ScrollView>
  );
}
}

```

```

class RugosusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
rugosus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Wrinkled Flesh-bellied
Frog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/57_Craugastor_rugosus/Craugastor-
rugosus-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (estimated ~30-
44mm, ~1.2-1.7in males; ~35-69mm, ~1.4-2.7in females) with a large head. The dorsum
has numerous tubercles giving a bumpy appearance. A pair of arcing folds extend from
the eye posteriorly, and another pair of folds occurs above the pelvis. The dorsal
coloration is variable, usually brown or gray, occasionally black, with scattered dark
markings. The posterior thigh is red with dark vertical bars (white and black in
juveniles). The tympanic membrane is easily visible below a dark supratympanic fold
that curves down to the shoulder. The eyes are large and have horizontal pupils and
gold/brass irises with dark reticulations. The venter is granular and cream-colored.
The limbs are short and stout. The fingers and toes lack webbing, and the digits have
slightly expanded terminal pads. Males lack both nuptial pads and a vocal
sac.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor rugosus</Text> is not known.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor rugosus</Text> is a nocturnal species occurring in lowland and
premontane forests of the southeastern Pacific versant. The elevational range for
<Text style={{fontStyle: 'italic'}}>Craugastor rugosus</Text> is from near sea level
to ~1200m. These frogs are terrestrial and are often encountered on the forest floor.
They are presumed sit and wait predators, similar to <Text style={{fontStyle:
'italic'}}>C. megacephalus</Text>.{"\n"}</Text>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/57_Craugastor_rugosus/Craugastor-
rugosus-range-2.png')}
          style = {styles.image}
        />

```

```

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}> Craugastor rugosus</Text> may be confused with the other large-headed
Craugastor species, <Text style={{fontStyle: 'italic'}}>C. gulosus</Text> and <Text
style={{fontStyle: 'italic'}}>C. megacephalus</Text>. Nonetheless, <Text
style={{fontStyle: 'italic'}}>Craugastor gulosus</Text> differs in being larger and
having a smooth dorsum. <Text style={{fontStyle: 'italic'}}>Craugastor
megacephalus</Text> is most similar in morphology, but lacks the red posterior thigh
with black bars (white and black in juvenile <Text style={{fontStyle: 'italic'}}>C.
rugosus</Text>) and occurs on the Atlantic versant.{"\n"}</Text>

    </ScrollView>
  );
}
}
class StejnegerianusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
stejnegerianus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Stejneger's Flesh-bellied
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/58_Craugastor_stejnegerianus/Craugastor-
stejnegerianus-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small-sized frog (~12-22mm, ~0.5-
0.8in). The skin is relatively granular with dorsal folds and scattered tubercles
dorsally and ventrally. The head is smooth and the snout is short. The eyes are large,
with horizontal pupils and copper or brass colored irises. There are small tubercles
above the eyes. Tympanic membranes are large (1- 2/3 diameter of the eye, male and
female respectively). A darkly pigmented supratympanic ridge extends down to the
shoulder. The dorsal coloration is variable, but is usually brown or gray. Darker
blotches are often present, which may include bars extending from the snout to the
shoulder, and/or a seat patch. The limbs may be marked with dark bars, and a light
colored mid-dorsal stripe may occur. Males lack both vocal sacs and nuptial pads. The
fingers and toes are unwebbed with noticeable tubercles on digits, feet and hands,
including a palmar tubercle that is larger than the thenar tubercle.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call at night from the surface of
low vegetation, producing a single "squeak" repeated after a pause.{"\n"}</Text>

```



```

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This very common species occurs in
nearly all moist to wet locales (forests to disturbed areas), from near sea level to
~1350m. They are usually found in the in the day hopping in the leaf litter, or active
at night.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/58_Craugastor_stejnegerianus/Craugastor-
stejnegerianus-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor stejnegerianus</Text> appears very similar to other small
Craugastor species and is most easily identified by its distribution, as the other
species are found at higher elevations (<Text style={{fontStyle: 'italic'}}>C. gabbi,
C. podiciferus</Text> and <Text style={{fontStyle: 'italic'}}>C. underwoodi</Text>),
or on the Atlantic slope (<Text style={{fontStyle: 'italic'}}>C. bransfordii, C.
persimilis</Text>, and <Text style={{fontStyle: 'italic'}}>C. polyptychus</Text>). The
rarely co-occurring <Text style={{fontStyle: 'italic'}}>C. underwoodi</Text> differs
in having the thenar tubercle roughly the same size as the palmar tubercle, and males
have nuptial pads.{"\n"}</Text>

    </ScrollView>
  );
}
}
class CraugastoridaeTalamancaePage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
          <Text style = {styles.scientificTitles}>Craugastor
talamancae{"\n"}</Text>
          <Text style = {styles.commonTitles}>Talamancan Flesh-bellied
Frog{"\n"}</Text>

        </View>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/59_Craugastor_talamancae/Craugastor-
talamancae-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small to medium-sized frog (~20-50mm;
~0.8-2in). The skin is slightly granular dorsally, and smooth ventrally. The eyes are

```

large, with horizontal pupils and pale gold irises. Tympanic membranes are large (~2/3 to 1/2 the size of the eye in males and females respectively) and readily visible below supratympanic folds that curve down towards the shoulder. Dorsal coloration is brown, with a dark eye mask and a contrasting light lip stripe that may extend onto the body. Additional light stripes may extend obliquely near the groin. Dark bars alternate with lighter colors on the limbs dorsally. The posterior thigh and groin has a reddish tint. The venter is white, but may have scattered dark spots. Males have pale nuptial pads and a small, internal vocal sac. Fingers and toes have expanded terminal pads. Fingers lack webbing, but the toes have limited webbing.

<Text style = {styles.sectionTitles}>Calls{"\n"}</Text>

<Text style = {styles.paragraphs}>Males call at night from the leaf litter, producing a quiet, single "squack" repeated after long pauses.

<Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

<Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Craugastor talamancae</Text> is a common species occurring in lowland moist and wet primary forests of the Atlantic slope, ranging from ~15 to 650 m. They are usually found while active (night) on low vegetation, but may also be encountered during the daytime in leaf litter.

<Image

resizeMode = 'contain'

source={require('./assets/Images/59\_Craugastor\_talamancae/Craugastor-talamancae-range-2.png')}

style = {styles.image}

/>

<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

<Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Craugastor talamancae</Text> may be confused with <Text style={{fontStyle: 'italic'}}>C. gollmeri, C. mimus</Text>, and <Text style={{fontStyle: 'italic'}}>C. noblei</Text>. However, these all lack the light lip stripe and have the dark mask clearly extending onto the body. <Text style={{fontStyle: 'italic'}}>Craugastor gollmeri</Text> differs further in having the upper half of the iris red. <Text style={{fontStyle: 'italic'}}>Craugastor crassidigitus</Text> and <Text style={{fontStyle: 'italic'}}>C. fitzingeri</Text> generally lack the dark eye mask and light lip stripe, and differ further with <Text style={{fontStyle: 'italic'}}>C. crassidigitus</Text> having more extensive toe webbing, and <Text style={{fontStyle: 'italic'}}>C. fitzingeri</Text> having a white gular stripe.

</ScrollView>

);

}

}

class TaurusPage extends React.Component {

static navigationOptions = {

headerStyle: {

backgroundColor: '#AF7235',

},

headerTintColor: '#fff',

headerTitleStyle: {

fontWeight: 'bold',

},

};

render() {

return (

<ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>

<View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>

<Text style = {styles.scientificTitles}>Craugastor

taurus{"\n"}</Text>

```

        <Text style = {styles.commonTitles}>Bull Flesh-bellied
Frog{"\n"}</Text>
    </View>

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/60_Craugastor_taurus/Craugastor-
taurus-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A medium to large-sized frog (~24-44mm,
~0.9-1.7in males; ~40-80mm, ~1.6-3.2in females). The dorsum has scattered tubercles
giving a bumpy appearance. The dorsum is tan or gray with dark markings. Pale spots or
bars occur on the lip. The posterior thigh is dark with pale markings. Tympanic
membranes are easily visible; they are large and round in males, and smaller and oval
in females. The eyes have a horizontal pupil and a gold iris. The venter is granular
and white to cream-colored with dark markings on the throat. The digits have slightly
expanded terminal pads. Webbing is absent on the hands, but the toes are moderately
webbed and have lateral fringes. A tarsal fold is also present. Males have a subgular
vocal sac, but lack nuptial pads.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Craugastor taurus</Text> is unknown.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor taurus</Text> is a formerly common nocturnal frog found in
lowland forests of the southeastern Pacific versant. Historically they ranged in
elevation from near sea level to ~550m. They are usually encountered in or near
streams where they forage. <Text style={{fontStyle: 'italic'}}>Craugastor
taurus</Text> is yet another species that has experienced severe declines across most
of its range. Encounters with this species should be carefully
documented.{"\n"}</Text>

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/60_Craugastor_taurus/Craugastor-
taurus-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor taurus</Text>, is most likely to be confused with other stream-
associated Craugastor species. <Text style={{fontStyle: 'italic'}}>Craugastor
fleischmanni</Text> has smoother skin, less toe webbing and occurs at higher
elevations. The terminal pads of the digits are larger on <Text style={{fontStyle:
'italic'}}>C. catalinae, C. obesus</Text> and <Text style={{fontStyle: 'italic'}}>C.
rhyacobatrachus</Text>.{"\n"}</Text>

  </ScrollView>
);
}
}
class UnderwoodiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#AF7235',

```

```

    },
    headerTintColor: '#fff',
    headerTitleStyle: {
        fontWeight: 'bold',
    },
    };
render() {
    return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
            <View style = {styles.colorBar, {backgroundColor: "#db8e43"}}>
                <Text style = {styles.scientificTitles}>Craugastor
underwoodi{"\n"}</Text>
                <Text style = {styles.commonTitles}>Underwood's Flesh-bellied
Frog{"\n"}</Text>

            </View>

            <Image
                resizeMode = 'contain'

                source={require('./assets/Images/61_Craugastor_underwoodi/Craugastor-
underwoodi-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A small (~20-30mm, ~0.8-1.2in), but
robust frog. The dorsal coloration is extremely variable, ranging from tan to dark
brown, with a mixture of spots, bands, or irregular markings in assorted earthy tones.
The groin, thighs, and ventral surface of the lower leg, often have a reddish orange
suffusion. The dorsal skin is granular, with some specimens also having numerous
longitudinal ridges. The eyes have a horizontal pupil and a gold to copper iris with
dark spots or reticulation. The tympanic membrane is evident, and slightly larger on
males. The venter is light tan to gray with numerous lighter markings, especially on
the throat. The hands and feet lack both expanded terminal discs and interdigital
webbing. Males have an enlarged nuptial pad, but lack a vocal sac. The thenar and
palmar tubercles are either nearly equal in size, or the palmar tubercle is slightly
larger. The ventral surfaces of the hands and feet have numerous large, but smooth
tubercles.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>Males call at night from the leaf
litter or low-growing squeak.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor underwoodi</Text> occurs throughout much of the Caribbean
versant and at scattered This common diurnal species can be found in a variety of
habitats from old-growth forest to young secondary forest. <Text style={{fontStyle:
'italic'}}>Craugastor underwoodi</Text> is terrestrial, and is often seen hopping
among the leaf litter on the forest floor.{"\n"}</Text>

            <Image
                resizeMode = 'contain'

                source={require('./assets/Images/61_Craugastor_underwoodi/Craugastor-
underwoodi-range-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

```

```

        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Craugastor underwoodi</Text> might be confused with <Text
style={{fontStyle: 'italic'}}>C. bransfordii</Text> and <Text style={{fontStyle:
'italic'}}>C. polyptychus</Text>. <Text style={{fontStyle: 'italic'}}>Craugastor
underwoodi</Text> is slightly larger and typically has smoother, less projecting
tubercles on the ventral surfaces of the hands and feet than <Text style={{fontStyle:
'italic'}}>C. bransfordii</Text>. <Text style={{fontStyle: 'italic'}}>Craugastor
polyptychus</Text> males lack nuptial pads, and occur at much lower
elevations.{ "\n"}</Text>

    </ScrollView>
  );
}
}
class AltaePage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BB6C18',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#ea891e"}}>
          <Text style = {styles.scientificTitles}>Pristimantis
altae{ "\n"}</Text>
          <Text style = {styles.commonTitles}>Coral-spotted Robber
Frog{ "\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/62_Pristimantis_altae/Pristimantis-altae-
2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{ "\n"}</Text>
        <Text style = {styles.paragraphs}>A tiny to small-sized frog (~18-27mm,
~0.7-1.1in). The dorsal coloration typically reddish-brown or dark brownish-gray.
Often there is some white pigmentation where the front arms meet the body. On the
groin and anterior thighs there are bright markings that range in color from
yellowish-orange to reddish-orange. The dorsal skin is smooth to weakly granular. The
eyes have a horizontal pupil, with a gray, yellowish-gold, or grayish-copper iris. The
ventral surface of the body and limbs is typically gray to dark brownish-gray. The
hands and feet lack interdigital webbing, but have expanded discs on the tips of the
digits. Males lack nuptial pads and but have a large subgular vocal sac.{ "\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{ "\n"}</Text>
        <Text style = {styles.paragraphs}>Males call at night from the surface of
leaves on low-growing vegetation. The advertisement call consists of series of two to
four quick "tik" like notes, similar to the sound made when hitting two small stones
together.{ "\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{ "\n"}</Text>

```

```

    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis altae</Text> has been found at scattered sites throughout much
of the Caribbean versant. This species is found in premontane forests, but has also
been recorded in some lowland sites as well. The known elevational range is from ~50
to 1500m, but this species is most frequently encountered between 500 to 1500m. This
relatively uncommon nocturnal species is typically found in old-growth and secondary
forests, but can be observed in disturbed open areas as well. <Text style={{fontStyle:
'italic'}}>Pristimantis altae</Text> is normally observed on the vegetation in the
forest understory.{"\n"}</Text>

```

```

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/62_Pristimantis_altae/Pristimantis-altae-
range-2.png')}

      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis altae</Text>, with its uniform dorsum and brightly salmon-
colored groin and anterior thighs is not likely to be confused with any other frog
from Costa Rica.{"\n"}</Text>

```

```

  </ScrollView>
);
}
}

```

```

class CaryophyllaceusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BB6C18',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#ea891e"}}>
          <Text style = {styles.scientificTitles}>Pristimantis
caryophyllaceus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Sharp-snouted Robber
Frog{"\n"}</Text>

```

```

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/63_Pristimantis_caryophyllaceus/Pristimantis-
caryophyllaceus-2.png')}

          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A finely structured small frog (~20-30
mm, 0.8-1.2in). The dorsal coloration ranges from a light yellowish-tan to brown, or
brownish-gray. Normally there are darker bands on the dorsal surfaces of the limbs and
body; often these dark bands form a chevron pattern on the back. Occasionally, white

```

or black spots occur on the dorsal surfaces, where they may form part of the chevron shaped bands. The dorsal skin is smooth to very weakly granular. The eyes have a horizontal pupil, with a silvery-gray, yellowish-gold, orange, or red iris. On the upper eyelid there is a weak to evident supraocular tubercle. The snout is elongate and finely structured, coming to a bluntly pointed tip. The ventral surfaces of the body and limbs are translucent, with a white peritoneum visible through the skin. The hands and feet lack interdigital webbing, but have rounded terminal discs on the digits. There is a large pointed tubercle projecting from the heel.

```

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Pristimantis caryophyllaceus</Text> has not been
formerly described, but consists of several sharp "tik" notes.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis caryophyllaceus</Text> has been found at scattered sites
throughout much of the Caribbean versant. This species is principally found in
premontane forests, but has also been recorded in some lowland sites as well. The
elevational range is from near sea level to ~1900m. This relatively uncommon nocturnal
species is typically found in old-growth and secondary forests, where it can be
observed on the understory vegetation.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/63_Pristimantis_caryophyllaceus/Pristimantis-
caryophyllaceus-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis caryophyllaceus</Text>, with its large heel tubercle, fine
pointed snout, and lack of contrasting colors in the groin or on the anterior dorsal
thigh, is not likely to be confused with other frogs in Costa Rica.{"\n"}</Text>

    </ScrollView>
  );
}
}
class CerasinusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BB6C18',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#ea891e"}}>
          <Text style = {styles.scientificTitles}>Pristimantis
cerasinus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Cherry-thighed Robber
Frog{"\n"}</Text>
        </View>

```

```

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/64_Pristimantis_cerasinus/Pristimantis-
cerasinus-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small to moderate-sized frog (~20-
40mm, ~0.8-1.6in). The dorsal coloration ranges from a light tannish-orange to
reddish-brown, often with additional irregular markings in a mixture of contrasting
earthy tones. Normally there are red to purplish-red markings on the groin and
anterior surface of the thigh, but these are subject to metachrosis, and may be
lacking when observed in the field. The dorsal skin is smooth to weakly granular with
numerous small tubercles often scattered throughout, especially on the legs and
forearms. There is a fleshy ridge between the eyes and the suprascapular region that
forms a "W" shape. The eyes have a horizontal pupil, with a silvery-gray, orange, or
yellow iris. A weak supraocular tubercle may be present. The snout is elongate and
bluntly pointed. The ventral surface of the body is pale, and weakly translucent in
some individuals; pointed tubercle is present on the heel. The hands and feet lack
webbing, but have expanded terminal discs.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Pristimantis cerasinus</Text> is a single quick, high-
pitched squeak-like note.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis cerasinus</Text> occurs throughout much of the lowlands and
foothills along the Caribbean versant at elevations ranging from near sea level to
~1400m. This relatively common nocturnal species is usually found in old-growth and
secondary forests, but can additionally be observed in more disturbed habitats. They
are normally found at night on the vegetation in the forest understory, but can at
times be observed hooping among the leaf litter during the day.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/64_Pristimantis_cerasinus/Pristimantis-
cerasinus-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis cerasinus</Text> may be confused with <Text style={{fontStyle:
'italic'}}>P. cruentus</Text>, but the latter species lacks yellow or orange
pigmentation near the posterior edge of the iris.{"\n"}</Text>

    </ScrollView>
  );
}
}
class CruentusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BB6C18',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',

```



```

    },
    };
    render() {
    return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
            <View style = {styles.colorBar, {backgroundColor: "#ea891e"}}>
                <Text style = {styles.scientificTitles}>Pristimantis
cruentus{"\n"}</Text>
                <Text style = {styles.commonTitles}>Bloody Robber
Frog{"\n"}</Text>
            </View>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/65_Pristimantis_cruentus/65-
Pristimantis-cruentus-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A small to moderate-sized frog (~15-
40mm, ~0.6-1.6in). The dorsal coloration is highly variable, ranging from a light tan,
light brown, dark brown, greenish-brown, green, to gray. The dorsal surfaces often
have additional irregular markings, spots, or bands in a mixture of contrasting earthy
tones. Normally there are bright yellow to red markings on the groin and anterior and
posterior surface of the thigh. The dorsal skin is granular to heavily tuberculate,
with a fleshy ridge between the eyes and the suprascapular region that forms a "W"
shape. The eyes have a horizontal pupil, with an iris varying in color from light
yellow to bright red, often with a dark reticulation. The ventral surface of the body
is pale and often has contrasting dark reticulation or spotting. An evident and large
pointed tubercle is present on the heel and above the eye. The hands and feet lack
interdigital webbing, and have expanded terminal discs on the digits that are truncate
to rounded.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>Males call at night from low
vegetation, usually producing a single, faint buzz-like or quack-like
note.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis cruentus</Text> occurs on both the Caribbean versant and the
central and southern Pacific at elevations ranging from near sea level to ~1800m, but
this species is most commonly observed within the premontane and marginally into the
lower montane zonations. This relatively common nocturnal species is most often found
on understory vegetation in old-growth and secondary forests, but can additionally be
observed in more disturbed habitats.{"\n"}</Text>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/65_Pristimantis_cruentus/65-
Pristimantis-cruentus-range-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis cruentus</Text> is most likely to be confused with <Text
style={{fontStyle: 'italic'}}>Pristimantis cerasinus</Text> or <Text
style={{fontStyle: 'italic'}}>Craugastor melanostictus</Text>. <Text
style={{fontStyle: 'italic'}}>Pristimantis cerasinus</Text> differs in having

```

yellow/orange near the posterior eye. <Text style={{fontStyle: 'italic'}}>Craugastor melanostictus</Text> differs in having toe III longer than toe V.{"\n"}</Text>

```
    </ScrollView>
  );
}
}
class GaigeiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BB6C18',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#ea891e"}}>
          <Text style = {styles.scientificTitles}>Pristimantis
gaigei{"\n"}</Text>
          <Text style = {styles.commonTitles}>Gaige's Robber
Frog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/66_Pristimantis_gaigei/Pristimantis-gaigei-
2.png')}
          style = {styles.image}
        />
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small to moderate-sized frog (~25-
45mm, ~1-1.8in). The dorsal coloration, which can closely resemble that of <Text
style={{fontStyle: 'italic'}}>Phyllobates vittatus</Text> or <Text style={{fontStyle:
'italic'}}>P. lugubris</Text>, is dark brown to black with a pair of light
dorsolateral stripes which can be bright orange to brownish yellow. The legs and arms
are often mottled with a mixture of turquoise to gray and dark brown to black. The
dorsal skin is smooth to weakly granular. The venter is usually gray and may be marked
with pale blotches (silver, blue or blue-green); some individuals have a brown venter.
The eyes have a horizontal pupil, with a gold to copper iris that often has a
concentration of dark spots or reticulation. The tympanic membrane is readily visible
(larger in males). The hands and feet lack interdigital webbing, and have slightly
expanded terminal discs. Males lack both nuptial pads and a vocal sac.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Pristimantis gaigei</Text> is unknown.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>Within Costa Rica, <Text
style={{fontStyle: 'italic'}}>Pristimantis gaigei</Text> is only known to inhabit a
small area in the lowlands of the extreme southeastern corner of Costa Rica, from near
sea level to ~200m. This relatively rare nocturnal species is typically found in old-
growth and secondary forests, and is principally terrestrial.{"\n"}</Text>
        <Image
```

```

        resizeMode = 'contain'

        source={require('./assets/Images/66_Pristimantis_gaigei/Pristimantis-gaigei-
range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis gaigei</Text> is most likely to be confused with <Text
style={{fontStyle: 'italic'}}>Phyllobates vittatus</Text> and <Text style={{fontStyle:
'italic'}}>P. lugubris</Text>. <Text style={{fontStyle: 'italic'}}>Pristimantis
gaigei</Text> can be distinguished from the two Phyllobates species due to it
coloration of the iris, being light gold to copper in <Text style={{fontStyle:
'italic'}}>P. gaigei</Text>, yet dark brown in the two Phyllobates
species.{"\n"}</Text>

    </ScrollView>
  );
}
}
class MoroPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BB6C18',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#ea891e"}}>
          <Text style = {styles.scientificTitles}>Pristimantis
moro{"\n"}</Text>
          <Text style = {styles.commonTitles}>Mohr's Robber
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/67_Pristimantis_moro/Pristimantis-moro-
2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A tiny to small-sized frog (~17-25 mm,
~0.7-1in). The dorsal coloration is known to range from bright green to reddish-
orange. The dorsal skin is smooth to weakly granular, lacking distinct tubercles on
the upper eyelid and on the heel. The eyes have a horizontal pupil, with an iris that
can range from silvery-gold to reddish-orange. A small tympanic membrane is visible.
The ventral surfaces are light colored with translucent skin. A white peritoneum and
pericardium are visible. The hands and feet lack interdigital webbing, and have
expanded, rounded discs on the tips of most of the digits. Males have a small subgular
vocal sac, but lack nuptial pads.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>

```

```

    <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Pristimantis moro</Text> is unknown.{ "\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis moro</Text> has been documented to inhabit the premontane
forests of Caribbean slopes of the Central Volcanic Range, but it is very likely that
this species has a continuous distribution down along the Caribbean premontane forest
of the Talamancan mountains. This rare and enigmatic nocturnal species is known to
inhabit old-growth and secondary forest, being found within bromeliads and on the
vegetation of the forest's understory.{ "\n"}</Text>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/67_Pristimantis_moro/Pristimantis-moro-range-
2.png')}

      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis moro</Text> might be mistaken for other small Pristimantis
species such as <Text style={{fontStyle: 'italic'}}>P. caryophyllaceus, P.
cruentus</Text> or <Text style={{fontStyle: 'italic'}}>P. ridens</Text>. However,
these differ in having supraocular and heel tubercles. <Text style={{fontStyle:
'italic'}}>Isthmohyla zeteki</Text> is superficially similar in appearance to brown
morphs of <Text style={{fontStyle: 'italic'}}>P. moro</Text>, and occurs in the same
microhabitats, but differs in having a dark "mustache", more forward-facing eyes, and
interdigital webbing (although limited).{"\n"}</Text>

  </ScrollView>
);
}
}
class ParadalisPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BB6C18',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#ea891e"}}>
          <Text style = {styles.scientificTitles}>Pristimantis
pardalis{"\n"}</Text>
          <Text style = {styles.commonTitles}>Leopard Robber
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/68_Pristimantis_pardalis/Pristimantis-
pardalis-2.png')}

          style = {styles.image}

```

```

    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A small-sized frog (~16-19mm, ~0.6-
0.8in males; ~25-29mm, ~1-1.1in females). The dorsum may be smooth to somewhat
granular, with scattered low tubercles. The dorsal coloration is a dark gray or brown.
White spots and markings occur on the groin and both the anterior and posterior thigh.
The tympanic membranes are small and indistinct. <Text style={{fontStyle:
'italic'}}>Pristimantis pardalis</Text> has large eyes with horizontal pupils and
copper irises with dark reticulations. The venter is gray with abundant pale specks.
The limbs are long and slender. The hands and feet lack webbing but the digits have
large, rounded terminal pads. Males do not have nuptial pads, but have a subgular
vocal sac.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call at night from understory
vegetation or the lower reaches of trees. The advertisement call of <Text
style={{fontStyle: 'italic'}}>Pristimantis pardalis</Text> is very similar to that of
<Text style={{fontStyle: 'italic'}}>P. altae</Text>, consisting of a small group of
"tik" like calls, sounding similar to sharply knocking two small stones
together.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis pardalis</Text> is an uncommon nocturnal species usually
encountered on low vegetation in primary premontane forests of both Atlantic and
Pacific slopes of the eastern Talamancas. They occur at elevations ranging from ~350
to 1,450m.{"\n"}</Text>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/68_Pristimantis_pardalis/Pristimantis-
pardalis-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis pardalis</Text> is similar morphologically to closely related
<Text style={{fontStyle: 'italic'}}>Pristimantis altae</Text>. However, coral or
orangish pink spots on the groin and anterior thigh as opposed to white (<Text
style={{fontStyle: 'italic'}}>P. pardalis</Text>) distinguishes <Text
style={{fontStyle: 'italic'}}>P. altae</Text>.{"\n"}</Text>

  </ScrollView>
);
}
}
class RidensPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BB6C18',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
      <View style = {styles.colorBar, {backgroundColor: "#ea891e"}}>

```

```

ridens{"\n"}</Text>
    <Text style = {styles.scientificTitles}>Pristimantis
    <Text style = {styles.commonTitles}>Pygmy Robber Frog{"\n"}</Text>
  </View>

  <Image
    resizeMode = 'contain'

    source={require('./assets/Images/69_Pristimantis_ridens/Pristimantis-ridens-
2.png')}
    style = {styles.image}
  />

  <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
  <Text style = {styles.paragraphs}>A tiny to small-sized frog (~16-25mm,
~0.6-1in). The dorsal coloration ranges from light yellowish-tan, beige, to reddish-
brown. A dark supratympanic line is usually present, as are grayish diagonal bands on
the flanks and dorsal surfaces of the legs. A dark interorbital band contrasted
anteriorly by a pale color usually occurs. Occasionally, a fine, light middorsal
stripe may be present. On the groin and parts of the legs, there is often a reddish-
orange to pink coloration. The dorsum can range from being nearly smooth to weakly
tuberculate. The eyes have a horizontal pupil, with an iris that is typically silvery-
gray to golden-orange. Most individuals have a small, but well-defined and pointed
supraocular tubercle. The venter is light grayish-white and translucent. The heel has
a small weak tubercle. The hands and feet lack interdigital webbing, but have expanded
terminal discs on the digits that are rounded.{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
  <Text style = {styles.paragraphs}>Males call at night from low
vegetation. The advertisement call of <Text style={{fontStyle: 'italic'}}>Pristimantis
ridens</Text> is a low trill-like series of notes, reminiscent of a low
giggle.{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
  <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis ridens</Text> occurs throughout much of Costa Rica, with the
exception of dry Guanacaste regions, from near sea level to ~1600m. This common
nocturnal species can be found in wide variety of habitat types, from old-growth and
secondary forests to open disturbed habitats such as gardens. They are often found at
night sitting on low vegetation.{"\n"}</Text>

  <Image
    resizeMode = 'contain'

    source={require('./assets/Images/69_Pristimantis_ridens/Pristimantis-ridens-
range-2.png')}
    style = {styles.image}
  />

  <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
  <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis ridens</Text> may be confused with <Text style={{fontStyle:
'italic'}}>P. caryophyllaceus</Text> and <Text style={{fontStyle: 'italic'}}>P.
moro</Text>. Nonetheless, <Text style={{fontStyle: 'italic'}}>P.
caryophyllaceus</Text> differs in having a longer, more angular snout and much larger
heel tubercles. <Text style={{fontStyle: 'italic'}}>Pristimantis moro</Text> differs
by lacking supraocular and heel tubercles, and lack of reddish-orange to pink
coloration on the groin and legs.{"\n"}</Text>

  </ScrollView>
);

```

```

    }
  }
}
class TaeniatusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BB6C18',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f9f9f9"}}>
        <View style = {styles.colorBar, {backgroundColor: "#ea891e"}}>
          <Text style = {styles.scientificTitles}>Pristimantis
taeniatus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Striped Robber
Frog{"\n"}</Text>

          </View>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/70_Pristimantis_taeniatus/Pristimantis-
taeniatus-2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
          <Text style = {styles.paragraphs}>A tiny to small-sized frog (~15-32mm,
~0.6-1.3in males). The dorsum is smooth and colored in various shades of brown with a
variety of markings or patterns occurring. The most common form lacks stripes dorsally
and has a dark-colored "W" shape at the back of the head and dark bars on the legs.
Some individuals have various forms of pale and/or dark longitudinal stripes. The eyes
have a horizontal pupil and a gold iris. Small supraocular tubercles occur. Tympanic
membranes are small but visible below supratympanic folds that are darkly colored. The
venter is slightly granular and cream colored with numerous brown flecks. The hands
and feet lack interdigital webbing, but digits have expanded terminal pads and lateral
fringes. Males have nuptial pads and a subgular vocal sac.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
          <Text style = {styles.paragraphs}>Males call at night from low-growing
vegetation, producing a short, single note.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
          <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis taeniatus</Text> is a rarely encountered species that occurs
in premontane forests on the Pacific versant in the eastern Talamancas. It is known
from ~1000 to 1150m.{"\n"}</Text>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/70_Pristimantis_taeniatus/Pristimantis-
taeniatus-range-2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

```

```

    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Pristimantis taeniatus</Text> is similar to other small Pristimantis
species. Nonetheless, these differ as follows <Text style={{fontStyle: 'italic'}}>P.
caryophyllaceus</Text> and <Text style={{fontStyle: 'italic'}}>P. ridens</Text> both
have heel tubercles, <Text style={{fontStyle: 'italic'}}>P. moro</Text> lacks the
supraocular tubercle, and all these species lack lateral fringes on the digits. Small
Craigastor species with similar dark supratympanic folds (ex. <Text style={{fontStyle:
'italic'}}>C. stejnegerianus</Text>) all lack the enlarged terminal disks on the
digits.{"\n"}</Text>

```

```

    </ScrollView>
  );
}
}
class BufoniformisPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#6F4C34',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#8b6042"}}>
          <Text style = {styles.scientificTitles}>Strabomantis
bufoniformis{"\n"}</Text>
          <Text style = {styles.commonTitles}>Toad-like Robber
Frog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/71_Strabomantis_bufoniformis/Strabomantis-
bufoniformis-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium to large-sized frog (~50-95mm,
~2-3.8in) that resembles a toad in its robust body and short, stocky limbs. The skin
is covered in white-tipped tubercles giving a very bumpy appearance. The dorsal
coloration is various shades of brown with dark blotches, and dark bars may occur on
the hind limbs. Contrasting dark and pale spots may occur on the lip. The head is wide
and the snout is short. The eyes are large, with horizontal/round pupils and a dark
horizontal, hourglass-shaped bar through the iris. Tympanic membranes are present, but
indistinct. The ventral color is light (white to yellow) with dark spots. Males have a
single, small vocal sac, but lack nuptial pads. The fingers lack webbing and expanded
pads. The toes have limited webbing with slightly expanded terminal pads.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males produce a weak call consisting of
series of short "chuck" or bark-like calls with several seconds between each
call.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

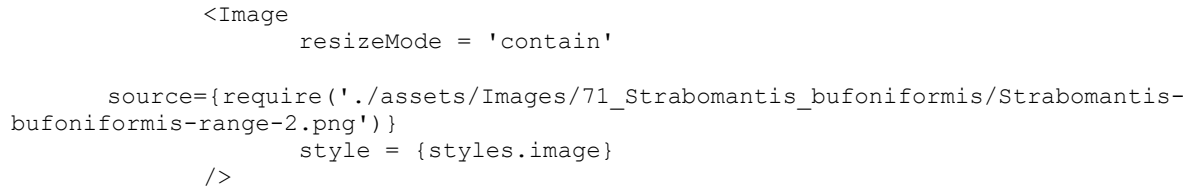
```



```

    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Strabomantis bufoniformis</Text> is rare in Costa Rica, and has not been
seen since the 1980s. They occur in, or near streams in lowland primary rainforests
from near sea level to ~50m. Any encounters with this species should be carefully
documented.{ "\n" }</Text>

```



```

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Strabomantis bufoniformis</Text> appears similar to broad-headed Craugastor
species including <Text style={{fontStyle: 'italic'}}>C. gulosus, C.
megacephalus</Text>, and <Text style={{fontStyle: 'italic'}}>C. rugosus</Text>.
However, these all lack the toe webbing present in <Text style={{fontStyle:
'italic'}}>S. bufoniformis</Text>.{ "\n" }</Text>

```

```

  </ScrollView>
  );
}
}
/**** END CRAUGASTORIDAE PAGES *****/
/*****
*****/

```

```

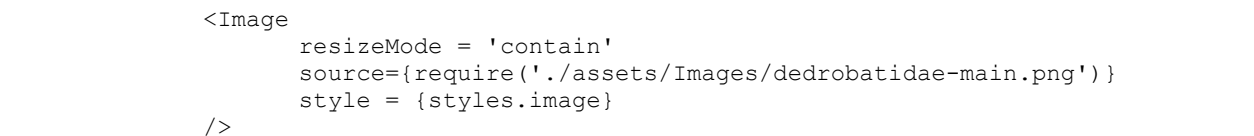
/*****
*****/

```

```

/**** BEGIN DENDROBATIDAE PAGES *****/
class Dendrobatidae extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#69887A',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#84ab99"}}>
          <Text style = {styles.familyTitles}>Dendrobatidae (Poison
Frogs){ "\n" }</Text>
        </View>

```



```

        <Text style = {styles.paragraphs}>
          Dendrobatidae, commonly known as Poison Frogs, is a modest-sized family
with ~180 species currently recognized (Frost, 2017). Costa Rica has 7 species in four
genera: <Text style={{fontStyle: 'italic'}}>Dendrobates</Text> (1 species), <Text
style={{fontStyle: 'italic'}}>Oophaga</Text> (2 species), <Text style={{fontStyle:

```

*Phyllobates* (2 species), and *Silverstoneia* (2 species). Taxonomic revisions suggested by Bauer (1994) resulted in the application of the genus *Oophaga* for two species formerly referred to as *Dendrobates*. Further revisions suggested by Grant et al. (2006) resulted in the change from *Colostethus* to *Silverstoneia* for two species.

The family Dendrobatidae occurs only in the Neotropics, ranging from its northern limit in Nicaragua, south through Costa Rica and Panama, and into the Pacific lowlands south to Peru. Many species also occur in the Amazon basin and Guianas of South America. In Costa Rica, most dendrobatids are restricted to the moist or wet lowlands, and are absent from the dry forests of Guanacaste. Poison Frogs are usually found in forests, but can sometimes be found in agricultural fields and even gardens (ex. *Oophaga pumilio*).

Poison Frogs are aptly named as many species secrete poisons from glands in their skin. These toxins are lipophilic alkaloids as opposed to water-soluble compounds like tetrodotoxin, a deadly poison found in several species of amphibians in other families (Saporito et al. 2012, Pough et al. 2016). Many species of Poison Frogs have bright, contrasting colors (aposematic coloration) that may serve as warning coloration to potential predators. Nonetheless, some species are more cryptically colored in shades of brown and lack lipophilic alkaloids (ex. *Silverstoneia flotator*). Parental care in various forms is common, and may include transporting tadpoles to suitable locations where they complete their development, and even the feeding of unfertilized eggs to tadpoles (*Oophaga* sp). Males of all species vocalize and may be heard calling during the day, especially in the morning and afternoon. Territoriality is common in Poison frogs and males will wrestle with intruders. Although difficult to discern in the field, an external feature of all species in this family is a pair of scutes on the dorsum of the fingers, and a sinistral spiracle on tadpoles (Vitt and Caldwell, 2013).

Species in this Family:

```

<Button color = "#7ca2d0"
  title="Dendrobates auratus"
  onPress={() => this.props.navigation.navigate('AuratusPage')}
/>
<Button color = "#7ca2d0"
  title="Oophaga granulifera"
  onPress={() => this.props.navigation.navigate('GranuliferaPage')}
/>
<Button color = "#7ca2d0"
  title="Oophaga pumilio"
  onPress={() => this.props.navigation.navigate('PumilioPage')}
/>
<Button color = "#7ca2d0"
  title="Phyllobates lugubris"
  onPress={() => this.props.navigation.navigate('LugubrisPage')}
/>
<Button color = "#7ca2d0"
  title="Phyllobates vittatus"
  onPress={() => this.props.navigation.navigate('VittatusPage')}
/>
<Button color = "#7ca2d0"
  title="Silverstoneia flotator"
  onPress={() => this.props.navigation.navigate('FlotatorPage')}
/>
<Button color = "#7ca2d0"

```

```

        title="Silverstoneia nubicola"
        onPress={() => this.props.navigation.navigate('NubicolaPage')}
    />
</ScrollView>
);
}
}
class AuratusPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#69887A',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
                <View style = {styles.colorBar, {backgroundColor: "#84ab99"}}>
                    <Text style = {styles.scientificTitles}>Dendrobates
auratus{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Green and Black Poison
Frog{"\n"}</Text>
                </View>

                <Image
                    resizeMode = 'contain'
                    source={require('./assets/Images/72_Dendrobates_auratus/72-
Dendrobates-auratus-2.png')}
                    style = {styles.image}
                />

                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A moderate-sized (~30-40 mm, ~1.2-
1.6in) and robust frog. This species has smooth skin, that can range in color from
bluish-green, green, to yellow-green with dark brown to black bands, stripes, and
spots. There is a marked difference in the overall coloration between populations of
<Text style={{fontStyle: 'italic'}}>D. auratus</Text> from the Caribbean and Pacific
versants, with those on the Caribbean typically having more prominent bluish-green to
green light areas, and narrower dark markings. The populations on the Pacific versant
normally have more dominant dark markings with sparse yellowish-green light areas. The
eyes are large with horizontal pupils and very dark irises. The fingers and toes lack
interdigital webbing. Males have a subgular vocal sac, but lack nuptial pads as they
do not grasp females in amplexus.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
                <Text style = {styles.paragraphs}>Males call sporadically during the day
from hidden locations among understory vegetation producing a long, low frequency
buzz, typically lasting 2 to 5 seconds.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
                <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Dendrobates auratus</Text> is found on both the Caribbean and Pacific
versants, inhabiting much of the lowlands and foothills on the Caribbean versant, with
the exception of the northwestern corner. On the Pacific versant, they occur within
the lowland and humid forest of the central and southern Pacific, roughly from the Rio
Tarcoles region southward. The elevational range is from near sea level to ~800m. This
diurnal species can be common in a wide variety of habitats, ranging from primary
forest to young secondary growth and gardens.{"\n"}</Text>
            </ScrollView>
        );
    }
}

```

```

        <Image
            resizeMode = 'contain'
            source={require('./assets/Images/72_Dendrobates_auratus/72-
Dendrobates-auratus-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Dendrobates auratus</Text> is not likely to be confused with any other
anuran species in Costa Rica.{"\n"}</Text>

    </ScrollView>
    );
}
}
class GranuliferaPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#B03B2E',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
                <View style = {styles.colorBar, {backgroundColor: "#dd493a"}}>
                    <Text style = {styles.scientificTitles}>Oophaga
granulifera{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Granular Poison
Frog{"\n"}</Text>

                </View>

                <Image
                    resizeMode = 'contain'
                    source={require('./assets/Images/73_Oophaga_granulifera/Oophaga-
granulifera-red-2.png')}
                    style = {styles.image}
                />

                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A small-sized frog (~18-25mm, ~0.7-
1in). This species has granular dorsal skin that can be orange, red, yellow, or green;
with secondary colors on the dorsum and limbs that range from light gray to turquoise-
blue. <Text style={{fontStyle: 'italic'}}>Oophaga granulifera</Text> can be variable
in color and pattern throughout its range in Costa Rica. The fingers and toes lack
interdigital webbing.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
                <Text style = {styles.paragraphs}>Males call from understory perch sites
within their territories throughout the day, but most frequently in the mornings and
afternoons. The call is a long series (often lasting 30 seconds or more) of slowly
repeated raspy notes, similar to <Text style={{fontStyle: 'italic'}}>O.
pumilio</Text>, but much slower.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

```

```

    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Oophaga granulifera</Text> is principally found along the foothills of the
central and southern Pacific region. The elevational range for <Text
style={{fontStyle: 'italic'}}>O. granulifera</Text> is from near sea level to ~600m.
This diurnal species is typically not found as commonly as its Caribbean versant
sister species, <Text style={{fontStyle: 'italic'}}>O. pumilio</Text>, but at some
sites <Text style={{fontStyle: 'italic'}}>O. granulifera</Text> can be found in decent
densities, especially within the humid leaf litter bordering streams during the dry
season. <Text style={{fontStyle: 'italic'}}>Oophaga granulifera</Text> can be found in
a variety of habitat types, but most commonly it inhabits mature forest. They often
tend to prefer forest growing along the riparian slopes of streams and
rivers.{"\n"}</Text>

```

```

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/73_Oophaga_granulifera/Oophaga-
granulifera-range-2.png')}
      style = {styles.image}
    />

```

```

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Oophaga granulifera</Text> is most likely to be confused with its close
relative <Text style={{fontStyle: 'italic'}}>O. pumilio</Text>. However, <Text
style={{fontStyle: 'italic'}}>O. granulifera</Text> has a granular texture of the
dorsum, whereas the dorsum of <Text style={{fontStyle: 'italic'}}>O. pumilio</Text> is
smooth. Further, these two species are allopatric, with <Text style={{fontStyle:
'italic'}}>O. granulifera</Text> found on the Pacific versant, and <Text
style={{fontStyle: 'italic'}}>O. pumilio</Text> found on the Caribbean versant in
Costa Rica.{"\n"}</Text>

```

```

  </ScrollView>
  );
}
}
class PumilioPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#B03B2E',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0}}>
        <View style = {styles.colorBar, {backgroundColor: "#dd493a"}}>
          <Text style = {styles.scientificTitles}>Oophaga
pumilio{"\n"}</Text>
          <Text style = {styles.commonTitles}>Blue-jeans, Strawberry, or Red
Poison Frog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/74_Oophaga_pumilio/Oophaga-
pumilio-2.png')}
          style = {styles.image}
        />

```

```

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small-sized (~18-25mm, ~0.7-1in), but
robust frog. This species has smooth skin that typically ranges in color from bright
orange to blood red, and often having secondary colors on the dorsum and limbs that
range from black to bright blue. <Text style={{fontStyle: 'italic'}}>Oophaga
pumilio</Text> is highly variable in color and pattern throughout its range in Costa
Rica. The eyes are large, and have a horizontal pupil and dark iris. The fingers and
toes lack interdigital webbing. Males have a dark, subgular vocal sac, but lack
nuptial pads.{"\n"}</Text>

```

```

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call throughout the day, but
especially in the mornings and afternoons, from understory perches within their
territories. The call of <Text style={{fontStyle: 'italic'}}>Oophaga pumilio</Text> is
a long series of loud rapidly repeated short raspy notes, that often lasts 30 seconds
or more.{"\n"}</Text>

```

```

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Oophaga pumilio</Text> is found throughout much of lowlands and foothills
of the Caribbean versant. The known elevational range for <Text style={{fontStyle:
'italic'}}>O. pumilio</Text> is from near sea level to ~800m. This diurnal species can
be common in a wide variety of habitats, ranging from primary forest to young
secondary growth and gardens. <Text style={{fontStyle: 'italic'}}>Oophaga
pumilio</Text> often tends to prefer edge habitats such as forest margins, or the
vegetation along roadsides.{"\n"}</Text>

```

```

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/74_Oophaga_pumilio/Oophaga-
pumilio-range-2.png')}
          style = {styles.image}
        />

```

```

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Oophaga pumilio</Text> is most likely to be confused with its close
relative <Text style={{fontStyle: 'italic'}}>O. granulifera</Text>, but these two
species are allopatric, with <Text style={{fontStyle: 'italic'}}>O. pumilio</Text>
known from the Caribbean versant of Costa Rica, whereas <Text style={{fontStyle:
'italic'}}>O. granulifera</Text> is known from the Pacific versant. In addition to the
geographic separation, <Text style={{fontStyle: 'italic'}}>O. granulifera</Text> has a
granular texture of the dorsum that is unknown in Costa Rican populations of <Text
style={{fontStyle: 'italic'}}>O. pumilio</Text>.{"\n"}</Text>

```

```

    </ScrollView>
  );
}
}
class LugubrisPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BA841F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>

```

```

    <View style = {styles.colorBar, {backgroundColor: "#e9a427"}}>
      <Text style = {styles.scientificTitles}>Phyllobates
lugubris{"\n"}</Text>
      <Text style = {styles.commonTitles}>Lovely or Yellow-striped
Poison Frog{"\n"}</Text>
    </View>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/75_Phyllobates_lugubris/Phyllobates-lugubris-
2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A small (~18-25mm, ~0.7-1in), but
robust frog. This species has smooth dark brown to black dorsal skin with a pair of
light dorsolateral stripes that range from dark yellow to yellowish white, and extend
from the tip of the snout to the sacrum. Some individuals may have smaller spots
similarly colored in the center of the dorsum. The ventral surface of the body is dark
brown to black with lighter white to greenish-blue spots scattered throughout. The
upper surfaces of the limbs are heavily pigmented by lighter copper to brown spots.
The eyes are large with horizontal pupils and dark irises. The fingers and toes lack
interdigital webbing. Males have a subgular vocal sac, but lack nuptial
pads.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call from hidden locations
throughout the day, but especially in the morning and afternoon, producing a long
(often 10 seconds or more) musical trill, which is very similar to that of Phyllobates
vittatus.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Phyllobates lugubris</Text> is found in the lowlands and foothills of the
Caribbean versant, ranging in elevation from near sea level to ~750m. This locally
common diurnal species tends to prefer habitats associated with the banks of small
streams and low-lying areas.{"\n"}</Text>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/75_Phyllobates_lugubris/Phyllobates-lugubris-
range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Phyllobates lugubris</Text> is similar in general appearance to <Text
style={{fontStyle: 'italic'}}>Allobates talamancae, P. vittatus</Text>, and Pacific
versant <Text style={{fontStyle: 'italic'}}>Silverstoneia flotator</Text>. <Text
style={{fontStyle: 'italic'}}>Allobates talamancae</Text> differs from <Text
style={{fontStyle: 'italic'}}>P. lugubris</Text> in having cream to light brown
dorsolateral stripes, and a solid white venter. <Text style={{fontStyle:
'italic'}}>Phyllobates vittatus</Text> is most similar, but has thicker, light orange
to reddish orange dorsolateral stripes, and is allopatric, only occurring on the
Pacific versant. <Text style={{fontStyle: 'italic'}}>Silverstoneia flotator</Text> has
a white ventrolateral stripe, whereas <Text style={{fontStyle: 'italic'}}>P.

```

```

lugubris</Text> lacks any such stripes on the ventrolateral region of the
body.{ "\n"}</Text>

    </ScrollView>
  );
}
}
class VittatusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BA841F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#e9a427"}}>
          <Text style = {styles.scientificTitles}>Phyllobates
vittatus{ "\n"}</Text>
          <Text style = {styles.commonTitles}>Golfo Dulce or Striped Poison
Frog{ "\n"}</Text>

          </View>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/76_Phyllobates_vittatus/Phyllobates-vittatus-
2.png')}

            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Description{ "\n"}</Text>
          <Text style = {styles.paragraphs}>A small to moderate-sized (~25-35mm,
~1-1.4in), and robust frog. This species has smooth dark brown to black dorsal skin
with a pair of light orange to reddish-orange dorsolateral stripes that extend from
the tip of the snout to the sacrum. Some individuals may have some smaller orangish
spots in the center of the dorsum. The ventral surface of the body and limbs is often
dominantly covered in a light greenish-blue color. The throat is normally dark brown
to black with some scattered, smaller whitish-blue to greenish-blue markings. The
upper surfaces of the limbs are heavily pigmented by principally greenish-blue
coloration, but some individuals may also have some light copper hues mixed in. The
fingers and toes lack interdigital webbing.{ "\n"}</Text>

          <Text style = {styles.sectionTitles}>Calls{ "\n"}</Text>
          <Text style = {styles.paragraphs}>Males call from hidden locations
throughout the day, but especially in the morning and afternoon, producing a long
(often 10 seconds or more) musical trill, which is very similar to that of <Text
style={{fontStyle: 'italic'}}>Phyllobates lugubris</Text>.{ "\n"}</Text>

          <Text style = {styles.sectionTitles}>Range and Habitat{ "\n"}</Text>
          <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Phyllobates vittatus</Text> is endemic to Costa Rica, only found in a small
section of the lowlands and foothills of the southwestern Pacific, at sites ranging in
elevation from near sea level to ~600m. This diurnal and locally common species often
prefers habitats associated with the banks of small streams and low-lying
areas.{ "\n"}</Text>

```



```

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/76_Phyllobates_vittatus/Phyllobates-vittatus-
range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Phyllobates vittatus</Text> is similar in general appearance to <Text
style={{fontStyle: 'italic'}}>Allobates talamancae</Text>, but differs due to its
cream to light brown dorsolateral stripes, and a solid white venter. <Text
style={{fontStyle: 'italic'}}>Phyllobates lugubris</Text> is most similar, but
typically has thinner dorsolateral stripes that range in color from dark yellow to
yellowish white, and is allopatric, inhabiting the Caribbean versant.{"\n"}</Text>

    </ScrollView>
  );
}
}
class FlotatorPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#906044',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#b47955"}}>
          <Text style = {styles.scientificTitles}>Silverstoneia
flotator{"\n"}</Text>
          <Text style = {styles.commonTitles}>Rainforest or Floating Rocket
Frog{"\n"}</Text>

        </View>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/77_Silverstoneia_flotator/Silverstoneia-
flotator-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A tiny (~15-18mm, ~0.6-0.7in), yet
robust frog. This species has smooth brown to black skin dorsally, and a pair of white
oblique stripes. The extent of the dorsolateral stripes varies between the Pacific and
Caribbean populations. Pacific <Text style={{fontStyle: 'italic'}}>S. flotator</Text>
have more complete white oblique stripes that extend from the groin to the upper
eyelid, whereas Caribbean versant <Text style={{fontStyle: 'italic'}}>S.
flotator</Text> have stripes that only extend from the groin about one fourth to one
third the distance to the eye. From the tip of the snout to the groin there is a white
ventrolateral stripe. The upper surfaces of the limbs are a light tannish-orange. The
ventral surface of the body is white. Males have a light tannish-gray, subgular vocal
sac, but lack nuptial pads. Finger III of adult males is noticeably wider and longer

```

compared to the other fingers. The fingers and toes lack interdigital webbing.

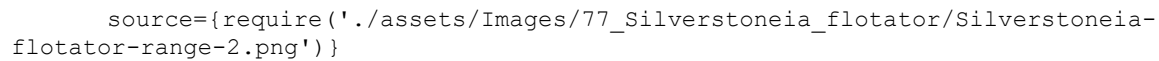
**Calls**

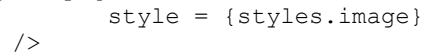
Males call from among the leaf litter or hidden sites on the ground and from low perches throughout the day, producing a series of quick high-pitched chirps.

**Range and Habitat**

*Silverstoneia flotator* occurs on both the Caribbean and Pacific versants. The elevational range for *S. flotator* is from near sea level to ~900m. This common, diurnal species tends to prefer undisturbed forested habitats near shallow seepages and small streams.







**Similar Species**

*Silverstoneia flotator* might be confused with *Allobates talamancae* and *Silverstoneia nubicola*. *Allobates talamancae* can be distinguished from *S. flotator* due to its cream to light brown dorsolateral stripes, and a black throat in adult males. *Silverstoneia nubicola* most resembles *S. flotator*, but can be distinguished by its yellowish venter and black throat in adult males.

);

}

}

class NubicolaPage extends React.Component {

static navigationOptions = {

headerStyle: {

background-color: '#906044',

},

headerTintColor: '#fff',

headerTitleStyle: {

fontWeight: 'bold',

},

};

render() {

return (

<ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>

<View style = {styles.colorBar, {backgroundColor: "#b47955"}}>

<Text style = {styles.scientificTitles}>Silverstoneia

nubicola

<Text style = {styles.commonTitles}>Highland or Boquete Rocket

Frog

</View>

<Image

```

        resizeMode = 'contain'

        source={require('./assets/Images/78_Silverstoneia_nubicola/Silverstoneia-
nubicola-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A tiny to small-sized frog (~16-23mm,
~0.6-0.9in). This species has smooth skin. The dorsum is dark brown and the flanks are
black. A pair of light-colored lateral stripes extend obliquely from the eye to the
groin, and a second set of cream-colored stripes extend along the inferior margin of
the flanks from the snout to the groin. The upper surfaces of the limbs are a light
tannish-orange, and the dorsal surface of the calves has dark blotches. The ventral
surface of the body is yellow. Males have a black subgular vocal sac, but lack nuptial
pads. Finger III of adult males is noticeably wider and longer compared to the other
fingers. The fingers and toes lack interdigital webbing.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call from the leaf litter
throughout the day, but especially in the mornings and afternoons. The call is a
series of 2 to 3 quickly repeated high-pitched squeaks "chirp, chirp... chirp,
chirp."{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Silverstoneia nubicola</Text> occurs in moist to wet premontane forests of
the Talamancas, with an elevational range of ~1050 to 1600m. This diurnal species was
formerly more abundant, but experienced population declines and is now rarely
encountered. They occur in undisturbed forested habitats near shallow seepages and
small streams where their tadpoles develop.{"\n"}</Text>

    <Image
        resizeMode = 'contain'

        source={require('./assets/Images/78_Silverstoneia_nubicola/Silverstoneia-
nubicola-range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Silverstoneia nubicola</Text> might be confused with <Text
style={{fontStyle: 'italic'}}>Allobates talamancae</Text> and <Text style={{fontStyle:
'italic'}}>Silverstoneia flotator</Text>. <Text style={{fontStyle:
'italic'}}>Allobates talamancae</Text> has cream to light brown dorsolateral stripes
(they do not extend obliquely to groin as in <Text style={{fontStyle: 'italic'}}>S.
nubicola</Text>). Silverstoneia flotator most resembles <Text style={{fontStyle:
'italic'}}>S. nubicola</Text>, but has a white venter (yellowish in <Text
style={{fontStyle: 'italic'}}>S. nubicola</Text>), a tannish gray vocal sac in adult
males (black in <Text style={{fontStyle: 'italic'}}>S. nubicola</Text>), and lack dark
blotches on calves (present in <Text style={{fontStyle: 'italic'}}>S.
nubicola</Text>).{"\n"}</Text>

    </ScrollView>
  );
}
}
/**** END DENDROBATIDAE PAGES *****/
/*****
*****/

```

```

/*****
*****/
/**** BEGIN ELEUTHERODACTYLIDAE PAGES *****/
class Eleutherodactylidae extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BA841F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  },
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
      <View style = {styles.colorBar, {backgroundColor: "#e9a427"}}>
        <Text style = {styles.familyTitles}>Eleutherodactylidae (Rain
Frogs)</Text>
      </View>

      <Image
        resizeMode = 'contain'
        source={require('./assets/Images/eleutherodactylidae-main.png')}
        style = {styles.image}
      />

      <Text style = {styles.paragraphs}>
        The family Eleutherodactylidae, commonly known as Northern Rain Frogs, is
a modest-sized family with ~210 species currently recognized (Frost, 2017).
Historically the genus <Text style={{fontStyle: 'italic'}}>Eleutherodactylus</Text>
was one of the largest vertebrate genera with over 500 species (Duellman, 1993).
However, Hedges et al. (2008) proposed taxonomic revisions that split from <Text
style={{fontStyle: 'italic'}}>Eleutherodactylus</Text> several new genera (ex. <Text
style={{fontStyle: 'italic'}}>Diasporus</Text>). Species in these genera were
previously contained in the family Leptodactylidae, but are now placed in new
families, one of which is Eleutherodactylidae. These changes resulted in the
reassignment of 44 species of Costa Rica anurans from their former placement in the
familiar <Text style={{fontStyle: 'italic'}}>Eleutherodactylus</Text>. Currently there
are 8 species of Eleutherodactylids in Costa Rica in two genera, <Text
style={{fontStyle: 'italic'}}>Diasporus</Text> (5 species) and <Text
style={{fontStyle: 'italic'}}>Eleutherodactylus</Text> (3 species). Ironically, the 3
species of <Text style={{fontStyle: 'italic'}}>Eleutherodactylus</Text> occurring in
Costa Rica (<Text style={{fontStyle: 'italic'}}>E. coqui</Text>, and <Text
style={{fontStyle: 'italic'}}>E. johnstonei</Text>, and <Text style={{fontStyle:
'italic'}}>E. planirostris</Text>), are all introduced species.{"\n"}{"\n"}

```

Eleutherodactylidae occurs in the Neotropics, ranging from southern USA, through Central America and the upper half of South America, as well as in the West Indies. In Costa Rica, Eleutherodactylids are widely distributed occurring in nearly every province (absent from the dry regions of Guanacaste), and at elevations ranging from near sea level to ~2500m (<Text style={{fontStyle: 'italic'}}>Diasporus hylaeformis</Text>). Eleutherodactylids may be locally abundant, and because of their loud advertisement call (ex. <Text style={{fontStyle: 'italic'}}>Diasporus diastema</Text>) they are a familiar sound of many forests in Costa Rica.{"\n"}{"\n"}

Similar to Craugastoridae, nearly all Eleutherodactylidae species have direct development (all Eleutherodactylids in Costa Rica are direct developers), consequently their eggs are deposited in a variety of moist locales, but not in standing water. Males usually begin calling near dusk and continue to produce their loud calls from hidden locations in vegetation. All species of Eleutherodactylids in Costa Rica are small frogs ranging in length from the smallest species <Text

style={{fontStyle: 'italic'}}>Diasporus vocator</Text> at ~ 15mm, up to nearly 60mm for the introduced <Text style={{fontStyle: 'italic'}}>Eleutherodactylus coqui</Text>. Eleutherodactylids have expanded pads on the ends of their digits, and similar to Craugastoridae, a circumferential groove is present (although difficult to see in the field). These pads help the frogs navigate their arboreal or semiarboreal habitats.{"\n"}{"\n"}

```

    </Text>

    <Text style = {styles.speciesInFamilyTitle}>Species in this
Family:</Text>
    <Button color = "#7ca2d0"
        title="Diasporus diastema"
        onPress={() => this.props.navigation.navigate('DiastemaPage')}
    />
    <Button color = "#7ca2d0"
        title="Diasporus hylaeformis"
        onPress={() => this.props.navigation.navigate('HylaeformisPage')}
    />
    <Button color = "#7ca2d0"
        title="Diasporus tigrillo"
        onPress={() => this.props.navigation.navigate('TigrilloPage')}
    />
    <Button color = "#7ca2d0"
        title="Diasporus ventrimaculatus"
        onPress={() =>
this.props.navigation.navigate('VentrimaculatusPage')}
    />
    <Button color = "#7ca2d0"
        title="Diasporus vocator"
        onPress={() => this.props.navigation.navigate('VocatorPage')}
    />
    <Button color = "#7ca2d0"
        title="Eleutherodactylus coqui"
        onPress={() => this.props.navigation.navigate('CoquiPage')}
    />
    <Button color = "#7ca2d0"
        title="Eleutherodactylus johnstonei"
        onPress={() => this.props.navigation.navigate('JohnstoneiPage')}
    />
    <Button color = "#7ca2d0"
        title="Eleutherodactylus planirostris"
        onPress={() => this.props.navigation.navigate('PlanirostrisPage')}
    />
    </ScrollView>
    );
}
}
class DiastemaPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#BA841F',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
                <View style = {styles.colorBar, {backgroundColor: "#e9a427"}}>

```

```

        <Text style = {styles.scientificTitles}>Diasporus
diastema{"\n"}</Text>
        <Text style = {styles.commonTitles}>Common Dink Frog{"\n"}</Text>

</View>

<Image
  resizeMode = 'contain'
  source={require('./assets/Images/79_Diasporus_diastema/Diasporus-
diastema-2.png')}
  style = {styles.image}
/>

  <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
  <Text style = {styles.paragraphs}>A small-sized frog (~15-25mm, ~0.6-
1in). The skin is relatively smooth. The head is flat and the eyes are large, with
horizontal pupils. The iris is light colored, with a darker horizontal bar. There are
small tubercles above the eyes. Tympanic membranes are small and indistinct. The
dorsal coloration is variable, but is usually brown or gray, sometimes with pink or
yellow hues. Darker blotches are often present, including a transverse bar behind the
eyes which may be contrasted with a lighter bar anteriorly. Dark bars often extend
from the snout, through the eye, ending on the shoulder. The limbs may be marked with
dark bars as well. They may have light colored longitudinal stripes (single midline,
or paired dorsolateral). Males have a large yellow subgular vocal sac but lack nuptial
pads. The hands and feet lack webbing, but have rounded terminal pads on the
digits.{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
  <Text style = {styles.paragraphs}>Males usually call from hidden
locations in vegetation, producing a loud, single note "tink" or "dink" repeated every
couple of seconds.{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
  <Text style = {styles.paragraphs}>This very common species occurs in
nearly all moist to wet locales (forests to disturbed areas), from near sea level to
~1600 m. They are arboreal, but may occasionally be found in leaf litter.{"\n"}</Text>

  <Image
    resizeMode = 'contain'
    source={require('./assets/Images/79_Diasporus_diastema/Diasporus-
diastema-range-2.png')}
    style = {styles.image}
  />

  <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
  <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Diasporus diastema</Text> may be confused with other Diasporus species.
However, <Text style={{fontStyle: 'italic'}}>D. hylaeformis</Text> differs in having
triangular ventral finger/toe pads, and occurs at higher elevations (the species may
overlap between ~1500- 1600 m). <Text style={{fontStyle: 'italic'}}>Diasporus
tigrillo</Text> is a yellow frog with dark spots dorsally, whereas <Text
style={{fontStyle: 'italic'}}>D. ventrimaculatus</Text> has white blotches on a black
or red venter. <Text style={{fontStyle: 'italic'}}>Diasporus vocator</Text> is smaller
and has oblong finger/toe pads, pointed at the tips.{"\n"}</Text>

</ScrollView>
);
}
}
class HylaeformisPage extends React.Component {
  static navigationOptions = {
    headerStyle: {

```

```

        backgroundColor: '#BA841F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
        fontWeight: 'bold',
    },
    };
render() {
    return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
            <View style = {styles.colorBar, {backgroundColor: "#e9a427"}}>
                <Text style = {styles.scientificTitles}>Diasporus
hylaeformis{"\n"}</Text>
                <Text style = {styles.commonTitles}>Montane Dink Frog{"\n"}</Text>

            </View>

            <Image
                resizeMode = 'contain'

                source={require('./assets/Images/80_Diasporus_hylaeformis/Diasporus-
hylaeformis-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A small-sized frog (~20-25mm, ~0.8-
1in). The skin is relatively smooth. The head is flat and the eyes are large, with
horizontal pupils, and a light-colored iris with a darker horizontal bar. There are
small tubercles above the eyes. Tympanic membranes are small and indistinct. The
dorsal coloration is variable, but is usually brown or gray, often with reddish hues.
A dark blotch with a light-colored edge anteriorly occurs on the head. Additional dark
blotches may occur dorsally including faint, dark bars extending from the snout,
through the eye, ending on the shoulder. They may have light-colored longitudinal
stripes (single midline, or paired dorsolateral, and/or ventrally). Males have a large
yellow or orange subgular vocal sac, but lack nuptial pads. The unwebbed hands and
feet have rounded, expanded tips on the digits, often reddish. The ventral surface of
the terminal pads may be slightly triangular.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>Males usually call from hidden
locations in low vegetation and trees, producing a loud, single note "tink" or "dink"
repeated frequently.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}>This uncommon species is usually found
on low vegetation in lower montane forests from ~1500 to 2500 m.{"\n"}</Text>

            <Image
                resizeMode = 'contain'

                source={require('./assets/Images/80_Diasporus_hylaeformis/Diasporus-
hylaeformis-range-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Diasporus hylaeformis</Text> may be confused with other <Text
style={{fontStyle: 'italic'}}>Diasporus species</Text>. However, <Text
style={{fontStyle: 'italic'}}>D. diastema</Text> differs in having more expanded tips
on the digits with rounded pads and occurs at lower elevations (the species may

```

overlap between ~1500- 1600 m) *Diasporus tigrillo* is a yellow frog with dark spots dorsally, whereas *D. ventrimaculatus* has white blotches on a red or black venter. *Diasporus vocator* is smaller, and has oblong finger/toe pads, pointed at the tips.

```

    </ScrollView>
  );
}
}
class TigrilloPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BA841F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#e9a427"}}>
          <Text style = {styles.scientificTitles}>Diasporus
tigrillo{"\n"}</Text>
          <Text style = {styles.commonTitles}>Tiger Dink Frog{"\n"}</Text>
        </View>
        <Image
tigrillo-2.png')
          resizeMode = 'contain'
          source={require('./assets/Images/81_Diasporus_tigrillo/Diasporus-
tigrillo-2.png')}
          style = {styles.image}
        />
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small-sized frog (~16-20mm, ~0.6-
0.8in). The skin is relatively smooth. The head is flat and the eyes are medium-sized
with horizontal pupils and a light (golden) colored iris. Small tubercles occur above
the eyes. Tympanic membranes are small and indistinct. The dorsal coloration is yellow
with numerous dark (brown) spots. Males have a large yellow, subgular vocal sac, but
lack nuptial pads. The unwebbed hands and feet have expanded, somewhat pointed tips on
the digits, and the ventral pads on the digits may be slightly
triangular.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males were observed calling from low
vegetation, producing a single note "tink" or "dink" reportedly similar to that of
<Text style={{fontStyle: 'italic'}}>D. diastema</Text>{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This extremely rare species has only
been found in the Rio Lari area in premontane rainforest on the Atlantic slope at ~400
to 440 m. The two known individuals were found on low vegetation associated with a
stream.{"\n"}</Text>
        <Image
tigrillo-range-2.png')
          resizeMode = 'contain'
          source={require('./assets/Images/81_Diasporus_tigrillo/Diasporus-
tigrillo-range-2.png')}

```



```

        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Diasporus tigrillo</Text> may be confused with other Diasporus species.
However, all other Diasporus species lack the solid yellow dorsum marked with brown
spots, and <Text style={{fontStyle: 'italic'}}>D. ventrimaculatus</Text> has white
blotches on a red or black venter.{"\n"}</Text>

    </ScrollView>
  );
}
}
class VentrimalaculatusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BA841F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#e9a427"}}>
          <Text style = {styles.scientificTitles}>Diasporus
ventrimaculatus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Spotted-belly Dink
Frog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/82_Diasporus_ventrimaculatus/Diasporus-
ventrimaculatus-victor-acosta-2.png')}
          style = {styles.image}
        />
        <Text style = {styles.paragraphs}>(Photo by Victor Acosta){'\n'}</Text>

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small-sized frog (~20-25mm, ~0.8-
1in). The skin is smooth to slightly granular (areolate). The head is flat, lacking
cranial crests. Eyes are large with a red to brass colored iris, and a dark band
extending horizontally through the pupil. Small tubercles above the eyes may occur
infrequently. Tympanic membranes are small and indistinct. The dorsal coloration is
highly variable, ranging from black, tan and red. The venter is marked with white
blotches on a red or black ground color. Males have a large, reddish, subgular vocal
sac, but lack nuptial pads. The unwebbed hands and feet have expanded tips on the
digits, and the ventral pads on the digits are rounded.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males were observed calling from low
vegetation and trees, producing a single note "tink" or "dink" similar to that of
<Text style={{fontStyle: 'italic'}}>D. diastema</Text>.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

```

<Text style = {styles.paragraphs}>This extremely rare species has only been found in Valle del Silencio in montane rainforest on the Atlantic slope at ~2500 m. They occur on low vegetation, trees, and associated epiphytes.{"\n"}</Text>

<Image  
    resizeMode = 'contain'

    source={require('./assets/Images/82\_Diasporus\_ventrimaculatus/Diasporus-ventrimaculatus-range-2.png')}  
    style = {styles.image}  
/>

<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

<Text style = {styles.paragraphs}><Text style={{fontStyle:  
'italic'}}>Diasporus ventrimaculatus</Text> may be confused with other <Text  
style={{fontStyle: 'italic'}}>Diasporus species</Text>. However, all other Diasporus  
species lack the white blotches on a red or black venter. <Text style={{fontStyle:  
'italic'}}>Diasporus tigrillo</Text> has a solid yellow dorsum marked with brown  
spots.{"\n"}</Text>

</ScrollView>

);

}

class VocatorPage extends React.Component {

    static navigationOptions = {

        headerStyle: {  
            backgroundColor: '#BA841F',

        },

        headerTintColor: '#fff',

        headerTitleStyle: {

            fontWeight: 'bold',

        },

    };

    render() {

        return (

            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>

                <View style = {styles.colorBar, {backgroundColor: "#e9a427"}}>

                    <Text style = {styles.scientificTitles}>Diasporus

vocator{"\n"}</Text>

                    <Text style = {styles.commonTitles}>Vociferous Dink

Frog{"\n"}</Text>

                </View>

            <Image

                resizeMode = 'contain'

                source={require('./assets/Images/83\_Diasporus\_vocator/Diasporus-  
vocator-2.png')}  
                style = {styles.image}  
            />

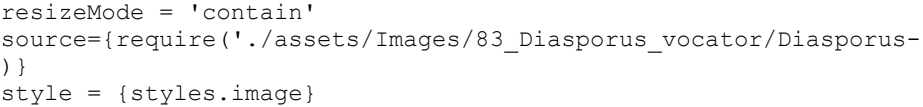
            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>

            <Text style = {styles.paragraphs}>A small-sized frog (~14-18mm, ~0.6-  
0.7in). The skin is relatively smooth, but may have scattered tubercles. The head is  
flat and the snout is pointed. The eyes are large, with light colored irises and  
horizontal pupils. Small supraocular tubercles are present. Tympanic membranes are  
small and indistinct. The dorsal coloration is variable, but is usually brown or gray  
with darker blotches, including a transverse bar behind the eyes often contrasting  
with a pale bar anteriorly. Dark bars often extend from the snout, through the eye,  
ending on the shoulder. The limbs may be marked with dark bars as well. Light colored  
longitudinal stripes (single midline, or paired dorsolateral) may occur. Males have a

large subgular vocal sac, but lack nuptial pads. The hands and feet are unwebbed. The digits have light colored bars on the last knuckle, and the terminal discs are oblong ending with a distinct point.

**Calls**  
Males usually call from hidden locations in low vegetation, producing a single note "tink" or "dink" that is repeated every couple of seconds.

**Range and Habitat**  
This common species occurs widely in moist to wet locales (forests to disturbed areas) of the Pacific versant, from near sea level to ~1500 m. They may be found on the ground or in low vegetation.

The image is a map showing the distribution range of the frog species *Diasporus vocator*. The map is titled "Diasporus vocator-range-2.png" and is contained within an image tag with a "contain" resizeMode.

**Similar Species**  
*Diasporus vocator* may be confused with other *Diasporus* species. However, all other *Diasporus* species in Costa Rica lack the distinct oblong terminal discs. *Diasporus diastema* has rounded finger/toe pads. *Diasporus hylaeformis* differs in having triangular finger/toe pads and occurs at higher elevations (over ~1500 m). *Diasporus tigrillo* is a yellow frog with dark spots dorsally, whereas *D. ventrimaculatus* has white blotches or reticulations ventrally.

```
    </ScrollView>
  );
}
}
class CoquiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#92561D',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#b76b25"}}>
          <Text style = {styles.scientificTitles}>Eleutherodactylus
coqui{"\n"}</Text>
          <Text style = {styles.commonTitles}>Puerto Rican
Coqui{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
```

```

        source={require('./assets/Images/84_Eleutherodactylus_coqui/Eleutherodactylus-
coqui-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A moderate-sized frog (~30-58mm, ~1.2-
2.3in). The dorsal coloration, which is subject to metachrosis, typically ranges from
a light tan to reddish-brown with additional light or dark bands or irregular
markings. There is a reddish-orange coloration on the anterior and posterior dorsal
surface of the thigh and on the lower leg. The dorsal skin is smooth to weakly
granular, at times having some small tubercles scattered throughout, especially on the
legs and forearms. <Text style={{fontStyle: 'italic'}}>Eleutherodactylus coqui</Text>
has a dark supratympanic line above evident tympanic membranes. The eyes have a
horizontal pupil, with a yellow to bronze iris that often has a dark reticulation. A
supraocular tubercle can be found on the upper eyelid. The snout is elongate and
bluntly pointed. The ventral surface of the body is light tan and weakly translucent
in the center of the body. A rounded tubercle is present on the heel. The hands and
feet lack interdigital webbing, and have expanded truncate terminal discs on the
digits.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call at night from hidden
positions within vegetation usually a meter or two above the ground. The advertisement
call consists of a double note call, starting with a softer note, and ending with a
loud high-pitched whistle-like note "co - qui."{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Eleutherodactylus coqui</Text> is not native to Costa Rica, but an
introduced population occurs in a neighborhood on the eastern edge of the city of
Turrialba, at an elevation of ~650m.{"\n"}</Text>

    <Image
        resizeMode = 'contain'

        source={require('./assets/Images/84_Eleutherodactylus_coqui/Eleutherodactylus-
coqui-range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Eleutherodactylus coqui</Text> is most likely to be confused with <Text
style={{fontStyle: 'italic'}}>Pristimantis ridens</Text>, but the latter species is
much smaller. Further, <Text style={{fontStyle: 'italic'}}>E. coqui</Text> is limited
in distribution to Turrialba, whereas <Text style={{fontStyle: 'italic'}}>P.
ridens</Text> is much more widespread.{"\n"}</Text>

    </ScrollView>
  );
}
}
class JohnstoneiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#92561D',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  },

```

```

    };
    render() {
      return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
          <View style = {styles.colorBar, {backgroundColor: "#b76b25"}}>
            <Text style = {styles.scientificTitles}>Eleutherodactylus
johnstonei{"\n"}</Text>
            <Text style = {styles.commonTitles}>Johnstone's Whistling
Frog{"\n"}</Text>

          </View>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/85_Eleutherodactylus_johnstonei/Eleutherodacty
lus-johnstonei-todd-pierson-2.png')}
            style = {styles.image}
          />
          <Text style = {styles.paragraphs}>(Photo by Todd Pierson){'\n'}</Text>

          <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
          <Text style = {styles.paragraphs}>A small-sized frog (~17-35mm, ~0.7-
1.4in). The skin is slightly granular, but may be smoother dorsally. The head is flat
and the snout is squared off with protuberant nostrils. The eyes are large with
horizontal pupils and a gold colored iris. Tympanic membranes are small and occur
below a dark supratympanic line that may also extend towards the snout. The dorsal
coloration is variable, but is usually a shade of tan or brown with numerous dark
spots. A pale vertebral stripe may be present. The ventral color is white to cream
colored. Males have a large subgular vocal sac, but lack nuptial pads. The unwebbed
hands and feet have expanded tips on the digits, and finger I is longer than finger
II.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
          <Text style = {styles.paragraphs}>Males call from vegetation, producing a
two-note whistle-like call. The second note rises in pitch.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
          <Text style = {styles.paragraphs}>This species is not native to Costa
Rica, but a single specimen was collected in San Jose at an elevation of ~1200m. The
species seems to prefer some level of habitat disturbance, and in other countries is
also known from introduced populations occurring in urban and human-influenced
locales.{"\n"}</Text>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/85_Eleutherodactylus_johnstonei/Eleutherodacty
lus-johnstonei-range-2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
          <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Eleutherodactylus johnstonei</Text> may be confused with small Pristimantis
species such as <Text style={{fontStyle: 'italic'}}>P. ridens</Text> and <Text
style={{fontStyle: 'italic'}}>P. cruentus</Text>, as well as Diasporus species.
However, these other species all have supraocular tubercles, and lack the notched
upper and lower jaw present in <Text style={{fontStyle: 'italic'}}>E.
johnstonei</Text>. Further, the Pristimantis species generally have vivid coloration
in the groin; red (<Text style={{fontStyle: 'italic'}}>P. ridens</Text>) or yellow
(<Text style={{fontStyle: 'italic'}}>P. cruentus</Text>).{"\n"}</Text>

```

```

    </ScrollView>
  );
}
}
class PlanirostrisPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#92561D',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#b76b25"}}>
          <Text style = {styles.scientificTitles}>Eleutherodactylus
planirostris{"\n"}</Text>
          <Text style = {styles.commonTitles}>Greenhouse Frog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/86_Eleutherodactylus_planirostris/Eleutherodac
tylus-planirostris-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small-sized frog (~15-36mm, ~0.6-
1.4in). The dorsal skin is granular, but the ventral skin is smooth. The head is flat
and the snout pointed. A raised, midline fold of skin extends posteriorly from the
snout to the dorsum. The eyes are large with horizontal pupils and a gold colored
iris. Tympanic membranes are large and readily visible below a darkly colored
supratympanic fold that extends from the eye to the shoulder. The dorsal coloration is
tan or brown with small dark spots. Dark dorsal markings form an interorbital bar that
contrasts with the pale color anteriorly. Some individuals make have a pair of pale
dorsolateral stripes. The ventral color is white to cream-colored. Males have a
subgular vocal sac. The unwebbed hands and feet have expanded tips on the
digits.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call in the evening or after
heavy rains from hidden sites in leaf litter or on low vegetation. They produce a very
quiet set of 4 to 6 notes that sound like melodious bird-like chirps.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This species is not native to Costa
Rica, but a population has been established in Limon. This species tolerates
disturbance, and introduced populations often occur in urban and human-influenced
locales.{"\n"}</Text>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/86_Eleutherodactylus_planirostris/Eleutherodac
tylus-planirostris-range-2.png')}

```

```

        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Eleutherodactylus planirostris</Text> might be confused with small
Craugastor species such as <Text style={{fontStyle: 'italic'}}>C. bransfordii, C.
persimilis</Text> and <Text style={{fontStyle: 'italic'}}>C. stejnegerianus</Text>.
Nonetheless these later species lack the expanded terminal pads on the digits. They
may also be confused with small Pristimantis species such as <Text style={{fontStyle:
'italic'}}>P. ridens</Text> and <Text style={{fontStyle: 'italic'}}>P.
cruentus</Text>, as well as Diasporus species. However, these other species all have
supraocular tubercles, and the Pristimantis species generally have vivid coloration in
the groin; red (<Text style={{fontStyle: 'italic'}}>P. ridens</Text>) or yellow (<Text
style={{fontStyle: 'italic'}}>P. cruentus</Text>).{"\n"}</Text>

    </ScrollView>
  );
}
}
/**** END ELEUTHERODACTYLIDAE PAGES *****/
/*****
*****

/*****
*****/
/**** BEGIN HEMIPHRACTIDAE PAGES *****/
class Hemiphractidae extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BC9476',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#ebb994"}}>
          <Text style = {styles.familyTitles}>Hemiphractidae (Marsupial
Frogs)</Text>
        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/hemiphractidae-main.png')}
          style = {styles.image}
        />

        <Text style = {styles.paragraphs}>
          The family Hemiphractidae, commonly known as Horned Frogs and Marsupial
          Frogs, is a small family with 105 species currently recognized (Frost, 2017). The
          family occurs in the Neotropics with species found in Central and South America, as
          well as on Trinidad and Tobago (Vitt and Caldwell, 2013). In Costa Rica, this family
          is represented by a single species, <Text style={{fontStyle: 'italic'}}>Gastrotheca
          cornuta</Text>. This species is rare in Costa Rica and is only known from a few sites
          on the Atlantic versant (Salazar, 2015).{"\n"}{"\n"}
        </Text>
      </ScrollView>
    );
  }
}

```

Frogs in the family Hemiphraactidae were formerly in the Treefrog family (Hylidae), but genetic evidence warranted placement in their own family (Faivovich et al., 2005; Frost et al. 2006; Duellman et. al. 2016). In addition to genetic differences, females of many species in this family have a pouch (a marsupium) on their back. This unique reproductive structure may either be open or closed, and allows females to transport eggs, larvae, or froglets depending on the species (froglets in the case of the *Gastrotheca cornuta*). The tadpoles of this species (and other species as well) develop special sac-like gills that are rich with blood vessels and function as a placenta likely facilitating gas exchange with the mother (del Pino, 1980).

```

    </Text>

    <Text style = {styles.speciesInFamilyTitle}>Species in this
Family:</Text>
    <Button color = "#7ca2d0"
        title="Gastrotheca cornuta"
        onPress={() => this.props.navigation.navigate('CornutaPage')}
    />
    </ScrollView>
    );
}
}
class CornutaPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#BC9476',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
                <View style = {styles.colorBar, {backgroundColor: "#ebb994"}}>
                    <Text style = {styles.scientificTitles}>Gastrotheca
cornuta{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Horned Marsupial
Frog{"\n"}</Text>

                </View>

                <Image
                    resizeMode = 'contain'

                    source={require('./assets/Images/87_Gastrotheca_cornuta/Gastrotheca-cornuta-
2.png')}
                    style = {styles.image}
                />

                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A large frog (~65-80mm, ~2.6-3.2in).
The dorsal coloration is light tan to brown with numerous darker brown to black
transversal bands, often also having a pair of dark brown to black dorsolateral
stripes. The ventral surfaces of the body and limbs are pinkish cream to light tan. A
pair of white spots are found just below the vent on the posterior ventral surfaces of
the thighs. Soft triangular skin flaps extend out from the upper eyelid. On the outer
margin of the heel there is small triangular skin flap, or calcar. Females have a
brood pouch opening in the center of the lower back. The hands lack evident webbing

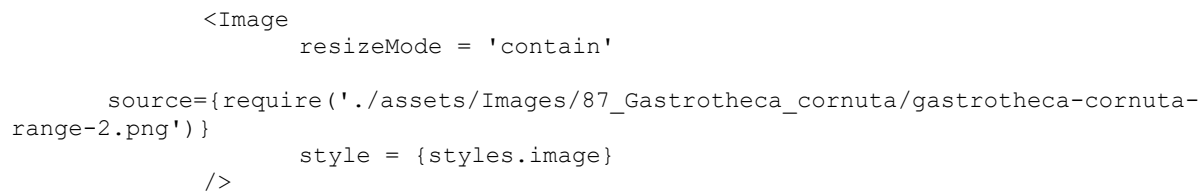
```



between the fingers, whereas moderate webbing is found between the toes of the feet.

**Calls**  
Male *Gastrotheca cornuta* call from understory vegetation producing a very loud call that can be heard from up to a hundred meters or more within the forest. The call consists of a loud single "Buk" or double "Buk - Buk".

**Range and Habitat**  
Within Costa Rica, *Gastrotheca cornuta* has only been reported to inhabit mature forest along the Caribbean foothills (300-800 masl) of the Talamancas in the central and southern Caribbean, from Guayacán de Siquirres towards the southeast. This nocturnal species is extremely rare, and up until just recently had not been seen within Costa Rica for nearly 20 years. *Gastrotheca cornuta* has direct development, and is known as a marsupial frog due to the female carrying her developing eggs within a specialized pouch in her lower back. Upon finishing their embryonic development, the young emerge as fully developed froglets.



**Similar Species**  
*Gastrotheca cornuta* is quite unique, and unlikely to be confused with any other Costa Rican frogs.

```
</ScrollView>
);
}
}
/**** END HEMIPHRACTIDAE PAGES *****/
/*****
*****/

/*****
*****/
/***** BEGIN HYLIDAE PAGES *****/
class Hylidae extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#78655C',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  },
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
      <View style = {styles.colorBar, {backgroundColor: "#977f73"}}>
        <Text style = {styles.familyTitles}>Hylidae (Tree Frogs)</Text>
      </View>
    </ScrollView>
  );
}
```

```

<Image
  resizeMode = 'contain'
  source={require('./assets/Images/hylidae-main.png')}
  style = {styles.image}
/>

```

```

<Text style = {styles.paragraphs}>

```

The family Hylidae, commonly known as Treefrogs, is a large family with ~690 species currently recognized (Frost, 2017). A family this large is bound to be varied, and hylids are indeed diverse in size (~30mm to 150mm) and in morphology. As the common name suggests most species are arboreal. But, some species do not live in trees, rather they are fossorial or aquatic. Nonetheless, all 38 species that occur in Costa Rica are arboreal or semiarboreal (although *Hyloscirtus* sp. are strongly associated with streams).

There have been substantial taxonomic revisions in Hylidae. Duellman et al. (2016) supported earlier proposals to remove two groups from Hylidae, placing them each in new families (Hemiphractidae and Phyllomedusidae). Taxonomic revisions suggested by Faivovich et al. (2005) and Dubois (2017) resulted in many Costa Rica hylid species formerly in the genus *Hyla* to be assigned to various resurrected or new genera including the most species-rich, *Isthmohyla* (11 species), followed by *Ecnomiohyla* (4 species), *Dendropsophus* (3 species), *Boana* (2 species), *Hyloscirtus* (2 species), *Ptychohyla* (1 species), and *Tlalocohyla* (1 species).

Hylids are widespread, occurring on every continent except Antarctica and Australia (Duellman et al. 2016). In Costa Rica, hylids occur in every province from near sea level to ~2,800m (*Isthmohyla pictipes*). Despite several species occurring above 2,000m in elevation, about 2/3 of hylids in Costa Rica occur at elevations of ~1,500m or lower. Hylids can be found in a wide variety of habitats ranging from dry forests to cloud forests, and from urban settings to old-growth forests.

All hylids in Costa Rica have expanded pads on the tips of their digits, and aquatic tadpoles with a sinistral spiracle. But, the location where development occurs varies. Tadpoles of some genera are exclusively stream-dwelling (*Duellmanohyla*, *Hyloscirtus* and *Ptychohyla*), while other genera have some species that develop in streams or rivers but not all (*Isthmohyla* and *Smilisca*). Many species (~40%) rely on still water in puddles and ponds for tadpole development, yet others utilize arboreal water sources such as tree cavities (*Ecnomiohyla* sp.) and bromeliads. Two species utilizing arboreal water sources (*Anotheca spinosa* and *Isthmohyla zeteki*) exhibit parental behavior similar to some Poison frogs in feeding unfertilized eggs to their tadpoles.

```

</Text>

```

```

<Text style = {styles.speciesInFamilyTitle}>Species in this
Family:</Text>

```

```

<Button color = "#7ca2d0"
  title="Anotheca spinosa"
  onPress={() =>
this.props.navigation.navigate('HylidaeSpinosaPage')}
/>
<Button color = "#7ca2d0"

```

```

        title="Boana rosenbergi"
        onPress={() => this.props.navigation.navigate('RosenbergiPage')}
    />
    <Button color = "#7ca2d0"
        title="Boana rufitela"
        onPress={() => this.props.navigation.navigate('RufitelaPage')}
    />
    <Button color = "#7ca2d0"
        title="Dendropsophus ebraccatus"
        onPress={() => this.props.navigation.navigate('EbraccatusPage')}
    />
    <Button color = "#7ca2d0"
        title="Dendropsophus microcephalus"
        onPress={() =>
this.props.navigation.navigate('MicrocephalusPage')}
    />
    <Button color = "#7ca2d0"
        title="Dendropsophus phlebodes"
        onPress={() => this.props.navigation.navigate('PhlebodesPage')}
    />
    <Button color = "#7ca2d0"
        title="Duellmanohyla lythrodes"
        onPress={() => this.props.navigation.navigate('LythrodesPage')}
    />
    <Button color = "#7ca2d0"
        title="Duellmanohyla rufiocus"
        onPress={() => this.props.navigation.navigate('RufiocusPage')}
    />
    <Button color = "#7ca2d0"
        title="Duellmanohyla uranochroa"
        onPress={() => this.props.navigation.navigate('UranochroaPage')}
    />
    <Button color = "#7ca2d0"
        title="Ecnomiohyla bailarina"
        onPress={() => this.props.navigation.navigate('BailarinaPage')}
    />
    <Button color = "#7ca2d0"
        title="Ecnomiohyla fimbrimembra"
        onPress={() => this.props.navigation.navigate('FimbrimembraPage')}
    />
    <Button color = "#7ca2d0"
        title="Ecnomiohyla miliaria"
        onPress={() => this.props.navigation.navigate('MiliariaPage')}
    />
    <Button color = "#7ca2d0"
        title="Ecnomiohyla sukia"
        onPress={() => this.props.navigation.navigate('SukiaPage')}
    />
    <Button color = "#7ca2d0"
        title="Hyloscirtus colymba"
        onPress={() => this.props.navigation.navigate('ColymbaPage')}
    />
    <Button color = "#7ca2d0"
        title="Hyloscirtus palmeri"
        onPress={() => this.props.navigation.navigate('PalmeriPage')}
    />
    <Button color = "#7ca2d0"
        title="Isthmohyla angustilineata"
        onPress={() =>
this.props.navigation.navigate('AngustilineataPage')}
    />
    <Button color = "#7ca2d0"
        title="Isthmohyla calypsa"

```

```

        onPress={() => this.props.navigation.navigate('CalypsaPage')}
    />
    <Button color = "#7ca2d0"
        title="Isthmohyla debilis"
        onPress={() => this.props.navigation.navigate('DebilisPage')}
    />
    <Button color = "#7ca2d0"
        title="Isthmohyla lancasteri"
        onPress={() => this.props.navigation.navigate('LancasteriPage')}
    />
    <Button color = "#7ca2d0"
        title="Isthmohyla picadoi"
        onPress={() => this.props.navigation.navigate('PicadoiPage')}
    />
    <Button color = "#7ca2d0"
        title="Isthmohyla pictipes"
        onPress={() => this.props.navigation.navigate('PictipesPage')}
    />
    <Button color = "#7ca2d0"
        title="Isthmohyla pseudopuma"
        onPress={() => this.props.navigation.navigate('PseudopumaPage')}
    />
    <Button color = "#7ca2d0"
        title="Isthmohyla rivularis"
        onPress={() => this.props.navigation.navigate('RivularisPage')}
    />
    <Button color = "#7ca2d0"
        title="Isthmohyla tica"
        onPress={() => this.props.navigation.navigate('TicaPage')}
    />
    <Button color = "#7ca2d0"
        title="Isthmohyla xanthosticta"
        onPress={() => this.props.navigation.navigate('XanthostictaPage')}
    />
    <Button color = "#7ca2d0"
        title="Isthmohyla zeteki"
        onPress={() => this.props.navigation.navigate('ZetekiPage')}
    />
    <Button color = "#7ca2d0"
        title="Osteopilus septentrionalis"
        onPress={() =>
this.props.navigation.navigate('SeptentrionalisPage')}
    />
    <Button color = "#7ca2d0"
        title="Ptychohyla legleri"
        onPress={() => this.props.navigation.navigate('LegleriPage')}
    />
    <Button color = "#7ca2d0"
        title="Scinax boulengeri"
        onPress={() => this.props.navigation.navigate('BoulengeriPage')}
    />
    <Button color = "#7ca2d0"
        title="Scinax elaeochrous"
        onPress={() => this.props.navigation.navigate('ElaeochrousPage')}
    />
    <Button color = "#7ca2d0"
        title="Scinax staufferi"
        onPress={() => this.props.navigation.navigate('StaufferiPage')}
    />
    <Button color = "#7ca2d0"
        title="Smilisca baudinii"
        onPress={() => this.props.navigation.navigate('BaudiniiPage')}
    />

```

```

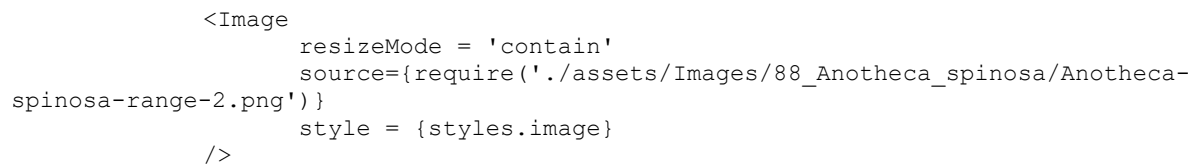
        <Button color = "#7ca2d0"
            title="Smilisca phaeota"
            onPress={() => this.props.navigation.navigate('PhaeotaPage')}
        />
        <Button color = "#7ca2d0"
            title="Smilisca puma"
            onPress={() => this.props.navigation.navigate('PumaPage')}
        />
        <Button color = "#7ca2d0"
            title="Smilisca sila"
            onPress={() => this.props.navigation.navigate('SilaPage')}
        />
        <Button color = "#7ca2d0"
            title="Smilisca sordida"
            onPress={() => this.props.navigation.navigate('SordidaPage')}
        />
        <Button color = "#7ca2d0"
            title="Tlalocohyla loquax"
            onPress={() => this.props.navigation.navigate('LoquaxPage')}
        />
        <Button color = "#7ca2d0"
            title="Trachycephalus typhonius"
            onPress={() => this.props.navigation.navigate('TyphoniusPage')}
        />
    </ScrollView>
    );
}
}
class HylidaeSpinosaPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#78655C',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
                <View style = {styles.colorBar, {backgroundColor: "#977f73"}}>
                    <Text style = {styles.scientificTitles}>Anotheca
spinosa{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Crowned Treefrog{"\n"}</Text>
                </View>
                <Image
spinosa-2.png')
                    resizeMode = 'contain'
                    source={require('./assets/Images/88_Anotheca_spinosa/Anotheca-
spinosa-2.png')}
                    style = {styles.image}
                />
                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A moderate to large-sized frog (~55-
80mm, ~2.2-3.2in). The dorsal coloration, which is subject to metachrosis, can vary
from light tan to dark brown, with irregular bands and spots that are outlined by
white or cream. The flanks, side of the head, and sections of the arms and legs
typically have a higher concentration of bands and spots. The eyes are large and have
a round pupil, and a copper colored iris. The tympanic membranes are large and easily

```

visible. Males lack vocal sacs, but have dark nuptial pads on the thumbs. Adult individuals (both sexes) have sharp, bony, spine-like projections along the margins of the upper skull. These bony projections are larger and more defined along the posterior margin of the skull. The ventral surfaces are light gray to tan with an abundance of dark spots and pigmentation.

**Calls**  
 The advertisement call of *Anotheca spinosa* can vary from soft individual notes, to a loud and long series of “boop-boop-boop-boop” notes. When the advertisement call consists of a loud long series, it can last up to 30 seconds and be heard from more than a hundred meters distance.

**Range and Habitat**  
 In Costa Rica, this uncommon nocturnal species primarily occurs on the Caribbean foothills and lower slopes, and on the Pacific slopes near Panama. The elevational for *Anotheca spinosa* ranges from ~350 to 1400m. This species can be found in a variety of habitats, ranging from old-growth to severely altered habitats such as agricultural areas and even gardens.



**Similar Species**  
*Anotheca spinosa*, with its sharp bony spine-like projections on the skull, is not likely to be confused with any other frog in Costa Rica.

```

    </ScrollView>
  );
}
}
class RosenbergiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BA841F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#e9a427"}}>
          <Text style = {styles.scientificTitles}>Boana
rosenbergi{"\n"}</Text>
          <Text style = {styles.commonTitles}>Rosenberg's Gladiator
Frog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/89_Boana_rosenbergi/Boana-rosenbergi-2.png')}

```

```

        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A large-sized frog (~60-80mm, ~2.4-
3.2in). The skin is relatively smooth dorsally and granular ventrally. The head is
flat and the nostrils protrude on the snout's tip. The eyes are large with horizontal
pupils and a light-colored iris edged in black. Tympanic membranes are easily visible.
The dorsal coloration is variable, but is usually brown or gray (sometimes green) with
darker blotches that may form a net-like (reticulated) pattern. A dark middorsal
stripe (absent in juveniles) extends posteriorly from the nose. The sides and groin
are usually marked with contrasting yellowish orange vertical bars. The ground color
when resting (daytime) is much lighter. Males have a subgular vocal sac and a
prominent prepollical spine (hidden in a fleshy covering). The hands are large and
both fingers and toes have expanded terminal pads and extensive webbing. These frogs
have green bones usually visible in the limbs.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males produce various calls. The
advertisement call starts with low-pitched single notes that get closer together until
it is a rapid, knocking "chuck, chuck-chuck, chk-chk-chk-chk."{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>This common nocturnal species occurs in
moist and wet lowland forests on the Pacific slope from near sea level to ~400m. They
are arboreal except during the breeding season when they may be found in territorial
breeding puddles or on low vegetation.{"\n"}</Text>

    <Image
        resizeMode = 'contain'
        source={require('./assets/Images/89_Boana_rosenbergi/Boana-
rosenbergi-range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Boana rosenbergi</Text> may be confused with other large hylids (such as
Ecnomiohyla species). However, they lack the prepollical (thumb) spines and green
bones. <Text style={{fontStyle: 'italic'}}>Boana rufitela</Text> has a similar
morphology, including the prepollical spines, but differs in having red webbing on the
hands and feet.{"\n"}</Text>

    </ScrollView>
  );
}
}
class RufitelaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BA841F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#e9a427"}}>
          <Text style = {styles.scientificTitles}>Boana
rufitela{"\n"}</Text>

```

```

        <Text style = {styles.commonTitles}>Red-webbed Gladiator
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/90_Boana_rufitela/Boana-rufitela-
2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~40-55mm, ~1.6-
2.2in) with slightly granular skin. The head is flat and the nostrils protrude on the
snout's tip. The eyes are large with horizontal pupils and a light-colored iris edged
in black. Tympanic membranes are easily visible. The dorsal coloration is green with
small, scattered black and white blotches. Occasionally, a pair of light lateral
stripes may extend from snout to groin (in juveniles). They have bright red webbing on
the hands and feet and the posterior thigh is red. The venter is cream colored and the
skin on the limbs is somewhat transparent making the green bones visible. Males have a
bluish-green subgular vocal sac and a prominent prepollical spine (hidden in a fleshy
covering). The digits all have expanded terminal pads. Webbing is prominent on the
feet, but limited on the hands. A small pointed calcar is present on each
heel.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from vegetation in or near
forest ponds producing a series of 9-21 low-pitched notes "chuck, chuck, chuck..."
that sound like the quick rubbing of air-filled balloons.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This uncommon species occurs in primary
moist and wet lowland forest on the Caribbean slope from near sea level to ~650m. They
are secretive and are usually encountered during the breeding season (rainy season)
when they may be found on low vegetation near forest ponds.{"\n"}</Text>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/90_Boana_rufitela/Boana-rufitela-
range-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Boana rufitela</Text> may be confused with other green hylids such as <Text
style={{fontStyle: 'italic'}}>Hyloscirtus palmeri</Text> and <Text style={{fontStyle:
'italic'}}>H. colymba</Text>, and perhaps the craugastorid <Text style={{fontStyle:
'italic'}}>Pristimantis moro</Text>. However, these all lack the green bones,
prepollical (thumb) spine, and red webbing found on <Text style={{fontStyle:
'italic'}}>B. rufitela</Text>.{"\n"}</Text>

    </ScrollView>
  );
}
}
class EbraccatusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
  },

```



```

headerTintColor: '#fff',
headerTitleStyle: {
  fontWeight: 'bold',
},
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
      <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
        <Text style = {styles.scientificTitles}>Dendropsophus
ebraccatus{"\n"}</Text>
        <Text style = {styles.commonTitles}>Hourglass
Treefrog{"\n"}</Text>

      </View>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/91_Dendropsophus_ebraccatus/Dendropsophus-
ebraccatus-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
      <Text style = {styles.paragraphs}>A small-sized frog (23-27mm, ~0.9-1.1in
males; 30-35mm, ~1.2-1.4in females). The skin is smooth dorsally and slightly granular
ventrally. The snout is short and the eyes are large with horizontal pupils. Tympanic
membranes are visible below supratympanic folds. An axillary membrane is present on
the arms. Fingers and toes are webbed and digits have expanded terminal pads. Males
lack nuptial pads, but have a large, yellowish subgular vocal sac. When active (night)
the dorsal ground color is darker ranging from yellow, orange or caramel, with a
contrasting brown hourglass-shaped blotch. A brown mask extends from the snout to the
flank with a light suborbital spot, and the limbs have dark blotches dorsally. When
resting (day) the dorsal ground color lightens to a pale yellow, beige or light gray.
Rarely, dark markings may be very limited or absent. The venter is light yellow to
orange.{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
      <Text style = {styles.paragraphs}>Males call throughout the wet season
from low vegetation of temporary ponds or swamps. The call consists of a varying
number of two syllable notes "crii-ck" repeated one to several times, and sometimes
followed by several stuttering "ck, ck, ck" notes.{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
      <Text style = {styles.paragraphs}>A very common species occurring widely
in lowland moist forests on both the Pacific and Atlantic slopes from near sea level
to ~1300m. They are usually found while active (night) on low vegetation of temporary
ponds.{"\n"}</Text>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/91_Dendropsophus_ebraccatus/Dendropsophus-
ebraccatus-range-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
      <Text style = {styles.paragraphs}>The vivid coloration, small size, large
eyes, and pads on digits make it unlikely to confuse <Text style={{fontStyle:
'italic'}}>Dendropsophus ebraccatus</Text> with other Costa Rican species. Both <Text

```

style={{fontStyle: 'italic'}}>D. microcephalus</Text> and <Text style={{fontStyle: 'italic'}}>D. phlebodes</Text> are similar, but lack a light suborbital spot and have limited finger webbing.{"\n"}</Text>

```

    </ScrollView>
  );
}
}
class MicrocephalusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#eedc27"}}>
          <Text style = {styles.scientificTitles}>Dendropsophus
microcephalus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Small-headed
Treefrog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/92_Dendropsophus_microcephalus/Dendropsophus-
microcephalus-2.png')}
          style = {styles.image}
        />
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small-sized frog (18-25mm; ~0.7-1in
males; 24-31mm ~1-1.2in females). The skin is smooth dorsally and granular ventrally.
The snout is short and the eyes are large with horizontal pupils. Tympanic membranes
are visible below slight supratympanic folds. An axillary membrane is present as is
webbing on fingers (limited) and toes (moderate). Digits have expanded terminal pads.
Breeding males have light colored nuptial pads and a large, yellowish subgular vocal
sac. When active (night) the dorsal ground color is darker ranging from yellow, orange
or caramel. A brown mask extends as a dark lateral band to the groin, bordered above
by a thin light stripe extending from the snout, over the eyes and to the groin. Faint
dark lines may occur dorsally, and the limbs have only small dark specks dorsally.
When resting (day) the dorsal ground color lightens to a pale yellow, beige or light
gray. The venter is white.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call throughout the wet season
from grassy vegetation of temporary ponds or wetlands. The call consists of an "eeckk"
or "crekk" note repeated one to several times, followed by several stuttering "ck, ck,
ck" notes.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>A very common species occurring widely
in both dry and moist forests, and disturbed areas primarily on the Pacific versant,
from near sea level to ~1200m. They are usually found while active (night) on grassy
vegetation of temporary ponds and wetlands.{"\n"}</Text>

```

```

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/92_Dendropsophus_microcephalus/Dendropsophus-
microcephalus-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Dendropsophus microcephalus</Text> is most likely to be confused with other
Dendropsophus species. <Text style={{fontStyle: 'italic'}}>Dendropsophus
ebraccatus</Text> has a dark hourglass blotch dorsally and a light suborbital spot.
<Text style={{fontStyle: 'italic'}}>Dendropsophus phlebodes</Text> is most similar,
but occurs on the Atlantic versant, has dark vein-like patterns dorsally, and lacks
light dorsolateral lines.{"\n"}</Text>

  </ScrollView>
);
}
}
class PhlebodesPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
          <Text style = {styles.scientificTitles}>Dendropsophus
phlebodes{"\n"}</Text>
          <Text style = {styles.commonTitles}>Veined Treefrog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/93_Dendropsophus_phlebodes/Dendropsophus-
phlebodes-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small-sized frog (19–24mm, ~0.8–0.9in
males; 23–28mm, ~0.9–1.1in females). The skin is smooth dorsally and granular
ventrally. The snout is short, and the eyes are large, with horizontal pupils.
Tympanic membranes are visible below slight supratympanic folds. An axillary membrane
is present, as is webbing on fingers (limited) and toes (moderate). Digits have
expanded terminal pads. Males have light colored nuptial pads, and a large, yellowish
subgular vocal sac. When active (night) the dorsal ground ranges from yellow, orange
or caramel. A brown mask extends just onto the torso, and dark vein-like patterns
occur dorsally on the torso and limbs. When resting (day) the dorsal ground color
lightens to a pale yellow, beige or light gray. The venter is white and semi-
translucent posteriorly.{"\n"}</Text>

```

```

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call throughout the wet season
from grassy vegetation of temporary ponds or wetlands. The call consists of a "eeckk"
or "crekk" repeated one to several times, often followed by several stuttering "ck,
ck, ck" notes.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>A common species occurring in moist
forests and disturbed areas primarily on the Atlantic versant, from near sea level to
~750m. They are usually found while active (night) on grassy vegetation of temporary
ponds.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/93_Dendropsophus_phlebodes/Dendropsophus-
phlebodes-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Dendropsophus phlebodes</Text> is most likely to be confused with other
Dendropsophus species. <Text style={{fontStyle: 'italic'}}>Dendropsophus
ebraccatus</Text> has a dark hourglass blotch dorsally and a light suborbital spot.
<Text style={{fontStyle: 'italic'}}>Dendropsophus microcephalus</Text> is most
similar, but occurs primarily on the Pacific versant, lacks vein-like patterns
dorsally and has dark lateral bands extending to near the groin, bordered above by a
light stripe.{"\n"}</Text>

    </ScrollView>
  );
}
}
class LythrodessPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#598332',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#70a43f"}}>
          <Text style = {styles.scientificTitles}>Duellmanohyla
lythrodess{"\n"}</Text>
          <Text style = {styles.commonTitles}>Savage's Red-eyed Stream
Frog{"\n"}</Text>

        </View>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/94_Duellmanohyla_lythrodess/Duellmanohyla-
lythrodess-2.png')}
            style = {styles.image}

```

```

    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A medium-sized frog (~30-35mm, ~1.2-
1.4in) with slender limbs and body. The skin is relatively smooth dorsally and
granular ventrally. The eyes are large with red irises and horizontal pupils. Tympanic
membranes are easily visible below supratympanic folds. Males have nuptial pads and a
white, subgular vocal sac. The fingers and toes are webbed and have expanded terminal
pads. Dorsal coloration displays metachrosis and ranges from light brown to green
(darker at night, lighter at day). A light stripe extends from the lip to the groin,
and forms a distinct suborbital spot. Light colored lines also occur on the lateral
edges of the forearms, tarsi and feet. The ventral color is yellow.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call from stream-side vegetation
producing what Savage (1968) described as "a weak, bell-like ping of 5- 7
notes".{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>A very rare species (only 1 individual
known from Costa Rica) occurring on the Atlantic slope, at ~450 m. They have been
found on vegetation near small streams.{"\n"}</Text>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/94_Duellmanohyla_lythroides/Duellmanohyla-
lythroides-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Duellmanohyla lythroides</Text> is most likely to be confused with
Duellmanohyla species, or other green hylids. <Text style={{fontStyle:
'italic'}}>Duellmanohyla rufioculis</Text> (considered the same species by some),
differs in having smaller tympanic membranes (smaller than largest finger pads), and a
white venter, while <Text style={{fontStyle: 'italic'}}>D. uranochroa</Text> differs
in having a much lighter green dorsal color and slightly larger tympanum (greater than
2/3 size of eye). All other green hylids lack either the light lip stripe (<Text
style={{fontStyle: 'italic'}}>Ptychohyla</Text>), or red eyes (ex. <Text
style={{fontStyle: 'italic'}}>Hyloscirtus, Isthmohyla</Text>), or they have vertical
pupils (<Text style={{fontStyle: 'italic'}}>Agalychnis</Text>).{"\n"}</Text>

  </ScrollView>
);
}
}
class RufioculisPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#598332',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#70a43f"}}>

```

```

        <Text style = {styles.scientificTitles}>Duellmanohyla
rufiocularis{"\n"}</Text>
        <Text style = {styles.commonTitles}>Rufus-eyed Stream
Frog{"\n"}</Text>

    </View>

    <Image
        resizeMode = 'contain'

        source={require('./assets/Images/95_Duellmanohyla_rufiocularis/Duellmanohyla-
rufiocularis-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A medium-sized frog (~25-40mm, ~1-
1.6in) with slender limbs and body. The skin is granular both dorsally and ventrally
(larger, more round granules ventrally). The eyes are large with red irises and
horizontal pupils. Tympanic membranes are small, but visible below supratympanic
folds. Males have nuptial pads on the thumbs and a white, subgular vocal sac. The
fingers and toes are webbed and have expanded terminal pads. The dorsal granules are
green and/or bronze and the surrounding ground color is darker, giving an overall dark
green or green/brown dorsal color. A light stripe extends from the lip to the groin,
and forms a distinct suborbital spot. Light colored lines also occur on the lateral
edges of the forearms, tarsi, and feet. The ventral color is white.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call from stream-side vegetation
producing a "krek, krek, krek" (3 or 4 notes) repeated rapidly.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>A common species that occurs near small
streams and seeps throughout the Cordilleras from ~650 to 1550 m.{"\n"}</Text>

    <Image
        resizeMode = 'contain'

        source={require('./assets/Images/95_Duellmanohyla_rufiocularis/Duellmanohyla-
rufiocularis-range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Duellmanohyla rufiocularis</Text> is most likely to be confused with
Duellmanohyla species, or other green hylids. <Text style={{fontStyle:
'italic'}}>Duellmanohyla lythrodes</Text> (considered the same species by some),
differs in having larger tympanic membranes (larger than largest finger pads), and a
yellow venter. <Text style={{fontStyle: 'italic'}}>Duellmanohyla uranochroa</Text>
differs in having a much lighter green dorsal color and much larger tympanum (greater
than 2/3 size of eye). All other green hylids lack either the light lip stripe (<Text
style={{fontStyle: 'italic'}}>Ptychohyala</Text>), or red eyes (ex. <Text
style={{fontStyle: 'italic'}}>Hyloscirtus, Isthmohyla</Text>), or they have vertical
pupils (<Text style={{fontStyle: 'italic'}}>Agalychnis</Text>).{"\n"}</Text>

    </ScrollView>
  );
}
}
class UranochroaPage extends React.Component {
  static navigationOptions = {

```

```

headerStyle: {
  backgroundColor: '#598332',
},
headerTintColor: '#fff',
headerTitleStyle: {
  fontWeight: 'bold',
},
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
      <View style = {styles.colorBar, {backgroundColor: "#70a43f"}}>
        <Text style = {styles.scientificTitles}>Duellmanohyla
uranochroa{"\n"}</Text>
        <Text style = {styles.commonTitles}>Red-eyed Stream
Frog{"\n"}</Text>

      </View>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/96_Duellmanohyla_uranochroa/Duellmanohyla-
uranochroa-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
      <Text style = {styles.paragraphs}>A medium-sized frog (~30-40mm, ~1.2-
1.6in) with slender limbs and body. The skin is smooth dorsally, and granular
ventrally. The eyes are large with red irises and horizontal pupils. Tympanic
membranes are large and easily visible below supratympanic folds. Males have nuptial
pads and a white, subgular vocal sac. The fingers and toes are webbed and have
expanded terminal pads. The dorsal color is a solid bright green. A light stripe
extends from the lip to the groin, and forms a distinct suborbital spot or blotch.
Light colored lines occur on the lateral edges of the forearms, tarsi and feet usually
with a bluish cast. The ventral color is cream to light yellow.{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
      <Text style = {styles.paragraphs}>Males call from stream-side vegetation
in hidden locations (diurnal), or from leaf surfaces (nocturnal), producing a short,
musical whistle "phoot" repeated rapidly (~1- 3 notes per second).{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
      <Text style = {styles.paragraphs}>Another formerly common species that
experienced severe declines in the 1980's and 90's, although scattered populations
still occur. They can be found near small streams and seeps throughout the Cordilleras
from ~660 to ~1740 m.{"\n"}</Text>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/96_Duellmanohyla_uranochroa/Duellmanohyla-
uranochroa-range-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
      <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Duellmanohyla uranochroa</Text> is most likely to be confused with
Duellmanohyla species, or other green hylids. <Text style={{fontStyle:
'italic'}}>Duellmanohyla lythrodes</Text> differs in having slightly smaller tympanic

```

```

membranes (smaller than 2/3 diameter of eye), while <Text style={{fontStyle:
'italic'}}>D. rufiocolis</Text> differs in having a darker green dorsum (often with
tan/ bronze), and much smaller tympanum (smaller than largest finger pad). All other
green hylids lack either the light lip stripe (<Text style={{fontStyle:
'italic'}}>Ptychohyala</Text>), or red eyes (ex. <Text style={{fontStyle:
'italic'}}>Hyloscirtus, Isthmohyla</Text>), or have vertical pupils (<Text
style={{fontStyle: 'italic'}}>Agalychnis</Text>).{"\n"}</Text>

    </ScrollView>
  );
}
}
class BailarinaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#3C4300',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#4c5400"}}>
          <Text style = {styles.scientificTitles}>Ecnomiohyala
bailarina{"\n"}</Text>
          <Text style = {styles.commonTitles}>Yellow-eyed Fringe-limbed
Treefrog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/97_Ecnomiohyala_bailarina/Ecnomiohyala-
bailarina-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium to large-sized frog (~55-70mm,
~2.2-2.8in). The dorsal coloration is subject to metachrosis, and varies from
yellowish green to emerald green, with irregular tan, gray, brown, and black markings.
Dark bands are usually present on the dorsal surfaces of the legs. The eye has a
horizontal pupil and a yellow iris with a copper colored reticulation. This species
has osteoderms in the dorsal skin of the head and body. Fleshy fringes along the
exterior margin of the forearms and lower legs have widely spaced and pointed
triangular projections. Adult males have keratinized spines present in two larger
clusters on the bony prepollical projection, and at the base of finger I. The ventral
surfaces of the body and limbs are light tan to cream. Extensive webbing exists on the
hands and feet.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Ecnomiohyala bailarina</Text> is a series of six to seven
quickly repeated notes of pulsed intensity. This species tends to call
infrequently.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

```



```

    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Ecnomiohyala bailarina</Text> was just recently described from a single
adult male specimen found in extreme eastern Panamá, and only three additional
specimens have been discovered in southeastern Costa Rica. The elevational range for
<Text style={{fontStyle: 'italic'}}>E. bailarina</Text> is from ~300 to 750m. This
rare nocturnal species has only been found in old-growth forest of the Talamancas,
where it is believed to reproduce in water-filled cavities in standing trees, most
likely in the canopy.{ "\n"}</Text>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/97_Ecnomiohyala_bailarina/Ecnomiohyala-
bailarina-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Ecnomiohyala bailarina</Text> is quite unique among Costa Rican frogs due to
its combination of having extensive interdigital webbing on the hands and feet and
adult males having clusters of small keratinized spines on the propollex and base of
finger I.{ "\n"}</Text>

  </ScrollView>
);
}
}
class FimbrimembraPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#3C4300',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#4c5400"}}>
          <Text style = {styles.scientificTitles}>Ecnomiohyala
fimbrimembra{"\n"}</Text>
          <Text style = {styles.commonTitles}>Smooth Fringe-limbed
Treefrog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/98_Ecnomiohyala_fimbrimembra/Ecnomiohyala-
fimbrimembra-fabio-hidalgo-2.png')}
          style = {styles.image}
        />
        <Text style = {styles.paragraphs}>(Photo by Fabio Hidalgo){'\n'}</Text>

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A large frog (~70-95mm, ~2.8-3.7in).
Dorsal coloration ranges from a light tan to reddish-brown with irregular markings or
pigments in earthy tones. Adult individuals have distinct but weakly scalloped fleshy

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fringes along the external margin of the forearms and lower legs (more extensively scalloped to serrate in juveniles). The eyes have a horizontal pupil, with an iris that can range in color from tan to reddish-orange. The dorsal skin is smooth overall, but some individuals may have weak rounded tubercles present; juveniles have a more tuberculate texture of the dorsal skin. The skin of the head is co-ossified to the skull in adult individuals, but not co-ossified in juveniles. The webbing of the hands and feet on average covers approximately three-fourths of the distance to the tip of the digits. The webbing does not reach the disc on any of the digits. Adult males have small black keratinized spines present on the propollex.

```

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from high in the canopy,
producing a low "guurrrrh" at long intervals.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>Within Costa Rica, <Text
style={{fontStyle: 'italic'}}>Ecnomiohyla fimbrimembra</Text> has been found at a
limited number of sites in the cloud forests along the Caribbean versant in the
Central Volcanic and Tilarán mountains. The estimated elevational range for <Text
style={{fontStyle: 'italic'}}>E. fimbrimembra</Text> within Costa Rica is from ~1400-
1900m, but more observations and documentation is needed. This rare nocturnal species
is associated with old-growth cloud forests, where it reproduces in water-filled
cavities in the trunks of trees, especially in the canopy.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/98_Ecnomiohyla_fimbrimembra/Ecnomiohyla-
fimbrimembra-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Ecnomiohyla fimbrimembra</Text> is not likely to be confused with any other
frog species inhabiting Costa Rica.{"\n"}</Text>

    </ScrollView>
  );
}
}
class MiliariaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#3C4300',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#4c5400"}}>
          <Text style = {styles.scientificTitles}>Ecnomiohyla
miliaria{"\n"}</Text>
          <Text style = {styles.commonTitles}>Spiny Fringe-limbed
Treefrog{"\n"}</Text>
        </View>

```

```

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/99_Ecnomiohyala_miliaria/Ecnomiohyala-miliaria-
2.png')}

            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A large frog (~80-110mm, ~3.2-4.3in).
The dorsal coloration typically contains a mixture of colors and tones, ranging from
light tan, white, green, to red or reddish-brown. Adults have distinct scalloped
fleshy fringes along the external margin of the forearms and lower legs. The eyes have
a horizontal pupil, and typically a reddish-orange iris. Large rounded to slightly
conical tubercles are scattered throughout the dorsal surfaces of the body and limbs.
The skin of the head is co-ossified to the skull in adult individuals, and osteoderms
can be found in the dorsal skin of the body. The webbing of the hands is fully webbed,
and reaches the disc on most digits. The heels have several smaller pointed tubercles
present, often with black keratinized tips. Adult males have large protruding and
sharp recurved prepollical spines on the hands. The ventral surface has scattered
keratinized pustules.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Ecnomiohyala miliaria</Text> is a long series of loud
rough bark-like notes.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>Within Costa Rica, <Text
style={{fontStyle: 'italic'}}>Ecnomiohyala miliaria</Text> has been found at a limited
number of sites in the lowlands and foothills along the Caribbean versant. The
estimated elevational range for <Text style={{fontStyle: 'italic'}}>E. miliaria</Text>
from near sea level to ~1000m, but more observations and documentation is needed
before the actual distribution is better understood. This rare nocturnal species is
associated with old-growth forests, where it is believed to reproduce in water-filled
cavities in the trunks of trees, especially in the canopy.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/99_Ecnomiohyala_miliaria/Ecnomiohyala-miliaria-
range-2.png')}

            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Ecnomiohyala miliaria</Text>, with its large size, highly tuberculate
dorsum, fully webbed hands and feet, and large sharp prepollical spines, is not likely
to be confused with any other frog species inhabiting Costa Rica.{"\n"}</Text>

    </ScrollView>
  );
}
}
class SukiaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#3C4300',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',

```

```

    },
    };
    render() {
    return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
            <View style = {styles.colorBar, {backgroundColor: "#4c5400"}}>
                <Text style = {styles.scientificTitles}>Ecnomiohyla
sukia{"\n"}</Text>
                <Text style = {styles.commonTitles}>Shaman Fringe-limbed
Treefrog{"\n"}</Text>

            </View>

            <Image
                resizeMode = 'contain'

                source={require('./assets/Images/100_Ecnomiohyla_sukia/Ecnomiohyla-sukia-
2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A medium to large-sized frog (~55-70
mm, ~2.2-2.8in). The dorsal coloration varies from light tan, gray, brown, or reddish-
brown, typically with a mixture of irregular dark brown, black, or green markings. The
dorsal coloration is subject to metachrosis. This species has osteoderms in the dorsal
skin of the head and body. Along the exterior margin of the forearms and lower legs
there are fleshy scalloped fringes. The eye has a horizontal pupil; the iris has and a
gray to yellowish-tan ground color with a heavy concentration of copper colored
reticulation or pigments. Males have a bony prepollical projection at the base of
finger I, which is bluntly pointed and directed laterally. The ventral surfaces of the
body and limbs are light tan to cream-colored with numerous brown spots and irregular
markings. Extensive webbing occurs on the hands and feet.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Ecnomiohyla sukia</Text> is a series of 10 to 20 loud
and fast high-pitched bark-like notes. This species tends to call
infrequently.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Ecnomiohyla sukia</Text> is endemic to Costa Rica, and only known to
inhabit the central and southeastern Caribbean foothills, ranging in elevation from
~400 to 1000m. This uncommon nocturnal species tends to prefer old-growth forest,
where it reproduces in water-filled cavities in standing trees, most often up in the
canopy. This species was just recently described.{"\n"}</Text>

            <Image
                resizeMode = 'contain'

                source={require('./assets/Images/100_Ecnomiohyla_sukia/Ecnomiohyla-sukia-range-
2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Ecnomiohyla sukia</Text> is quite unique among Costa Rican frogs, but could
get confused with <Text style={{fontStyle: 'italic'}}>E. miliaria</Text>. The
following characteristics are present in <Text style={{fontStyle: 'italic'}}>E.
miliaria</Text>, but unknown for <Text style={{fontStyle: 'italic'}}>E. sukia</Text>:

```

large pointed tubercles on the heel and upper eyelid, adult males have a sharply pointed and recurved prepollical projection.

```
    </ScrollView>
  );
}
}
class ColymbaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#9AAD4D',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#c1d961"}}>
          <Text style = {styles.scientificTitles}>Hyloscirtus
colymba{"\n"}</Text>
          <Text style = {styles.commonTitles}>Diving Stream
Frog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/101_Hyloscirtus_colymba/Hyloscirtus-colymba-
2.png')}
          style = {styles.image}
        />
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small to medium-sized frog (~30-40mm,
~1.2-1.6in). The dorsal coloration, which is subject to metachrosis, can vary from a
light green to dark olive green, with fine reddish spots. The skin on most of the
dorsal and ventral parts of the body and limbs is translucent. There is a light
whitish yellow line that extends from the tip of the snout, above the eye and tympanic
membrane, and diagonally downward to a point just above the armpit. The eye has a
horizontal pupil, and a white to light gray iris with a very fine to moderate brown to
copper reticulation. Under the ventral skin of the body a completely white-pigmented
parietal peritoneum is visible. There is weak to moderate webbing on the hands and
nearly extensive interdigital webbing on the feet.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Hyloscirtus colymba</Text> is a long series of loud,
sharp ping-like notes.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>In Costa Rica, this rare nocturnal
species has only been found on Caribbean slopes of Talamanca. The elevational range
for <Text style={{fontStyle: 'italic'}}>H. colymba</Text> is from ~600 to 1100m. This
species tends to prefer old-growth forest, where it calls and reproduces from under
the rocks within small streams and seepages.{"\n"}</Text>
        <Image
          resizeMode = 'contain'
```

```

        source={require('./assets/Images/101_Hyloscirtus_colymba/Hyloscirtus-colymba-
range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Hyloscirtus colymba</Text> may be confused with glass frogs, <Text
style={{fontStyle: 'italic'}}>Hyloscirtus palmeri</Text>, or <Text style={{fontStyle:
'italic'}}>Boana rufitela</Text>. <Text style={{fontStyle: 'italic'}}>Hyloscirtus
colymba</Text> can be distinguished from all Costa Rican glass frogs due to their
fully white-pigmented parietal peritoneum, and the light stripe from the tip of the
snout to just above the armpit. <Text style={{fontStyle: 'italic'}}>Hyloscirtus
colymba</Text> can be distinguished from <Text style={{fontStyle: 'italic'}}>H.
palmeri</Text> and <Text style={{fontStyle: 'italic'}}>B. rufitela</Text> due to
lacking a white fleshy calcar structure on the tip of the heel.{"\n"}</Text>

    </ScrollView>
  );
}
}
class PalmeriPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#9AAD4D',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#c1d961"}}>
          <Text style = {styles.scientificTitles}>Hyloscirtus
palmeri{"\n"}</Text>
          <Text style = {styles.commonTitles}>Palmer's Green Stream
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/102_Hyloscirtus_palmeri/Hyloscirtus-palmeri-
2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~40-50mm, ~1.6-
2in). The dorsal coloration, which is subject to metachrosis, ranges from a light
green to dark olive green, with fine white spots or flecking. Some individuals can
also have dark brown to black spots scattered dorsally. The skin on most of the dorsal
and ventral parts of the body and limbs is translucent. The eye has a horizontal
pupil, and a white to light gray iris with a brown to copper reticulation. Under the
ventral skin of the body a completely white-pigmented parietal peritoneum is visible.
On the tip of the heel there is a small rounded fleshy white calcar. The hands have
weak to moderate webbing, and extensive webbing on the feet. The armpit has an
axillary membrane.{"\n"}</Text>

```

```

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from under rocks within
streams and occasionally from overhanging streamside vegetation. The advertisement
call of <Text style={{fontStyle: 'italic'}}>Hyloscirtus palmeri</Text> is a loud
whistle-like chirp, often emitted in double notes.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>In Costa Rica, this rare nocturnal
species is only known to inhabit the central and southeastern Caribbean foothills. The
elevational range for <Text style={{fontStyle: 'italic'}}>H. palmeri</Text> is from
~400 to 1000m. This species tends to prefer old-growth forest, near streams where they
reproduce.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/102_Hyloscirtus_palmeri/Hyloscirtus-palmeri-
range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Hyloscirtus palmeri</Text> could be confused with glass frogs, or possibly
with <Text style={{fontStyle: 'italic'}}>Boana rufitela</Text>. Hyloscirtus palmeri
can be distinguished from all Costa Rican glass frogs due to the combination of a
fully white-pigmented parietal peritoneum, white fleshy calcar on the heel, and an
axillary membrane. <Text style={{fontStyle: 'italic'}}>Boana rufitela</Text> has
reddish-orange interdigital webbing, whereas <Text style={{fontStyle:
'italic'}}>Hyloscirtus palmeri</Text> has greenish-yellow interdigital
webbing.{"\n"}</Text>

    </ScrollView>
  );
}
}
class AngustilineataPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
          <Text style = {styles.scientificTitles}>Isthmohyla
angustilineata{"\n"}</Text>
          <Text style = {styles.commonTitles}>Narrow-lined
Treefrog{"\n"}</Text>

        </View>

        <Image
            resizeMode = 'contain'

```

```

        source={require('./assets/Images/103_Isthmohyla_angustilineata/Isthmohyla-
angustilineata-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A small-sized frog (~30-37mm, ~1.2-
1.5in). The skin is relatively smooth to slightly granular dorsally and granular
ventrally. The snout is rounded in profile, and the eyes are large with horizontal
pupils. Tympanic membranes are relatively small, but visible below a slight
supratympanic fold that extends from the posterior of the eye to the shoulder. The
dorsal coloration is brown or yellow, with scattered dark spots or blotches on the
dorsum of the limbs. A brown band extends from the snout to the groin, bordered above
by a distinct, thin white stripe. The venter is light with scattered dark spots. Males
have a single, subgular vocal sac and brown nuptial pads. The fingers and toes have
expanded terminal pads. Fingers lack webbing, and the toes have limited
webbing.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call from low branches and
vegetation near shallow water within swampy areas, producing a somewhat quiet, two
note "squack, squack" call.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>This species was formerly uncommon, and
is now rarely seen. They occur in montane forests of the Cordilleras from ~1500 to
2350m. They are usually encountered at night in low vegetation near puddles or swamps
in primary forest.{"\n"}</Text>

    <Image
        resizeMode = 'contain'

        source={require('./assets/Images/103_Isthmohyla_angustilineata/Isthmohyla-
angustilineata-range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Isthmohyla angustilineata</Text> may be confused with other treefrogs
having light-colored lateral striping. However, all other striped treefrog species
have finger webbing present. <Text style={{fontStyle: 'italic'}}>Isthmohyla
pseudopuma</Text> often have a dark lateral band or stripe, but they lack the white
pinstripe above.{"\n"}</Text>

    </ScrollView>
  );
}
}
class CalypsaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>

```



```

    <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
      <Text style = {styles.scientificTitles}>Isthmohyla
calypsa{"\n"}</Text>
      <Text style = {styles.commonTitles}>Calypsa Treefrog{"\n"}</Text>
    </View>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/104_Isthmohyla_calypsa/Isthmohyla-calypsa-
duellman-mooring-2.png')}
      style = {styles.image}
    />
    <Text style = {styles.paragraphs}>(Photo by Duellman and
Mooring) {"\n"}</Text>

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A small-sized frog (~25-40mm, ~1-
1.6in). The skin is covered in projecting spines dorsally, and is granular ventrally.
The head and snout are short with protuberant nostrils. The eyes are large with
horizontal pupils. The dorsal coloration is metallic green with dark spots or
blotches, and a white groin. The venter is light colored with numerous dark spots.
Males have a single subgular vocal sac, and dark nuptial pads. The fingers and toes
have expanded terminal pads, and limited to moderate webbing. {"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males produce a short call usually
consisting of a single note (sometimes 2 or 3 notes) that rises in pitch. {"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>This rare species formerly occurred in
lower montane rainforests of extreme eastern Costa Rica from ~1700 to 2300m.
Historically they were found in vegetation near streams. This species may now be
extinct in Costa Rica, and any sightings should be carefully documented and
reported. {"\n"}</Text>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/104_Isthmohyla_calypsa/Isthmohyla-calypsa-
range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Isthmohyla calypsa</Text> is not likely to be confused with any other frog
in Costa Rica. <Text style={{fontStyle: 'italic'}}>Isthmohyla lancasteri</Text> is
similar, but has relatively smoother skin and yellow in the groin. The spiny
supraocular tubercles of some Craugastoridae species (ex. <Text style={{fontStyle:
'italic'}}>Pristimantis cruentus</Text>) may result in misidentification. However,
<Text style={{fontStyle: 'italic'}}>Isthmohyla calypsa</Text> has finger and toe
webbing and a truncate snout. Another hylid, <Text style={{fontStyle:
'italic'}}>Anothea spinosa</Text> has spines, but these are limited to the
head. {"\n"}</Text>

  </ScrollView>
);
}
}
class DebilisPage extends React.Component {

```

```

    static navigationOptions = {
headerStyle: {
  backgroundColor: '#BEA41F',
},
headerTintColor: '#fff',
headerTitleStyle: {
  fontWeight: 'bold',
},
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
      <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
        <Text style = {styles.scientificTitles}>Isthmohyla
debilis{"\n"}</Text>
        <Text style = {styles.commonTitles}>Weak-voiced
Treefrog{"\n"}</Text>
      </View>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/105_Isthmohyla_debilis/Isthmohyla-debilis-
duellman-mooring-2.png')}
        style = {styles.image}
      />
      <Text style = {styles.paragraphs}>(Photo by Duellman and
Mooring){'\n'}</Text>

      <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
      <Text style = {styles.paragraphs}>A small-sized frog (~25-32mm, ~1-
1.25in). The skin is relatively smooth dorsally and slightly granular ventrally. In
profile, the snout slopes from the nares posteriorly towards the lip. The eyes are
large with horizontal pupils. The brown tympanic membranes are easily visible below a
supratympanic fold. The dorsal coloration displays metachrosis and is gray to olive
(night) and a brighter green or blue-green (day). There is a dark stripe that extends
from the snout to the eye, and a light suborbital spot. The venter is light with
numerous dark spots or blotches. Males have a single subgular vocal sac and brown
nuptial pads. The fingers and toes have expanded terminal pads, and webbing (limited
on the fingers).{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
      <Text style = {styles.paragraphs}>Males call from thick vegetation along
mountain streams and produce a very weak "chirp" call that is repeated 5-9
times.{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
      <Text style = {styles.paragraphs}>This rare species occurs in premontane
forests of the Cordilleras from 1200 to 1400m. They are usually found at night in
vegetation near streams. This species may be extirpated from Costa Rica, and any
specimens encountered should be carefully documented and reported.{"\n"}</Text>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/105_Isthmohyla_debilis/Isthmohyla-debilis-
range-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

```

```

        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Isthmohyla debilis</Text> is most likely to be confused with other
Isthmohyla species. However, they all lack the light-colored suborbital spot. Further,
<Text style={{fontStyle: 'italic'}}>I. tica</Text> has bumpy or granular skin, while
<Text style={{fontStyle: 'italic'}}>I. xanthosticta</Text> has bright yellow spots on
the groin and thighs. Duellmanohyla species may be similarly colored, but all have red
eyes.{"\n"}</Text>

    </ScrollView>
  );
}
}
class LancasteriPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
          <Text style = {styles.scientificTitles}>Isthmohyla
lancasteri{"\n"}</Text>
          <Text style = {styles.commonTitles}>Lancaster's
Treefrog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/106_Isthmohyla_lancasteri/Isthmohyla-
lancasteri-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~28-40mm, ~1.1-
1.6in). The dorsal coloration is variable, consisting of a mottled mixture of gray,
metallic green, brown, dark brown, and at times yellowish-green. Smooth rounded
tubercles are typically found on the upper eyelid and along the external margin of the
forearms and lower legs. <Text style={{fontStyle: 'italic'}}>Isthmohyla
lancasteri</Text> has a short, truncate snout. Dorsal skin can range from being
completely smooth to having numerous low rounded tubercles scattered throughout. The
ventral surfaces of the body and limbs are white with dark spots of varying sizes. On
the posterior flank and groin there is a contrasting bright yellow coloration. The
dorsal surfaces of the thighs have dark bands that are often accompanied by the yellow
coloration found on the flanks and groin. Moderate webbing is found between the digits
of the hands and feet.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Isthmohyla lancasteri</Text> consists of unmusical
metallic scraping notes. An advertisement call may consist of just a single note or
several in a rapid series.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

```

```

    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Isthmohyla lancasteri</Text> is endemic to the Caribbean foothills of
southeastern Costa Rica, ranging in elevation from ~400 to 1400m. This uncommon
nocturnal species is typically found in mature forest, but at times can also be found
in more disturbed habitats such as drainage ditches along roadsides. <Text
style={{fontStyle: 'italic'}}>Isthmohyla lancasteri</Text> breeds in seepages and
small streams, laying its eggs in the water.{"\n"}</Text>

```

```

    <Image
      resizeMode = 'contain'

```

```

      source={require('./assets/Images/106_Isthmohyla_lancasteri/Isthmohyla-
lancasteri-range-2.png')}
      style = {styles.image}
    />

```

```

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Isthmohyla lancasteri</Text> could possibly be confused with <Text
style={{fontStyle: 'italic'}}>Isthmohyla tica</Text> and <Text style={{fontStyle:
'italic'}}>Scinax boulengeri</Text>. <Text style={{fontStyle: 'italic'}}>Isthmohyla
lancasteri</Text> has a short truncate snout profile, whereas both <Text
style={{fontStyle: 'italic'}}>I. tica</Text> and <Text style={{fontStyle:
'italic'}}>S. boulengeri</Text> have elongated snouts that are rounded in profile.
Further, <Text style={{fontStyle: 'italic'}}>I. tica</Text> lacks the yellow
coloration on the groin and thighs.{"\n"}</Text>

```

```

  </ScrollView>
  );
}
}

```

```

class PicadoiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
          <Text style = {styles.scientificTitles}>Isthmohyla
picadoi{"\n"}</Text>
          <Text style = {styles.commonTitles}>Picado's Treefrog{"\n"}</Text>
        </View>

```

```

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/107_Isthmohyla_picadoi/Isthmohyla-picadoi-
2.png')}
          style = {styles.image}
        />

```

```

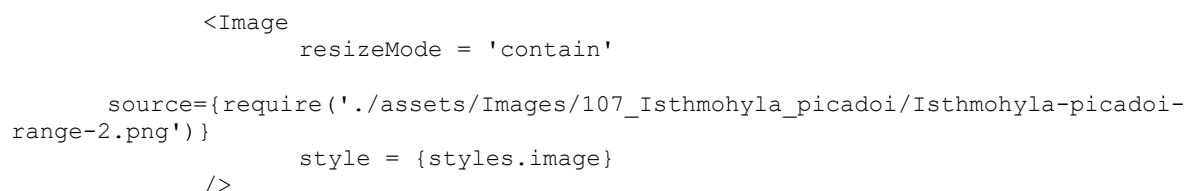
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small-sized frog (~27-35mm, ~1-
1.4in). The skin is relatively smooth. The eyes are large with a reddish iris and

```

horizontal pupils. The dorsal coloration is tan to yellowish. There may be scattered dark blotches dorsally. A dark lateral stripe may extend from the nare to the groin. There may also be a red wash on the face below the eyes, and a dark "mustache". There is a dark colored fold of skin across the dorsal wrist. The venter is light tannish-orange, and is translucent. Males have a single, small subgular vocal sac. The fingers and toes have expanded terminal pads, but limited (toes) to no (fingers) webbing.

**Calls**  
 Males call from bromeliads, usually high in the canopy, and produce a loud call that sounds like a creaking door, followed by wooden blocks knocking together "creeek, ek, ek, ek."

**Range and Habitat**  
 This uncommon species occurs in montane cloud forests of the Cordilleras (Central and Talamanca) from ~1700 to 2750m. They are arboreal and are often found in, or near bromeliads where they breed.



**Similar Species**  
*Isthmohyla picadoi* is most likely to be confused with *I. zeteki* which is similar in appearance and habit (bromeliad-dwelling). However, *I. zeteki* is smaller and occurs at lower elevations. Although not an easy feature to detect in the field, *I. picadoi* has two tooth-like odontoids on the middle of the lower jaw, while *I. zeteki* only has one. Further, *I. zeteki* has relatively larger eyes that are directed more dorsally. All the other hylids with similar eye color are green

```

    </ScrollView>
  );
}
}
class PictipesPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
          <Text style = {styles.scientificTitles}>Isthmohyla
pictipes</Text>
          <Text style = {styles.commonTitles}>Painted-foot
Treefrog</Text>
        </View>
      </ScrollView>
    );
  }
}

```

```

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/108_Isthmohyla_pictipes/Isthmohyla-pictipes-
2.png')}

            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small to medium-sized frog (~30-45mm,
~1.2-1.75in). The skin is smooth to slightly granular dorsally and granular ventrally.
The eyes are large with horizontal pupils. Tympanic membranes are small, but easily
visible below a supratympanic fold. The dorsal coloration is variable, usually
consisting of some shade of green, or dark brownish-purple that may either be solid or
marbled. The flank, groin, and thighs have light (yellowish) spots. The ventral color
is variable and ranges from light to dark. Males have a single, small subgular vocal
sac, and brown nuptial pads. The fingers and toes have expanded terminal pads and
limited (fingers) to moderate (toes) webbing.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from vegetation and rocks in
or near steep mountain streams. The calls are low "eeck" and consist of one or two
notes produced sporadically.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This formerly common species occurs in
montane cloud forests of the Cordilleras (Central and Talamanca) from ~1900 to 2800m.
They are usually found on rocks, or in vegetation near rapid streams. However, like
many other stream-associated species, <Text style={{fontStyle: 'italic'}}>I.
pictipes</Text> populations have declined substantially.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/108_Isthmohyla_pictipes/Isthmohyla-pictipes-
range-2.png')}

            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Isthmohyla pictipes</Text> is most likely to be confused with other
Isthmohyla species. However, <Text style={{fontStyle: 'italic'}}>I.
xanthosticta</Text> has a light lip stripe. <Text style={{fontStyle:
'italic'}}>Isthmohyla rivularis</Text> and <Text style={{fontStyle: 'italic'}}>I.
tica</Text> occur in similar habitat, but both lack the yellow spots on the groin, and
thighs. Green morphs may resemble Hyloscirtus species, however, <Text
style={{fontStyle: 'italic'}}>H. colymba</Text> has a yellow stripe from the nare to
the shoulder, and <Text style={{fontStyle: 'italic'}}>H. palmeri</Text> has a rounded
fleshy calcar on the heel.{"\n"}</Text>

    </ScrollView>
  );
}
}
class PseudopumaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',

```

```

headerTitleStyle: {
  fontWeight: 'bold',
},
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
      <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
        <Text style = {styles.scientificTitles}>Isthmohyla
pseudopuma{"\n"}</Text>
        <Text style = {styles.commonTitles}>Meadow Treefrog{"\n"}</Text>
      </View>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/109_Isthmohyla_pseudopuma/Isthmohyla-
pseudopuma-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
      <Text style = {styles.paragraphs}>A medium-sized frog (~37-52mm, ~1.5-
2in). The skin is relatively smooth dorsally, and granular ventrally. The snout slopes
anteriorly from the nostrils to lip. The eyes are large with horizontal pupils.
Tympanic membranes are visible below a supratympanic fold. The dorsal coloration is
tan, yellowish (breeding males are lemon yellow), or brown with a wide, dark lateral
stipe. There may be dark stripes or blotches dorsally and on the legs. The venter is
white and may have numerous dark spots. Males have a bilobate, subgular vocal sac and
dark nuptial pads. The fingers and toes have expanded terminal pads and
webbing.{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
      <Text style = {styles.paragraphs}>Males call throughout the wet season
from low vegetation of temporary ponds, puddles or man-made water sources. The call
consists of a repeated low, single "waak" note.{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
      <Text style = {styles.paragraphs}>This common species occurs in lower
montane forests of the Cordilleras (Tilarán, Central and Talamanca) from ~1120 to
2340m. They are often associated with puddles and pools in both primary forests and
disturbed areas (ex. pastures). They can be found in the water or on vegetation at
night during the breeding season (early wet season).{"\n"}</Text>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/109_Isthmohyla_pseudopuma/Isthmohyla-
pseudopuma-range-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
      <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Isthmohyla pseudopuma</Text> is most likely to be confused with other
Isthmohyla species or Smilisca species. <Text style={{fontStyle: 'italic'}}>Smilisca
puma</Text> lacks finger webbing, and the other Smilisca species generally lack yellow
dorsally and have light, or light blue spots on the thighs. <Text style={{fontStyle:
'italic'}}>Isthmohyla tica</Text> has a more granular surface dorsally, while the
snout of <Text style={{fontStyle: 'italic'}}>I. rivularis</Text> slopes posteriorly
from the nares to the lip.{"\n"}</Text>

```

```

        </ScrollView>
    );
}
}
class RivularisPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#BEA41F',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f9f9f9"}}>
                <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
                    <Text style = {styles.scientificTitles}>Isthmohyla
rivularis{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Mountain Stream
Treefrog{"\n"}</Text>
                </View>
                <Image
                    resizeMode = 'contain'
                    source={require('./assets/Images/110_Isthmohyla_rivularis/Isthmohyla-rivularis-
2.png')}
                    style = {styles.image}
                />
                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A small to medium-sized frog (~30-37mm,
~1.2-1.5in). The skin is relatively smooth dorsally, and granular ventrally. The snout
tapers posteriorly from the nare to the lip. The eyes are large, with horizontal
pupils. Tympanic membranes are small and not easily visible. A slight supratympanic
fold is present. The dorsal coloration is tan with brown markings, and often with
metallic-green flecks or spots. The venter is light with numerous dark spots. Males
have a single, subgular vocal sac and brown nuptial pads. The fingers and toes have
expanded terminal pads and webbing.{"\n"}</Text>
                <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
                <Text style = {styles.paragraphs}>Males call from stems in hidden
locations within over-hanging stream-side vegetation, producing a fairly quiet,
whistling trill that sounds similar to a cricket's chirping.{"\n"}</Text>
                <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
                <Text style = {styles.paragraphs}>This formerly common species occurs in
premontane and lower montane forests of the Cordilleras (Tilarán, Central and
Talamanca) from ~1200 to 2050m. Populations have declined dramatically in the last two
decades and they are now rarely encountered. When found, it is usually at night on
vegetation near small streams.{"\n"}</Text>
                <Image
                    resizeMode = 'contain'
                    source={require('./assets/Images/110_Isthmohyla_rivularis/Isthmohyla-rivularis-
range-2.png')}
                    style = {styles.image}

```



```

    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Isthmohyla rivularis</Text> is most likely to be confused with <Text
style={{fontStyle: 'italic'}}>I. tica</Text>. They are closely related and share
similar habits (ex. stream breeding). However, <Text style={{fontStyle: 'italic'}}>I.
tica</Text> has a blunt snout, is much more granular dorsally, and occurs at lower
elevations. <Text style={{fontStyle: 'italic'}}>Isthmohyla pseudopuma</Text> and
Smilisca species do not have posteriorly sloping snouts and lack the dorsal metallic-
green flecking.{"\n"}</Text>

    </ScrollView>
  );
}
}
class TicaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
          <Text style = {styles.scientificTitles}>Isthmohyla
tica{"\n"}</Text>
          <Text style = {styles.commonTitles}>Tico Treefrog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/111_Isthmohyla_tica/Isthmohyla-
tica-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~27-42mm, ~1-
1.7in). The skin is generally granular both dorsally and ventrally. The snout is flat
or rounded. The eyes are large, with horizontal pupils. Tympanic membranes are visible
below the supratympanic folds. The dorsal coloration is tan with greenish blotches and
occasionally white spots and dark lines. The venter is pale. Males have a single,
subgular vocal sac, and brown nuptial pads. The fingers and toes have expanded
terminal pads, and limited webbing.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call throughout the wet season
from streamside vegetation. The advertisement call is a quiet, cricket-like
chirping.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This formerly common species occurs in
premontane and lower montane forests of the Cordilleras (Tilarán, Central, and
Talamanca) from ~700 to 1750m. They are now rare, but when found, they are usually in
vegetation associated with small, mountain streams.{"\n"}</Text>

```

```

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/111_Isthmohyla_tica/Isthmohyla-
tica-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Isthmohyla tica</Text> is most likely to be confused with the closely
related <Text style={{fontStyle: 'italic'}}>Isthmohyla rivularis</Text>. However,
<Text style={{fontStyle: 'italic'}}>I. rivularis</Text> occurs at higher elevations,
has a smaller tympanum, a less-rounded snout (slopes posteriorly from nare to lip) and
fewer tubercles on the skin. Other Isthmohyla and Smilisca species differ in having a
suborbital light colored spot (<Text style={{fontStyle: 'italic'}}>Isthmohyla
debilis</Text>), or yellow or blue spots on the groin and/or thighs (<Text
style={{fontStyle: 'italic'}}>Isthmohyla pseudopuma, Isthmohyla xanthosticta, Smilisca
sordida</Text>, and <Text style={{fontStyle: 'italic'}}>Smilisca
sila</Text>).{"\n"}</Text>

  </ScrollView>
  );
}
}
class XanthostictaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
          <Text style = {styles.scientificTitles}>Isthmohyla
xanthosticta{"\n"}</Text>
          <Text style = {styles.commonTitles}>Barva Treefrog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/112_Isthmohyla_xanthosticta/Isthmohyla-
xanthosticta-duellman-mooring-2.png')}
          style = {styles.image}
        />
        <Text style = {styles.paragraphs}>(Photo by Duellman and
Mooring) {"\n"}</Text>

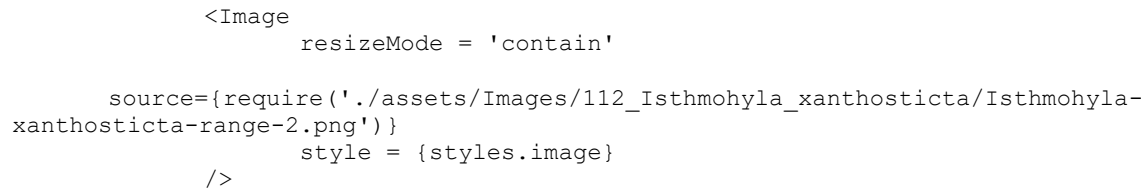
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small-sized frog (~30mm, ~1.2in). The
skin is relatively smooth dorsally, and granular ventrally. The snout slopes
posteriorly from the nostrils to the lip. The eyes are large, with horizontal pupils.
Tympanic membranes are visible. The dorsal coloration is green, and the flanks are
dark with bright yellow spots and blotches. There is a tan stripe from the nostrils to
the eyes, and there are white stripes on the lips, forearms and tarsi. The venter is

```

pale yellow. The fingers and toes have expanded terminal pads, and webbing.

**Calls**  
The advertisement call of this species is unknown.

**Range and Habitat**  
This extremely rare species (known only from the type locality) occurs in the lower montane zone of rainforest on Volcano Barva at an elevation of ~2150m. It is very possible this species is extinct, and any sightings should be carefully documented and reported.

The image shows a map of the range of Isthmohyla xanthosticta. The map is located in the Isthmus of Panama, showing the distribution area of the species. The range is indicated by a shaded area on the map.

**Similar Species**  
*Isthmohyla pictipes* is most similar. However, they lack light stripes on their lips and limbs that are present on *I. xanthosticta*. Other similar green treefrogs lack the lateral yellow spots (*I. debilis*) and/or have red eyes (*Duellmanohyla lythrodes*, *D. rufiocularis*, *D. uranochroa*).

```
    </ScrollView>
  );
}
}
class ZetekiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#eecd27"}}>
          <Text style = {styles.scientificTitles}>Isthmohyla
zeteki</Text>
          <Text style = {styles.commonTitles}>Zetek's Treefrog</Text>
        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/113_Isthmohyla_zeteki/Isthmohyla-
zeteki-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description</Text>
```

```
    <Text style = {styles.paragraphs}>A small frog (~21-27mm, ~0.8-1.1in).  
The dorsal skin is a uniform translucent yellowish orange, normally lacking any spots.  
The ventral skin is transparent, but a white parietal peritoneum is visible covering  
most of the chest and abdomen. Occasionally a small portion of the viscera are visible  
in the extreme lower abdomen. The reddish-orange eyes are large and directed forward.  
The anterior point of the lower jaw has is small, single, tooth-like structure known  
as an odontoid. The digits have expanded terminal pads, but only limited webbing. A  
darkly pigmented skin fold occurs on the dorsum of the wrist, forming a narrow dark  
wristband.{ "\n"}</Text>
```

```
    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
```

```
    <Text style = {styles.paragraphs}>Males call from bromeliads where egg  
laying and tadpole development occur. Calls consist of one to four loud unmusical  
squeak-like notes. Often males will call then remain silent for up to several  
minutes.{ "\n"}</Text>
```

```
    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
```

```
    <Text style = {styles.paragraphs}><Text style={{fontStyle:  
'italic'}}>Isthmohyla zeteki</Text> is endemic to the mid-elevation mountains of Costa  
Rica and western Panama. Within Costa Rica, this nocturnal species can be locally  
common and inhabits the Caribbean slopes of the Cordillera de Tilarán, Cordillera  
Volcánica Central, and the Cordillera de Talamanca from ~1200- 1800m. Within the  
Cordillera de Tilarán, it is possible to find this species on the extreme upper  
margins of the Pacific versant.{ "\n"}</Text>
```

```
    <Image  
      resizeMode = 'contain'  
      source={require('./assets/Images/113_Isthmohyla_zeteki/Isthmohyla-  
zeteki-range-2.png')}  
      style = {styles.image}  
    />
```

```
    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
```

```
    <Text style = {styles.paragraphs}><Text style={{fontStyle:  
'italic'}}>Isthmohyla zeteki</Text> could be confused with closely related <Text  
style={{fontStyle: 'italic'}}>Isthmohyla picadoi</Text>. However, <Text  
style={{fontStyle: 'italic'}}>I. picadoi</Text> occurs at higher elevations. Further,  
adult <Text style={{fontStyle: 'italic'}}>I. picadoi</Text> are larger, have more dark  
pigmentation on the dorsal surfaces, and have a pair of odontoids at the tip of the  
lower jaw instead of a single odontoid like that in <Text style={{fontStyle:  
'italic'}}>I. zeteki</Text>.{ "\n"}</Text>
```

```
  </ScrollView>  
  );  
}  
class SeptentrionalisPage extends React.Component {  
  static navigationOptions = {  
    headerStyle: {  
      backgroundColor: '#695845',  
    },  
    headerTintColor: '#fff',  
    headerTitleStyle: {  
      fontWeight: 'bold',  
    },  
  };  
  render() {  
    return (  
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>  
        <View style = {styles.colorBar, {backgroundColor: "#846f57"}}>  
          <Text style = {styles.scientificTitles}>Osteopilus  
septentrionalis{"\n"}</Text>  
          <Text style = {styles.commonTitles}>Cuban Treefrog{"\n"}</Text>
```

```

</View>

<Image
  resizeMode = 'contain'

  source={require('./assets/Images/114_Osteopilus_septentrionalis/Osteopilus-
septentrionalis-2.png')}
  style = {styles.image}
/>

  <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
  <Text style = {styles.paragraphs}>A large-sized frog (27-89mm, ~1.1-3.5in
males; 52-165mm, ~2-6.5in females). The skin is smooth dorsally but with scattered
tubercles, and granular ventrally. The head has scattered tubercles and the skin is
co-ossified with the skull. The snout is rounded, and the eyes are large, with
horizontal pupils. Tympanic membranes are visible below supratympanic folds that
extend to shoulder. Fingers and toes are webbed, and digits have expanded terminal
pads. Males have dark nuptial pads, a small subgular vocal sac. Dorsal color is highly
variable, ranging from green, to beige to brown. Dark blotches may be present dorsally
and on the dorsum of the limbs. A dark line extends from the snout and along the
supratympanic fold. The axilla, groin, and posterior thighs are yellow with dark
reticulations. The ventral torso is white. The ventral limbs range from light yellow
to orange and are semi-translucent, making the green bones visible.{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
  <Text style = {styles.paragraphs}>Males call throughout the wet season
from low vegetation of temporary ponds, puddles or man-made water sources. The most
common call consists of warbling "wrrrack" note repeated every second or
so.{"\n"}</Text>

  <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
  <Text style = {styles.paragraphs}>An introduced species occurring only in
the urban parks of Puerto Limon (near sea level). They are usually found while active
(night) on low vegetation near water sources, but also in/near man-made
structures.{"\n"}</Text>

  <Image
    resizeMode = 'contain'

    source={require('./assets/Images/114_Osteopilus_septentrionalis/Osteopilus-
septentrionalis-range-2.png')}
    style = {styles.image}
  />

  <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
  <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Osteopilus septentrionalis</Text> may be confused with other large
treefrogs. However, no other species with green bones has the co-ossified skin on the
head combined with the yellow and brown reticulated axillae, groin and posterior
thighs.{"\n"}</Text>

  </ScrollView>
);
}
}
class LegleriPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#8B4928',
    },
  },
  headerTintColor: '#fff',

```

```

headerTitleStyle: {
  fontWeight: 'bold',
},
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
      <View style = {styles.colorBar, {backgroundColor: "#ae5b33"}}>
        <Text style = {styles.scientificTitles}>Ptychohyala
legleri{"\n"}</Text>
        <Text style = {styles.commonTitles}>Legler's Red-eyed Stream
Frog{"\n"}</Text>
      </View>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/115_Ptychohyala_legleri/Ptychohyala-legleri-
2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
      <Text style = {styles.paragraphs}>A medium-sized frog (~20-39mm, ~0.8-
1.5in). The skin is smooth dorsally, and granular ventrally. The snout is rounded, and
the eyes are large, with horizontal pupils and red irises. Tympanic membranes are
visible below supratympanic folds that extend to shoulder. The dorsal ground color is
a dark green or greenish brown. Small dark, and/or light-colored spots may be present.
A white lip stripe is usually present, as are light colored lateral stripes extending
from axilla to groin, a stripe above the cloaca, and stripes along the lateral edges
of the limbs. The venter is white to cream-colored. Fingers have moderate webbing, and
toes are extensively webbed. Digits have expanded terminal pads. Males have dark
nuptial pads, a small subgular vocal sac.{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
      <Text style = {styles.paragraphs}>Males call throughout the wet season
from low-growing streamside vegetation or rocks in mountain streams. The call is a
single, drawn out "krrrrreck" note sounding like a stick drawn across a
comb.{"\n"}</Text>

      <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
      <Text style = {styles.paragraphs}>A formerly common, but now rare species
occurring in premontane forests of the southeastern Pacific versant from ~850 to
1500m. They are usually found while active (night) on low vegetation within, or
alongside streams.{"\n"}</Text>

      <Image
        resizeMode = 'contain'

        source={require('./assets/Images/115_Ptychohyala_legleri/Ptychohyala-legleri-
range-2.png')}
        style = {styles.image}
      />

      <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
      <Text style = {styles.paragraphs}>Some species of Agalychnis have
similarly colored red eyes, but those species have vividly colored flanks and lack the
lateral white stripe. Duellmanohyla species also have red eyes, varying shades of
green dorsally, occur near streams and are similarly sized. Consequently, they are the
most likely to be confused with <Text style={{fontStyle: 'italic'}}>P. legleri</Text>.

```

However, these all have a white stripe that extends continuously from the snout to the groin.

```
    </ScrollView>
  );
}
}
class BoulengeriPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#9E932C',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#c6b837"}}>
          <Text style = {styles.scientificTitles}>Scinax
boulengeri{"\n"}</Text>
          <Text style = {styles.commonTitles}>Boulenger's Snouted
Treefrog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/116_Scinax_boulengeri/116-Scinax-
boulengeri-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~35-55mm; ~1.4-
2.2in). Abundant dorsal tubercles produce a rough or bumpy appearance. The ventral
skin is granular. The eyes are large, with horizontal pupils, and small supraocular
tubercles present. Tympanic membranes are visible below bumpy, supratympanic folds.
The snout is long with protuberant nostrils, and there may be tubercles along the
edges of the jaw. Dorsal coloration is variable, ranging from brown, green or gray.
Dark markings are present dorsally, including a triangular shape between the eyes.
Dark bars occur on the legs. The groin, thighs, and shank are conspicuously marked
with dark spots or bars on a light green, yellow, or chartreuse ground color. The
venter is pale colored. Fingers, and toes 1-2 lack webbing, other toes are webbed.
Both fingers and toes have large, expanded terminal pads. Males have light colored
nuptial pads and a subgular vocal sac.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call throughout the year, but
especially during the wet season. They call from low vegetation in, or near still
water of ponds or swamps, producing a single low-pitched "waaak" repeated several
times a minute{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>A common species occurring mostly in
dense lowland forests, but also in disturbed areas. They occur on both the Pacific and
Atlantic slopes from near sea level to ~700m. They are usually found while active
(night) on low vegetation, often near breeding sites.{"\n"}</Text>

        <Image
```

```

        resizeMode = 'contain'
        source={require('./assets/Images/116_Scinax_boulengeri/116-Scinax-
boulengeri-range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}>The combination of an elongated snout,
numerous tubercles, and vivid coloration on the groin and legs make it unlikely to
confuse <Text style={{fontStyle: 'italic'}}>Scinax boulengeri</Text> with any other
species.{"\n"}</Text>

    </ScrollView>
  );
}
}
class ElaeochrousPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#9E932C',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#c6b837"}}>
          <Text style = {styles.scientificTitles}>Scinax
elaeochrous{"\n"}</Text>
          <Text style = {styles.commonTitles}>Olive Snouted
Treefrog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/117_Scinax_elaeochrous/Scinax-
elaeochrous-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small-sized frog (~25-40mm; ~1.4-
2.2in). Dorsally, the skin has a very slight rough or bumpy appearance; ventral skin
is granular. The eyes are large, with horizontal pupils, and a dark bar in line with
the pupil. The snout appears pointed from above, and the nostrils are protuberant.
Tympanic membranes are visible below supratympanic folds. Dorsal coloration is
variable, but usually a light shade of tan, gray or yellow. Breeding males when active
(night) are yellow. Faint, dark markings are present as a triangular blotch between
the eyes, irregular longitudinal stripes or spots, and/or bars on the legs. The venter
is light colored, and their green bones are visible through the semi-translucent
ventral skin of the legs. Fingers, and toes 1-2, lack webbing; other toes are webbed.
Both fingers and toes have expanded terminal pads. Males have light colored nuptial
pads and a subgular, yellowish vocal sac.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call year-round, but most
intensely after the first heavy rains of the wet season. They call from low vegetation

```



in, or near still water of ponds and swamps, producing a single, nasally "brraaak" repeated several times a minute, sometimes followed by a "chuck".{"\n"}</Text>

<Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

<Text style = {styles.paragraphs}>A very common species occurring widely on both the Pacific and Atlantic versant from near sea level to ~1200 m. They are usually found while active (night) on low vegetation in moist to wet forests and open areas.{"\n"}</Text>

<Image  
    resizeMode = 'contain'  
    source={require('./assets/Images/117\_Scinax\_elaeochrous/Scinax-  
elaeochrous-range-2.png')}  
    style = {styles.image}  
/>

<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

<Text style = {styles.paragraphs}><Text style={{fontStyle:  
'italic'}}>Scinax elaeochrous</Text> is most likely to be confused with other Scinax species. <Text style={{fontStyle: 'italic'}}>Scinax boulengeri</Text> has a much more prominent snout, is more tuberculate, and has vividly marked groin and legs. <Text style={{fontStyle: 'italic'}}>Scinax staufferi</Text> is the most similar, but is smaller, and most obvious, lack green bones.{"\n"}</Text>

</ScrollView>

);

}

}

class StaufferiPage extends React.Component {

    static navigationOptions = {

        headerStyle: {

            backgroundColor: '#9E932C',

        },

        headerTintColor: '#fff',

        headerTitleStyle: {

            fontWeight: 'bold',

        },

    };

    render() {

        return (

            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>

                <View style = {styles.colorBar, {backgroundColor: "#c6b837"}}>

                    <Text style = {styles.scientificTitles}>Scinax

staufferi{"\n"}</Text>

                    <Text style = {styles.commonTitles}>Stauffer's Snouted

Treefrog{"\n"}</Text>

                </View>

            <Image

                resizeMode = 'contain'

                source={require('./assets/Images/118\_Scinax\_staufferi/Scinax-  
staufferi-2.png')}

                style = {styles.image}

            />

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>

            <Text style = {styles.paragraphs}>A small-sized frog (~20-30mm; ~0.8-  
1.2in). Dorsally, the skin is smooth, to slightly rough or bumpy; ventral skin is  
granular. The eyes are large, with horizontal pupils and a dark bar in line with the  
pupil. The snout appears pointed from above, and the nostrils are protuberant.  
Tympanic membranes are visible below supratympanic folds. Dorsal coloration is

variable, but usually a light shade of tan or gray. Breeding males when active (night) have a yellow/orange tint, especially the vocal sac. Dark markings are variable but may include an interorbital triangular blotch or bar, irregular longitudinal stripes or spots, and/or bars on the legs. Usually a dark line from snout to groin is present. The venter is light colored. Fingers, and toes 1-2, lack webbing; other toes are webbed. Both fingers and toes have expanded terminal pads. Males have light colored nuptial pads and a subgular, yellowish-orange vocal sac.{"\n"}</Text>

<Text style = {styles.sectionTitles}>Calls{"\n"}</Text>

<Text style = {styles.paragraphs}>Males call after heavy rains from low vegetation, the shore, or the water of temporary ponds and wetlands. The call is a short nasal "aaah" repeated rapidly.{"\n"}</Text>

<Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

<Text style = {styles.paragraphs}>A very common species occurring primarily in dry forests, and open areas such as marshes and agricultural areas. They occur on the Pacific slope from near sea level to ~550 m. They are usually found while active (night) on low vegetation near breeding sites.{"\n"}</Text>

<Image  
 resizeMode = 'contain'  
 source={require('./assets/Images/118\_Scinax\_staufferi/Scinax-staufferi-range-2.png')}  
 style = {styles.image}  
 />

<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

<Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Scinax staufferi</Text> is most likely to be confused with <Text style={{fontStyle: 'italic'}}>S. elaeochrous</Text>. However, <Text style={{fontStyle: 'italic'}}>S. elaeochrous</Text> differs in being larger, active males are more yellow, and most obvious, they have green bones.{"\n"}</Text>

</ScrollView>

);

}

}

class BaudiniiPage extends React.Component {

static navigationOptions = {

headerStyle: {

backgroundColor: '#BF9E44',

},

headerTintColor: '#fff',

headerTitleStyle: {

fontWeight: 'bold',

},

};

render() {

return (

<ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>

<View style = {styles.colorBar, {backgroundColor: "#efc756"}}>

<Text style = {styles.scientificTitles}>Smilisca

baudinii{"\n"}</Text>

<Text style = {styles.commonTitles}>Mexican Treefrog{"\n"}</Text>

</View>

<Image

resizeMode = 'contain'

source={require('./assets/Images/119\_Smilisca\_baudinii/Smilisca-baudinii-2.png')}

style = {styles.image}

```

/>
    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A medium to large-sized frog (~45-75mm,
~1.8-3in). The skin is slightly granular dorsally, with larger granules laterally and
ventrally. The eyes are large with horizontal pupils. Tympanic membranes are large and
visible below supratympanic folds. Dorsal coloration is highly variable, ranging from
brown, green or gray. Darker reticulations occur dorsally, and a dark mask is usually
present. Some individuals have a dark suborbital bar and or a light suborbital spot.
Dark bars also occur dorsally on the limbs. The groin is yellowish with dark
reticulations, and the posterior thigh has pale spots. The venter is pale, and males
have gray or brown vocal sacs. Fingers and toes have expanded terminal pads, and toes
are moderately webbed, while fingers have limited webbing. Males have brown nuptial
pads and large paired subgular vocal sacs.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call after heavy rains,
especially in the early rainy season (May) from low vegetation, the ground, or in
temporary puddles, ponds and wetlands. They produce a nasal "ehh" repeated in ~1-15
quick notes.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>A common species found in a variety of
habitats ranging from pastures, marshes, and forests, from near sea level to ~750m.
They are usually found while active (night) on low vegetation in or near temporary
water sources.{"\n"}</Text>

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/119_Smilisca_baudinii/Smilisca-
baudinii-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Smilisca baudinii</Text> may be confused with other large treefrogs.
However, <Text style={{fontStyle: 'italic'}}>Trachycephalus typhonius</Text> has dark
vertical bars or reticulations on the iris, and <Text style={{fontStyle:
'italic'}}>Boana rosenbergi</Text> has a dark dorsal pinstripe and prepollical spines.
<Text style={{fontStyle: 'italic'}}>Smilisca phaeota</Text> is most similar, but has
dark vein like patterns on the flanks, and the posterior thighs are
unmarked.{"\n"}</Text>

  </ScrollView>
  );
}
}
class PhaeotaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BF9E44',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#efc756"}}>

```

```

                <Text style = {styles.scientificTitles}>Smilisca
phaeota{"\n"}</Text>
                <Text style = {styles.commonTitles}>Masked Treefrog{"\n"}</Text>

            </View>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/120_Smilisca_phaeota/Smilisca-
phaeota-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A medium to large-sized frog (~40-65mm,
~1.6-2.6in males; ~50-80mm ~2-3.2in females). The skin is relatively smooth dorsally,
and slightly granular ventrally. The eyes are large with horizontal pupils. Large
tympanic membranes are visible below supratympanic folds. Dorsal coloration is
variable, usually light hued tan, green or gray with scattered darker spots and
sometimes green splotches. A dark mask runs from the snout to the shoulder, and a
white labial stripe is present. Faint dark bars are on the dorsum of the limbs. The
flanks have thin, dark, vein-like patterns and the posterior surface of the thighs are
not marked with spots. The venter is light colored, although the throat and vocal sacs
of males are darker. Fingers and toes have expanded terminal pads, and moderate (toes)
to slight (fingers) webbing. Males have light colored nuptial pads, and paired
subgular vocal sacs that meet medially.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>Males call after rains from low
vegetation or in the water of small puddles or pools. The call consists of a single
nasal "waah" repeated rapidly, or an initial "waah" followed by a pulsed trill-like
"brrrrrr."{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}>A common nocturnal species usually
found while active, on low vegetation near shallow water. They occur in both forests
and disturbed areas from near sea level to ~1100m.{"\n"}</Text>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/120_Smilisca_phaeota/Smilisca-
phaeota-range-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Smilisca phaeota</Text> is most likely to be confused with other large
treefrogs. <Text style={{fontStyle: 'italic'}}>Trachycephalus typhonius</Text> differs
in having dark vertical bars or reticulations on the iris. <Text style={{fontStyle:
'italic'}}>Boana rosenbergi</Text> has a dark dorsal pinstripe and prepollical spines.
<Text style={{fontStyle: 'italic'}}>Smilisca baudinii</Text> is most similar, but
their posterior thigh is spotted, and they lack both the pale lip stripe, and the
dark, vein-like patterns on the flanks.{"\n"}</Text>

        </ScrollView>
    );
}
}
class PumaPage extends React.Component {
    static navigationOptions = {
        headerStyle: {

```

```

        backgroundColor: '#BF9E44',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
        fontWeight: 'bold',
    },
    };
render() {
    return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
            <View style = {styles.colorBar, {backgroundColor: "#efc756"}}>
                <Text style = {styles.scientificTitles}>Smilisca puma{"\n"}</Text>
                <Text style = {styles.commonTitles}>Tawny Treefrog{"\n"}</Text>
            </View>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/121_Smilisca_puma/Smilisca-puma-
2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A small to medium-sized frog (~30-45mm,
~1.2-1.8in). The skin is relatively smooth dorsally and granular ventrally. The eyes
are large, with horizontal pupils. Tympanic membranes are visible below supratympanic
folds. Dorsal coloration is tan with brown, longitudinal blotches often connected
medially. Other markings include a brown interorbital bar, smaller dark spots
laterally, and a dark line often accentuates the supratympanic fold, extending onto
the flank. They have a thin, light colored lip line, a faint mask and faint bars are
on the dorsum of the limbs. The venter is light colored, and males have white vocal
sacs. Fingers and toes have expanded terminal pads, and toes have moderate webbing.
But, there is almost no webbing on the fingers. Males have light colored nuptial pads
and paired subgular vocal sacs.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>Males call after heavy rains from among
vegetation in pools. The call is an initial "krrick" followed by shorter "krdick"
repeated in ~5 quick notes.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}>An uncommon species usually found in
vegetation near small pools or ponds in lowland forests on the Atlantic versant from
near sea level to ~500m.{"\n"}</Text>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/121_Smilisca_puma/Smilisca-puma-
range-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Smilisca puma</Text> could possibly be confused with other brown/tan
treefrogs such as <Text style={{fontStyle: 'italic'}}>Trachycephalus typhonius</Text>,
and Boana rosenbergi, however these are both much larger and have finger webbing.
Other Smilisca species are most similar, but <Text style={{fontStyle: 'italic'}}>S.
puma</Text> essentially lacks finger webbing whereas all other Smilisca have finger
webbing present.{"\n"}</Text>
        </ScrollView>
    );
}

```

```

    </ScrollView>
  );
}
}
class SilaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BF9E44',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#efc756"}}>
          <Text style = {styles.scientificTitles}>Smilisca sila{"\n"}</Text>
          <Text style = {styles.commonTitles}>Pug-nosed
Treefrog{"\n"}</Text>

          </View>

          <Image
            resizeMode = 'contain'
            source={require('./assets/Images/122_Smilisca_sila/Smilisca-sila-
2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
          <Text style = {styles.paragraphs}>A medium-sized frog (~30-45mm, ~1.2-
1.8in males; 45-60mm, ~1.8-2.4in females). The skin often has scattered tubercles
dorsally, and is granular ventrally. The snout is short, and the eyes are large with
horizontal pupils. Tympanic membranes are visible below supratympanic folds. Dorsal
coloration ranges from gray to tan, and individuals may have a solid color dorsally,
or may have darker blotches or reticulations. The groin and posterior thighs are dark
with cream or light blue spots. The venter is light colored, although males have
darker vocal sacs. Fingers and toes have expanded terminal pads. Toes have moderate
webbing, but there is limited webbing on the fingers. Males have nuptial pads and
paired subgular vocal sacs.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
          <Text style = {styles.paragraphs}>Males call from in or near rocky
streams during the dry season. Their calls are complex, usually consisting of "krrik"
followed by 2 or 3 shorter and quicker "krik" "krik" or sometimes a drawn out
"scriiit."{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
          <Text style = {styles.paragraphs}>A common species that occurs on the
Pacific versant from near sea level to ~1000m. They are usually found in association
with forest streams.{"\n"}</Text>

          <Image
            resizeMode = 'contain'
            source={require('./assets/Images/122_Smilisca_sila/Smilisca-sila-
range-2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

```

```

    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Smilisca sila</Text> may be confused with other brown treefrogs. <Text
style={{fontStyle: 'italic'}}>Trachycephalus typhonius</Text> is larger with distinct
dark vertical bars and/or reticulations on the iris. <Text style={{fontStyle:
'italic'}}>Boana rosenbergi</Text> differs in having a dark dorsal pinstripe. <Text
style={{fontStyle: 'italic'}}>Smilisca phaeota</Text> has dark, vein-like markings on
the flank and a dark mask, <Text style={{fontStyle: 'italic'}}>S. baudinii</Text> is
larger and has dark reticulations on a light groin, and <Text style={{fontStyle:
'italic'}}>S. puma</Text> lacks finger webbing. <Text style={{fontStyle:
'italic'}}>Smilisca sordida</Text> is most similar but they lack the pug nose and have
smooth skin dorsally.{"\n"}</Text>

```

```

    </ScrollView>
  );
}
}
class SordidaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BF9E44',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#efc756"}}>
          <Text style = {styles.scientificTitles}>Smilisca
sordida{"\n"}</Text>
          <Text style = {styles.commonTitles}>Drab Treefrog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/123_Smilisca_sordida/Smilisca-
sordida-2.png')}
          style = {styles.image}
        />
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~30-55mm; ~1.2-
2.2in males; ~55-65mm ~2.2-2.6in females). The skin is smooth dorsally and granular
ventrally. The eyes are large with horizontal pupils. Tympanic membranes and subtle
supratympanic folds are present. Dorsal coloration is variable ranging from shades of
gray to brown with darker longitudinal blotches dorsally, sometimes connecting
medially, and slightly darker bars on the dorsum of the limbs. The groin has dark
reticulations contrasting with light gray or pale blue spots. The posterior thigh is
similarly marked. The ventral color ranges from white to cream. The fingers and toes
have webbing and expanded terminal pads. Males have dark nuptial pads, and gray,
paired subgular vocal sacs.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call after rains during the dry
season from rocks and low vegetation associated with small, rocky streams. The call is
a rapidly repeated "krriid."{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

```

```
    <Text style = {styles.paragraphs}>A common species found in association
with forest streams ranging from near sea level to ~1525m, including some gallery
forests on the northern Pacific versant.{"\n"}</Text>
```

```
    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/123_Smilisca_sordida/Smilisca-
sordida-range-2.png')}
      style = {styles.image}
    />
```

```
    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Smilisca sordida</Text> may be confused with other brown/tan treefrogs.
<Text style={{fontStyle: 'italic'}}>Trachycephalus typhonius</Text> is larger with
distinct dark vertical bars and/or reticulations on the iris. <Text style={{fontStyle:
'italic'}}>Boana rosenbergi</Text> differs in having a dark dorsal pinstripe. <Text
style={{fontStyle: 'italic'}}>Isthmohyla pseudopuma</Text> lack the reticulated groin.
Other Smilisca are similar, but <Text style={{fontStyle: 'italic'}}>S. phaeota</Text>
has dark, vein-like markings on the flank and a dark mask, and <Text
style={{fontStyle: 'italic'}}>S. baudinii</Text> has brown groin and posterior thigh
marked with light spots. <Text style={{fontStyle: 'italic'}}>Smilisca sila</Text> is
most similar, but is pug-nosed and has tuberculate skin dorsally.{"\n"}</Text>
```

```
  </ScrollView>
  );
}
}
class LoquaxPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#BEA41F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#eed27"}}>
          <Text style = {styles.scientificTitles}>Tlalocohyla
loquax{"\n"}</Text>
          <Text style = {styles.commonTitles}>Loquacious
Treefrog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/124_Tlalocohyla_loquax/Tlalocohyla-loquax-
2.png')}
          style = {styles.image}
        />
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>Small to moderate-sized (~35-45mm,
~1.4-1.8in), but a robustly shaped frog. The snout is rounded in profile. The dorsal
coloration, which is subject to metachrosis, can vary from a light yellow to dark
reddish brown, often having dark spots and markings scattered throughout. On the
```



anterior and posterior thighs, and to a lesser extent on the ventral surfaces of the thighs, there is a bright reddish-orange coloration; this reddish-orange coloration also extends down to the ventral surfaces of the lower leg and onto the interdigital webbing of the feet. The eye has a horizontal pupil, and a brown to copper colored iris. The ventral surfaces of the body, hands, and the majority of the limbs are a yellowish-cream. An axillary membrane is found at the armpits. There is weak to moderate webbing on the hands, and nearly extensive webbing on the feet. Males lack nuptial pads, but have a subgular vocal sac.

<Text style = {styles.sectionTitles}>Calls

Males call from vegetation and other structures above the water or near its surface in ponds and swamps. The advertisement call is a loud "kunk", but at times, especially when numerous other *T. loquax* are calling at a site, other sounds and notes can be emitted.

<Text style = {styles.sectionTitles}>Range and Habitat

This relatively common nocturnal species may be found throughout much of the northern and central Caribbean lowlands and foothills, ranging in elevation from ~50 to 1100m. This species can be found in a variety of habitats, ranging from old-growth forest to agricultural areas.

<Image

resizeMode = 'contain'

source={require('./assets/Images/124\_Tlalocohyla\_loquax/Tlalocohyla-loquax-range-2.png')}

style = {styles.image}

/>

<Text style = {styles.sectionTitles}>Similar Species

*Tlalocohyla loquax* is quite different from other frog species in Costa Rica, and unlikely to be confused, especially when its unique advertisement call is added to its defining characteristics.

</ScrollView>

);

}

}

class TyphoniusPage extends React.Component {

static navigationOptions = {

headerStyle: {

backgroundColor: '#513F30',

},

headerTintColor: '#fff',

headerTitleStyle: {

fontWeight: 'bold',

},

};

render() {

return (

<ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>

<View style = {styles.colorBar, {backgroundColor: "#664f3c"}}>

<Text style = {styles.scientificTitles}>Trachycephalus

typhonius

<Text style = {styles.commonTitles}>Pepper Frog or Milk

Frog

</View>

```

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/125_Trachycephalus_typhonius/Trachycephalus-typhonius-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium to large-sized frog (~70-100mm, ~2.8-4in male; ~90-115mm, ~3.5-4.5in female). The skin is granular dorsally, with larger granules or tubercles laterally and ventrally. The eyes are large with horizontal pupils and dark reticulations often forming vertical bars on the irises. Tympanic membranes are visible below supratympanic folds that may obscure the upper portion. Dorsal coloration is variable, but usually a shade of tan or gray with a dark dorsal blotches. Dark transverse bars usually occur on the dorsum of the limbs. The venter is light tan or cream, and they have green bones which may be visible ventrally. If disturbed they may produce white secretions that irritate mucous membranes and open wounds (hence their common name). Fingers and toes have expanded terminal pads, and moderate to extensive webbing. Males have tan nuptial pads, and large paired dark gray or black lateral vocal sacs behind the corners of the mouth.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call after heavy rains, from the shallows of temporary ponds, or from pools of intermittent streams. They produce a low-pitched, nasal "rehh" or "wah" repeated about every second.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>A very common species found in a wide variety of habitats ranging from pastures, marshes, and dry to wet forests, from near sea level to ~1100m. They are usually found while active (night) on low vegetation, or at breeding congregations.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/125_Trachycephalus_typhonius/Trachycephalus-typhonius-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Trachycephalus typhonius</Text> is most likely to be confused with other large brown treefrogs. <Text style={{fontStyle: 'italic'}}>Boana rosenbergi</Text> has a dark dorsal pinstripe and prepollical spines. <Text style={{fontStyle: 'italic'}}>Smilisca phaeota</Text> has a dark mask, and dark vein-like patterns on the flanks. <Text style={{fontStyle: 'italic'}}>S. baudinii</Text> has thicker, reticulated patterns on the flanks and the posterior thigh is spotted.{"\n"}</Text>

    </ScrollView>
  );
}
}
/**** END HYLIDAE PAGES *****/
/*****
*****
*****

/*****
*****
*****/

```

```

/**** BEGIN LEPTODACTYLIDAE PAGES *****/
class Leptodactylidae extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#A08A80',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#c9ada1"}}>
          <Text style = {styles.familyTitles}>Leptodactylidae (Foam
Frogs)</Text>
        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/leptodactylidae-main.png')}
          style = {styles.image}
        />

        <Text style = {styles.paragraphs}>
          Leptodactylidae, commonly known as Foam Frogs, is a modest-sized family
with ~200 species currently recognized (Frost, 2017). Formerly this was a very large
family that was split into smaller monophyletic groups proposed as separate families
by Frost et al. (2006). As a result there are currently only 2 genera of
Leptodactylidae found in Costa Rica, a single species of <Text style={{fontStyle:
'italic'}}>Engystomops</Text> (formerly <Text style={{fontStyle:
'italic'}}>Phsyallaemus</Text>), and <Text style={{fontStyle:
'italic'}}>Leptodactylus</Text> (5 species). Taxonomic revisions suggested by Hedges
et al. (2008), resulted in the reassignment of many species formerly known by the
genus <Text style={{fontStyle: 'italic'}}>Eleutherodactylus</Text> into the new family
Craugastoridae and Eleutherodactylidae.{"\n"}{"\n"}

```

Leptodactylids are Neotropical, ranging in distribution from southern USA, throughout Central America, and nearly all of South America, as well as occurring in the West Indies (pough et al. 2016). They may be found in a variety of habitat types, but in Costa Rica most species are associated with open, or disturbed sites where ponds or wetlands are present. Leptodactylids occur in every province, but are limited in elevational range, only occurring at a maximal elevation of ~1450m (<Text style={{fontStyle: 'italic'}}>Leptodactylus melanonotus</Text>).{"\n"}{"\n"}

Leptodactylids in Costa Rica range in size from the small-sized <Text style={{fontStyle: 'italic'}}>Leptodactylus fragilis</Text> at ~24mm in length, to the largest frog species in Costa Rica, <Text style={{fontStyle: 'italic'}}>L. savagei</Text> at lengths of up to ~185mm. With the exception of <Text style={{fontStyle: 'italic'}}>Engystomops pustulosus</Text>, Leptodactylids in Costa Rica have relatively pointed snouts, and long hind limbs giving a superficial resemblance to Ranids (True Frogs). Nevertheless, Leptodactylids differ in lacking the toe webbing present in Ranids.{"\n"}{"\n"}

A feature shared by Leptodactylids in Costa Rica, is the construction of foam nests. While in amplexus, breeding pairs use their hind legs to froth up air bubbles in mucus secretions to make a foam in which eggs are laid. Some species create these foam nests on the surface (<Text style={{fontStyle: 'italic'}}>Engystomops pustulosus</Text> and <Text style={{fontStyle: 'italic'}}>Leptodactylus savagei</Text>), while the remaining species often create their nests in burrows. These later species also call from burrows, at times making it frustratingly difficult to find calling males.{"\n"}{"\n"}

```

        </Text>

        <Text style = {styles.speciesInFamilyTitle}>Species in this
Family:</Text>
        <Button color = "#7ca2d0"
            title="Engystomops pustulosus"
            onPress={() => this.props.navigation.navigate('PustulosusPage')}
        />
        <Button color = "#7ca2d0"
            title="Leptodactylus fragilis"
            onPress={() => this.props.navigation.navigate('FragilisPage')}
        />
        <Button color = "#7ca2d0"
            title="Leptodactylus insularum"
            onPress={() => this.props.navigation.navigate('InsularumPage')}
        />
        <Button color = "#7ca2d0"
            title="Leptodactylus melanonotus"
            onPress={() => this.props.navigation.navigate('MelanonotusPage')}
        />
        <Button color = "#7ca2d0"
            title="Leptodactylus poecilochilus"
            onPress={() =>
this.props.navigation.navigate('PoecilochilusPage')}
        />
        <Button color = "#7ca2d0"
            title="Leptodactylus savagei"
            onPress={() => this.props.navigation.navigate('SavageiPage')}
        />
    </ScrollView>
    );
}
}
class PustulosusPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#A08A80',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
                <View style = {styles.colorBar, {backgroundColor: "#c9ada1"}}>
                    <Text style = {styles.scientificTitles}>Engystomops
pustulosus{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Túngara Frog{"\n"}</Text>

                </View>

                <Image
                    resizeMode = 'contain'

                    source={require('./assets/Images/126_Engystomops_pustulosus/Engystomops-
pustulosus-2.png')}
                    style = {styles.image}
                />
            </ScrollView>
        );
    }
}

```

```

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A small to medium-sized frog (25-35mm;
~1-1.4in). This species is toad-like in appearance, and the dorsal surfaces of the
body and limbs very granular/bumpy. The eyes have horizontal pupils and a light-
colored iris. Tympanic membranes are covered with pustules making them difficult to
see; however, the parotoid glands are easily seen. The dorsal coloration is gray or
tan with darker spots and/or bars. The arms are marked with a light color on the
elbow, and a dark bar on the forearm. There is a pale midline stripe on the posterior
dorsum. The ventral surface is smooth with black spots on a light ground color.
Breeding males have brown nuptial pads on the thumbs, and a dark vocal sac with a
light-colored midline stripe. The fingers and toes lack webbing and toe pads, but
well-developed tubercles are present on the hands and feet.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from shallow water or the
water's edge, producing a "piooou". When calling in a chorus, one to several "chucks"
are added at the end.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>A very common species in dry forest,
lowland and premontane moist and wet forests on the Pacific slope, and a population
(possibly introduced) near Siquirres. They are found in open and/or disturbed habitats
near still, shallow water, occurring from near sea level to ~1050m.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/126_Engystomops_pustulosus/Engystomops-
pustulosus-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Engystomops pustulosus</Text> most resembles juvenile Incilius (toad)
species. However, these all have toe webbing which is absent in <Text
style={{fontStyle: 'italic'}}>E. pustulosus</Text>.{"\n"}</Text>

    </ScrollView>
  );
}
}
class FragilisPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#8B7A69',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#ae9984"}}>
          <Text style = {styles.scientificTitles}>Leptodactylus
fragilis{"\n"}</Text>
          <Text style = {styles.commonTitles}>White-lipped Foam
Frog{"\n"}</Text>
        </View>

```

```

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/127_Leptodactylus_fragilis/Leptodactylus-
fragilis-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A medium-sized frog (24-40mm; ~1-1.5in)
with short limbs, a stout body, and a tapering snout. There are scattered tubercles,
and two pairs of dorsolateral folds/rows of tubercles. The eyes are large with
horizontal pupils. Tympanic membranes and supratympanic folds are easily visible.
Males lack the nuptial spines present in other Costa Rica Leptodactylids. The fingers
and toes lack webbing and toe pads. The bottoms of the feet and tarsi have white
tubercles. Dorsal coloration is variable shades of brown with dark blotches and dark
bars on the hind limbs. A light lip stripe contrasted by a dark line extends from the
nose to the shoulder, and the posterior thigh has a light-colored line (cream to
yellow). The ventral color is white or cream.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call from hidden sites near the
water's edge of temporary puddles, ponds and wetlands, producing a short humming-
whistle.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>A very common species occurring
primarily on the Pacific slope, and northern lowlands from near sea level to ~650m.
They are abundant in dry forest, often found near water in open and/or disturbed
habitats including farm ground.{"\n"}</Text>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/127_Leptodactylus_fragilis/Leptodactylus-
fragilis-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Leptodactylus fragilis</Text> is most likely to be confused with Ranids or
other Leptodactylus species. Ranids have toe webbing. <Text style={{fontStyle:
'italic'}}>Leptodactylus savagei</Text> is larger and has a white and black barred
lip. Both <Text style={{fontStyle: 'italic'}}>L. insularum</Text> and <Text
style={{fontStyle: 'italic'}}>L. melanonotus</Text> have web-like lateral fringes on
the toes. <Text style={{fontStyle: 'italic'}}>L. poecilochilus</Text> is the most
similar, but lacks white tubercles on the bottoms of their feet and
tarsi.{"\n"}</Text>

  </ScrollView>
);
}
}
class InsularumPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#8B7A69',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',

```

```

    },
    };
    render() {
    return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
            <View style = {styles.colorBar, {backgroundColor: "#ae9984"}}>
                <Text style = {styles.scientificTitles}>Leptodactylus
insularum{"\n"}</Text>
                <Text style = {styles.commonTitles}>Marbled Foam Frog{"\n"}</Text>
            </View>

            <Image
                resizeMode = 'contain'

                source={require('./assets/Images/128_Leptodactylus_insularum/Leptodactylus-
insularum-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A large frog (50-95mm, ~2-3.8in males;
70-120mm, ~2.8-4.7in females). They have smooth skin, dorsolateral folds, and
supratympanic folds that may branch and continue posteriorly as a lateral fold. The
eyes are large, with horizontal pupils. The ground color is gray or tan with various
dark blotches. The thighs are marked with dark bars and posterior mottling. A dark
line extends from the snout and along the supratympanic fold. There may be a light-
colored stripe on the upper lip. The ventral color is cream. Breeding males have two
black nuptial spines on their thumbs, and hypertrophied forearms. They have moderately
long legs. The hands and feet lack interdigital webbing, but each toe has a lateral
membranous fringe.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>Males call from shallow water of
puddles and ponds, producing a musical, reverberating "whoop" that may be repeated
rapidly.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}>A fairly common species that occurs on
the Pacific slope, from near sea level to ~400m. Often found in open and/or disturbed
habitats of dry, moist and wet forest near still, shallow water.{"\n"}</Text>

            <Image
                resizeMode = 'contain'

                source={require('./assets/Images/128_Leptodactylus_insularum/Leptodactylus-
insularum-range-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Leptodactylus insularum</Text> may be confused with Ranids or other
Leptodactylus species. Ranids have obvious toe webbing. <Text style={{fontStyle:
'italic'}}>Leptodactylus savagei</Text> is also large, but has lumbar glands and a
black and white spotted upper lip. <Text style={{fontStyle: 'italic'}}>Leptodactylus
melanonotus</Text> is much smaller, more stocky and bumpy, and has dark tubercles on
feet and tarsi. <Text style={{fontStyle: 'italic'}}>Leptodactylus fragilis</Text> and
<Text style={{fontStyle: 'italic'}}>L. poecilochilus</Text> are both smaller, lack
lateral toe fringes, and have a pale stripe on the posterior thigh.{"\n"}</Text>

        </ScrollView>
    );
    }
}

```

```

    );
  }
}
class MelanonotusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#8B7A69',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#ae9984"}}>
          <Text style = {styles.scientificTitles}>Leptodactylus
melanonotus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Black-backed Foam
Frog{"\n"}</Text>

          </View>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/129_Leptodactylus_melanonotus/Leptodactylus-
melanonotus-2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
          <Text style = {styles.paragraphs}>A medium-sized frog (30-55mm; ~1-2in)
with relatively short limbs, a stout body, and short snout. The dorsal surface has
scattered tubercles giving a slightly bumpy appearance. Some of the tubercles may join
forming longitudinal ridges. The tympanum and supratympanic fold are easily visible.
The eyes are large with horizontal pupils. Hands and feet lack webbing and toe pads,
but toes have a membranous lateral fringe. The undersurface of the feet have scattered
dark tubercles, and breeding males have 2 darkened spines on the thumb. Coloration is
variable, usually brown dorsally, marked with scattered dark blotches and/or lines.
Blotches may form bars on the legs. The lips usually have distinct white spots. The
ventral surface of the body is light colored.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
          <Text style = {styles.paragraphs}>Males call from hidden locations near
temporary water of ponds, puddles and wetlands, producing a short "doink" repeated
rapidly.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
          <Text style = {styles.paragraphs}>A very common species occurring widely
on both Pacific and Atlantic slopes from near sea level to ~1450 m. They are often
found in open or disturbed habitats near water.{"\n"}</Text>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/129_Leptodactylus_melanonotus/Leptodactylus-
melanonotus-range-2.png')}
            style = {styles.image}
          />

```



```

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Leptodactylus melanonotus</Text> may be confused with Ranids, <Text
style={{fontStyle: 'italic'}}>Craugastor ranoides</Text>, or other Leptodactylus
species. Ranids have obvious toe webbing, and <Text style={{fontStyle: 'italic'}}>C.
ranoides</Text> has finger pads and a yellow venter. <Text style={{fontStyle:
'italic'}}>Leptodactylus savagei</Text> is much larger and has a black and white
spotted lip, whereas <Text style={{fontStyle: 'italic'}}>L. insularum</Text> has
distinct dorsolateral folds and smooth skin. <Text style={{fontStyle:
'italic'}}>Leptodactylus fragilis</Text> and <Text style={{fontStyle: 'italic'}}>L.
poecilochilus</Text> are both similar in size to <Text style={{fontStyle:
'italic'}}>L. melanonotus</Text>, but have a distinct pale stripe on the posterior
thigh and lack lateral toe fringes and dark tubercles on the feet.{"\n"}</Text>

    </ScrollView>
  );
}
}
class PoecilochilusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#8B7A69',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#ae9984"}}>
          <Text style = {styles.scientificTitles}>Leptodactylus
poecilochilus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Turbo White-lipped Foam
Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/130_Leptodactylus_poecilochilus/Leptodactylus-
poecilochilus-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (33-50mm; ~1.3-
2in). The skin is smooth, with at least one pair, and as many as 3 pairs of distinct
dorsolateral folds. The medial folds are most pronounced and lateral folds, if
present, may be discontinuous. The eyes are large, with horizontal pupils. Tympanic
membranes and supratympanic folds are easily visible. A dark stripe extends from the
snout, along the supratympanic fold, ending on the shoulder. The dorsal coloration is
generally tan or gray. Broad, pale stripes may occur between the dorsolateral folds,
extending from snout to vent. Dark blotches occur on the upper lip and/or limbs, and
the posterior thigh has a distinct pale stripe. The venter is light colored. Males
lack nuptial pads or spines, but have dark, lateral vocal sacs. The fingers and toes
lack webbing and terminal pads. The bottoms of the feet and tarsi are
smooth.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>

```

```
    <Text style = {styles.paragraphs}>Males call from shallow water of ponds and puddles, producing a short "chok" or "doink" note that may be repeated rapidly.{ "\n" }</Text>
```

```
    <Text style = {styles.sectionTitles}>Range and Habitat{ "\n" }</Text>
```

```
    <Text style = {styles.paragraphs}>This common species occurs primarily on the Pacific versant, and northern lowlands, from near sea level to ~1150m. They may be found in both dry and moist forests usually near lentic water in open and/or disturbed habitats.{ "\n" }</Text>
```

```
    <Image
      resizeMode = 'contain'
```

```
      source={require('./assets/Images/130_Leptodactylus_poecilochilus/Leptodactylus-poecilochilus-range-2.png')}
```

```
      style = {styles.image}
```

```
    />
```

```
    <Text style = {styles.sectionTitles}>Similar Species{ "\n" }</Text>
```

```
    <Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Leptodactylus poecilochilus</Text> is most likely to be confused with Ranids or other Leptodactylus species. Ranids have obvious toe webbing. The large size, and white and black barred lip distinguish <Text style={{fontStyle: 'italic'}}>L. savagei</Text>. <Text style={{fontStyle: 'italic'}}>Leptodactylus fragilis</Text> differs in having white lip stripes and white tubercles on the bottoms of the feet and tarsi. Both <Text style={{fontStyle: 'italic'}}>L. melanonotus</Text> and <Text style={{fontStyle: 'italic'}}>L. insularum</Text> have lateral toe fringes, and both lack stripes on the posterior thigh.{ "\n" }</Text>
```

```
  </ScrollView>
```

```
  );
```

```
}
```

```
class SavageiPage extends React.Component {
```

```
  static navigationOptions = {
```

```
    headerStyle: {
```

```
      backgroundColor: '#8B7A69',
```

```
    },
```

```
    headerTintColor: '#fff',
```

```
    headerTitleStyle: {
```

```
      fontWeight: 'bold',
```

```
    },
```

```
  };
```

```
  render() {
```

```
    return (
```

```
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
```

```
        <View style = {styles.colorBar, {backgroundColor: "#ae9984"}}>
```

```
          <Text style = {styles.scientificTitles}>Leptodactylus
```

```
savagei{ "\n" }</Text>
```

```
          <Text style = {styles.commonTitles}>Savage's Thin-toed
```

```
Frog{ "\n" }</Text>
```

```
        </View>
```

```
      <Image
```

```
        resizeMode = 'contain'
```

```
        source={require('./assets/Images/131_Leptodactylus_savagei/Leptodactylus-savagei-2.png')}
```

```
        style = {styles.image}
```

```
      />
```

```

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A very large-sized frog (106-185mm;
~4.2-7.3in). The skin is relatively smooth, although the sides and groin are
glandular. Lumbar glands are present, as are weak dorsolateral folds. The snout is
rounded, and the eyes are large with horizontal pupils. Tympanic membranes and
supratympanic folds are easily visible. Fingers and toes lack webbing and terminal
pads. The lips have contrasting dark and white blotches. A black stripe extends from
the snout to the shoulder. The dorsal coloration is variable, generally gray or tan
with darker spots and/or bars. The limbs are marked with dark spots or bars. The
ventral color is gray with light spots. Breeding males have large forearms, a black
spine on each thumb, and 2 black spines on the chest. They may elevate their body when
threatened.{"\n"}</Text>

```

```

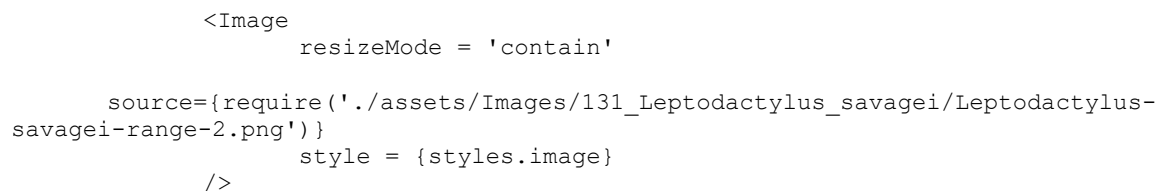
    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call from burrows, retreats, or
the edge of still water, producing a vibrating "whoop" that rises in pitch, and is
repeated every few seconds.{"\n"}</Text>

```

```

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>This very common species occurs in both
forests and disturbed areas near forests, on the Pacific and Atlantic slopes from near
sea level to ~1,200m, usually near water.{"\n"}</Text>

```



```

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Leptodactylus savagei</Text> is most likely to be confused with Ranids or
other Leptodactylus species. Ranids have obvious toe webbing. <Text style={{fontStyle:
'italic'}}>Leptodactylus insularum</Text> may be nearly as large, but has web-like
lateral fringes on the toes. All other Leptodactylus species are much smaller. <Text
style={{fontStyle: 'italic'}}>Leptodactylus melanonotus</Text> has bumpy skin and
lateral toe fringes. Both <Text style={{fontStyle: 'italic'}}>L. fragilis</Text> and
<Text style={{fontStyle: 'italic'}}>L. poecilochilus</Text> have a pale stripe on the
posterior thigh.{"\n"}</Text>

```

```

    </ScrollView>
  );
}
}
/**** END LEPTODACTYLIDAE PAGES *****/
/*****
*****/

```

```

/*****
*****/
/**** BEGIN MICROHYLIDAE PAGES *****/
class Microhylidae extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#594D4F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  },

```

```

    };
    render() {
    return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
            <View style = {styles.colorBar, {backgroundColor: "#706163"}}>
                <Text style = {styles.familyTitles}>Microhylidae (Narrow-Mouthed
Frogs)</Text>
            </View>

            <Image
                resizeMode = 'contain'
                source={require('./assets/Images/microhylidae-main.png')}
                style = {styles.image}
            />

            <Text style = {styles.paragraphs}>
                The family Microhylidae, commonly known as Narrow-mouthed Frogs, is a
large family with nearly 500 species (Frost, 2017) currently recognized. Nonetheless
only 2 genera occur in Costa Rica, <Text style={{fontStyle:
'italic'}}>Ctenophryne</Text> (1 species) and <Text style={{fontStyle:
'italic'}}>Hypopachus</Text> (2 species). This family has been fairly stable
taxonomically, but changes have occurred based on revision suggestions by de Sá et al.
(2012) who synonymized <Text style={{fontStyle: 'italic'}}>Nelsonophryne</Text> with
<Text style={{fontStyle: 'italic'}}>Ctenophryne</Text>, and Streicher et al. (2012)
placed <Text style={{fontStyle: 'italic'}}>Gastrophryne pictiventris</Text> within
<Text style={{fontStyle: 'italic'}}>Hypopachus</Text>.{ "\n" }{ "\n" }

                Microhylids are primarily tropical with species occurring on all
continents within the tropical zone. In Costa Rica, Microhylids occur in all
provinces, and range in elevation from near sea level to 1450m. Microhylids are very
diverse, ranging in size from 10mm to 100mm in length (Pough et al. 2016); 25mm to
67mm in Costa Rica. They also exhibit a wide variety of habitat associations, ranging
from fossorial and terrestrial to arboreal. All three species of Microhylidae in Costa
Rica are fossorial resulting in fewer encounters.{ "\n" }{ "\n" }

                Physical features of Microhylids in Costa Rica include the name-sake
narrow mouth, pointed snouts and small heads. They also have a distinct transverse
fold of skin on the head (although difficult to see in the field at times). They have
squat limbs, fitting with their fossorial lifestyle. In Costa Rica, these species are
usually encountered at the beginning of the rainy season when they emerge from
underground retreats or leaf litter to move to puddles, ponds and wetlands where they
breed. Microhylid tadpoles lack keratinized mouthparts and have a spiracle located
midline near the posterior of the body.{ "\n" }{ "\n" }

            </Text>

            <Text style = {styles.speciesInFamilyTitle}>Species in this
Family:</Text>
            <Button color = "#7ca2d0"
                title="Ctenophryne aterrima"
                onPress={() => this.props.navigation.navigate('AterrimaPage')}
            />
            <Button color = "#7ca2d0"
                title="Hypopachus pictiventris"
                onPress={() => this.props.navigation.navigate('PictiventrisPage')}
            />
            <Button color = "#7ca2d0"
                title="Hypopachus variolosus"
                onPress={() => this.props.navigation.navigate('VariolosusPage')}
            />
        </ScrollView>
    );
}

```

```

}
class AterrimaPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#594D4F',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#706163"}}>
          <Text style = {styles.scientificTitles}>Ctenophryne
aterrima{"\n"}</Text>
          <Text style = {styles.commonTitles}>Black Narrow-mouthed
Frog{"\n"}</Text>

          </View>

          <Image
            resizeMode = 'contain'
            source={require('./assets/Images/132_Ctenophryne_aterrima/132-
Ctenophryne-aterrima-kubicki-2.png')}
            style = {styles.image}
          />
          <Text style = {styles.paragraphs}>(Photo by Brian Kubicki){'\n'}</Text>

          <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
          <Text style = {styles.paragraphs}>A medium-sized frog (~45-67mm, ~1.8-
2.6in). The skin is very smooth, with a distinct transverse fold behind the eyes. The
head tapers sharply towards the snout, and the small eyes are dark with round pupils.
Tympanic membranes are not easily visible. The dorsal coloration is solid dark gray or
black, while the venter is solid brown. Males lack a vocal sac, but have light colored
nuptial pads on fingers (1-3) and nuptial glands on the venter. The fingers and toes
lack expanded pads or tips. The hands and feet are smooth, and the toes have limited
webbing.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
          <Text style = {styles.paragraphs}>Vocalizations for this species have not
been reported.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
          <Text style = {styles.paragraphs}>This rarely encountered species occurs
in wet and moist forests on both the Pacific and Atlantic slopes from near sea level
to ~1350 m. When found, it is usually found under surface debris, except during the
breeding season (early wet season) when they may be found at night on the forest floor
during/after rain.{"\n"}</Text>

          <Image
            resizeMode = 'contain'
            source={require('./assets/Images/132_Ctenophryne_aterrima/132-
Ctenophryne-aterrima-range-2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
          <Text style = {styles.paragraphs}>The combined features of smooth skin,
solid dark color, and transverse fold on the head of <Text style={{fontStyle:
'italic'}}>Ctenophryne aterrima</Text> are unique and they are unlikely to be confused

```

with any other frog in Costa Rica. Perhaps the narrow head and transverse fold present on *Hypopachus variolosus* and *H. pictiventris* could initially lead to confusion, but both of these species are marked with various blotches and patterns.

```

    </ScrollView>
  );
}
}
class PictiventrisPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#91644A',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#b67e5d"}}>
          <Text style = {styles.scientificTitles}>Hypopachus
pictiventris{"\n"}</Text>
          <Text style = {styles.commonTitles}>Southern Narrow-mouthed
Frog{"\n"}</Text>

          </View>

          <Image
            resizeMode = 'contain'

            source={require('./assets/Images/133_Hypopachus_pictiventris/Hypopachus-
pictiventris-2.png')}
            style = {styles.image}
          />

          <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
          <Text style = {styles.paragraphs}>A small-sized frog (~25-38mm, ~1-1.5in)
The skin is relatively smooth, with scattered small pustules. There is usually a
distinct transverse fold behind the eyes (although poorly developed in some
individuals). The head tapers sharply towards the snout and the nostrils are near the
snout's tip. The eyes are small, with round pupils. Tympanic membranes are not easily
visible. The dorsal coloration is brown or gray, and at the lateral edges forms thin,
light lines delineating dark lateral bands from snout to groin. The venter is dark
with numerous light spots/blotches. Males have a single, dark subgular vocal sac. The
fingers and toes lack expanded pads or tips, and only the toes have
webbing.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
          <Text style = {styles.paragraphs}>Males call from puddles, or ponds in
undisturbed forest, producing a loud, nasal "waaaaah" that sounds like a sheep
bleating.{"\n"}</Text>

          <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
          <Text style = {styles.paragraphs}>This common species occurs in moist and
wet lowland forests on the Atlantic slope from near sea level to ~800 m. They are
secretive and usually found under surface debris, or in the leaf litter. During the
breeding season (early wet season) they may be found active on the surface, or near
breeding sites.{"\n"}</Text>

```

```

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/133_Hypopachus_pictiventris/Hypopachus-
pictiventris-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}>Because of their triangular, narrow
head, <Text style={{fontStyle: 'italic'}}>Hypopachus pictiventris</Text> is only
likely to be confused with <Text style={{fontStyle: 'italic'}}>H. variolosus</Text> or
<Text style={{fontStyle: 'italic'}}>Ctenophryne aterrima</Text>. However, <Text
style={{fontStyle: 'italic'}}>H. variolosus</Text> occurs on the Pacific slope, while
<Text style={{fontStyle: 'italic'}}>H. pictiventris</Text> occurs on the Atlantic
slope. Further, <Text style={{fontStyle: 'italic'}}>H. variolosus</Text> has a white
diagonal line below the eye, and two large metatarsal tubercles. <Text
style={{fontStyle: 'italic'}}>Ctenophryne aterrima</Text> has a solid color dorsally
(dark gray) and ventrally (tan).{"\n"}</Text>

    </ScrollView>
  );
}
}
class VariolosusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#91644A',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#b67e5d"}}>
          <Text style = {styles.scientificTitles}>Hypopachus
variolosus{"\n"}</Text>
          <Text style = {styles.commonTitles}>Sheep Frog{"\n"}</Text>

        </View>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/134_Hypopachus_variolosus/Hypopachus-
variolosus-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A medium-sized frog (~30-55mm, ~1.2-
2.2in). The skin is relatively smooth, with a distinct transverse fold behind the
eyes. The head tapers sharply towards the snout, and the nostrils are near the snout's
tip. The eyes are small, with round pupils. Tympanic membranes are not easily visible.
The dorsal coloration is tan or brown with dark spots/ blotches, especially towards
the posterior, and on the legs. There is a dark mask, with a light diagonal stripe
below the eye. The venter is dark with numerous light spots/blotches. Males have a
single, dark subgular vocal sac. The fingers and toes lack expanded pads or tips, and

```

the toes have thick webbing. The feet have two well-developed metatarsal tubercles.

**Calls**

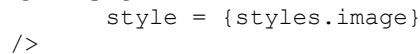
Males call from in, or near the water of ponds or wetlands, producing a loud, nasal "waaaaaaah" that sounds like a sheep bleating (hence the common name).

**Range and Habitat**

This common species occurs in dry and moist forests on the Pacific versant from near sea level to ~1450 m. They are secretive and not often encountered. When found, it is usually under surface debris, except during the breeding season (early wet season) when they may be found in, or near ponds and wetlands.







**Similar Species**

*Hypopachus variolosus* is may be confused with *H. pictiventris* or *Ctenophryne aterrima*. However, *H. pictiventris* occurs on the Atlantic versant, has a small, single metatarsal tubercule, and lacks the diagonal white stripe under the eye. *Ctenophryne aterrima* differs in having solid colors dorsally (dark gray), and ventrally (tan).

```
</ScrollView>
);
}
}
/**** END MICROHYLIDAE PAGES *****/
/*****
*****/
```

```
/*****
*****/
```

```
*****/
class Phyllomedusidae extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#5F8AA8',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  },
};
render() {
  return (
    <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
      <View style = {styles.colorBar, {backgroundColor: "#77add2"}}>
        <Text style = {styles.familyTitles}>Phyllomedusidae (Leaf
Frogs)</Text>
      </View>
```



```

<Image
  resizeMode = 'contain'
  source={require('./assets/Images/phyllomedusidae-main.png')}
  style = {styles.image}
/>

```

```

<Text style = {styles.paragraphs}>

```

Phyllomedusidae, commonly known as Leaf Frogs, is a relatively small family with 62 species currently recognized (Frost, 2017), all occurring in the Neotropics. Within Costa Rica, phyllomedusids are widespread, occurring in every province, from near sea level to ~1,650m, although most species occur below 1,000m elevation. Phyllomedusids have long been recognized as a distinct subgroup within the family Hylidae. Even to a casual observer, phyllomedusid frogs appear different if for no other reason than because of their vertical pupil (hylids have horizontal pupils). Bossuyt and Roelants (2009), and Duellman et al. (2016) recognized the taxonomic distinctness of this group, removing them from Hylidae and placing them in the resurrected family Phyllomedusidae. As a result of other recent taxonomic revisions (Faivovich et al. 2005, and Duellman et al. 2016), Costa Rican phyllomedusids are placed in two genera *Agalychnis* (5 species) and *Cruziohyla* (1 species).{"\n"}{"\n"}

Leaf Frogs are medium to large-sized frogs that get their common name from their arboreal nature and the fact that these nocturnal frogs rest on leaves during the daytime. They have fleshy, angular edges on their limbs that create a smooth visual transition from body to leaf when they are resting. The vivid "flash colors" on the flanks and inner aspects of their limbs are also hidden in the resting posture, further perfecting their camouflage. Monkey Frogs, another common name for some species of phyllomedusids comes from their monkey-like habit of walking hand over hand when moving about the vegetation. They can leap when necessary, and some scientists speculate the extensive webbing between the digits (ex. *Agalychnis spurrelli*) can aid frogs in a gliding action as they jump to lower sites.{"\n"}{"\n"}

The eggs of phyllomedusids are laid on leaves and other structures overhanging water of ponds and puddles. Upon hatching the tadpoles drop into the water to complete their development. Work by Warkentin (1995) demonstrated that vibrations from predators can stimulate early hatching as an escape mechanism. Tadpoles of Costa Rican phyllomedusids maintain a distinctive vertical posture in the water using only the tips of their tails. Nonetheless, they use their entire tails to swim rapidly when necessary.{"\n"}{"\n"}

```

</Text>

```

```

<Text style = {styles.speciesInFamilyTitle}>Species in this
Family:</Text>

```

```

<Button color = "#7ca2d0"
  title="Agalychnis annae"
  onPress={() => this.props.navigation.navigate('AnnaePage')}
/>
<Button color = "#7ca2d0"
  title="Agalychnis callidryas"
  onPress={() => this.props.navigation.navigate('CallidryasPage')}
/>
<Button color = "#7ca2d0"
  title="Agalychnis lemur"
  onPress={() => this.props.navigation.navigate('LemurPage')}
/>
<Button color = "#7ca2d0"
  title="Agalychnis saltator"
  onPress={() => this.props.navigation.navigate('SaltatorPage')}
/>
<Button color = "#7ca2d0"

```

```

        title="Agalychnis spurrelli"
        onPress={() => this.props.navigation.navigate('SpurrelliPage')}
      />
      <Button color = "#7ca2d0"
        title="Cruziohyala calcarifer"
        onPress={() => this.props.navigation.navigate('CalcariferPage')}
      />
    </ScrollView>
  );
}
}
class AnnaePage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#5F8AA8',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#77add2"}}>
          <Text style = {styles.scientificTitles}>Agalychnis
anna{"\n"}</Text>
          <Text style = {styles.commonTitles}>Yellow-eyed Leaf
Frog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/135_Agalychnis_anna/Agalychnis-
anna-2.png')}
          style = {styles.image}
        />
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A large frog (~60-85mm, ~2.4-3.4in).
The dorsal coloration, which is subject to metachrosis, varies from light green to
dark green, at times having white spots. The flanks and dorsal surfaces of the
anterior and posterior thighs and upper arms have a blue to purple coloration. Blue to
purple pigmentation is also often found on the dorsal surfaces of fingers III and IV,
and on the lower leg extending from the inner margin of the tarsus down onto toes IV
and V. The eye has a vertically elliptical pupil, and a yellow to yellowish-orange
iris. The ventral surfaces of the body and limbs are white, and often have a pinkish-
orange hue. Moderate webbing is found between the digits of the hands and feet. The
snout has a strongly sloping profile.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>During the rainy season in the Central
Valley (typically May through December), males call from vegetation surrounding slow
or still water of streams and ponds. The advertisement call consists of a
"rrrrrrroopp", often with accompanying chirps or clucks.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This nocturnal species has either
disappeared or severely declined from most of its historical sites within pristine
habitat, including the type locality of Tapanti National Park, where this species has
not been observed in years. Oddly, they are still found at several sites within urban

```

settings in the Central Valley, often breeding in contaminated water sources. The elevational range for *Agalychnis annae* is ~800– 1,650m.

```
<Image
  resizeMode = 'contain'
  source={require('./assets/Images/135_Agalychnis_anae/Agalychnis-
anae-range-2.png')}
  style = {styles.image}
/>

<Text style = {styles.sectionTitles}>Similar Species</Text>
<Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Agalychnis annae</Text> is quite unique with its combination of blue to
purple flanks, vertically elliptical pupil, and a yellow to yellowish orange iris. It
is unlikely any other species of anuran within Costa Rica will be confused with <Text
style={{fontStyle: 'italic'}}>A. annae</Text>.</Text>

</ScrollView>
);
}
}
class CallidryasPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#5F8AA8',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#77add2"}}>
          <Text style = {styles.scientificTitles}>Agalychnis
callidryas</Text>
          <Text style = {styles.commonTitles}>Red-eyed Leaf
Frog</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/136_Agalychnis_callidryas/Agalychnis-
callidryas-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description</Text>
        <Text style = {styles.paragraphs}>A medium to large-sized frog (~45-75mm,
~1.8-3in). The dorsal coloration, which is subject to metachrosis, can vary from light
green to dark green, at times having lighter transverse lines and/or white spots. The
flanks can range in color from light blue, purple, or even brown, and have vertical
white to cream bars. <Text style={{fontStyle: 'italic'}}>Agalychnis callidryas</Text>
shows considerable geographic variation throughout Costa Rica, not only with the color
combinations on the flanks, but also the colorations of the dorsal surfaces of the
upper arms, anterior and posterior thighs, and even the hands and feet. The eye has a
vertically elliptical pupil, and a bright red to orange iris. The ventral surfaces of
the body and limbs are white, and at times have a pinkish-orange hue. Moderate webbing
```

is found between the digits of the hands and feet. The snout has a sloping profile.

<Text style = {styles.sectionTitles}>Calls

Males of this nocturnal species call from vegetation surrounding or overhanging calm water of ponds and ephemeral pools. The advertisement call consists of a "Cchuk" or at times "Cchuk-chuk". Additionally, they also often emit a series of softer "tuk-tuk-tuk-tuk-tuktuk" notes.

<Text style = {styles.sectionTitles}>Range and Habitat

This common species is widely distributed on both the Atlantic and Pacific versants, within the humid forests of the lowlands and foothills from near sea level to ~1,000m. They can be found in a wide variety of habitat types, from old-growth forest to roadside ditches and gardens.

<Image  
resizeMode = 'contain'

source={require('./assets/Images/136\_Agalychnis\_callidryas/Agalychnis-callidryas-range-2.png')}  
style = {styles.image}  
>

<Text style = {styles.sectionTitles}>Similar Species

<Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Agalychnis callidryas, with its vertically elliptical pupil, red eyes, and light vertical bands on the flanks, is not likely to be confused with any other frog in Costa Rica.

</ScrollView>

);

}

}

class LemurPage extends React.Component {

static navigationOptions = {

headerStyle: {

backgroundColor: '#5F8AA8',

},

headerTintColor: '#fff',

headerTitleStyle: {

fontWeight: 'bold',

},

};

render() {

return (

<ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>

<View style = {styles.colorBar, {backgroundColor: "#77add2"}}>

<Text style = {styles.scientificTitles}>Agalychnis

lemur

<Text style = {styles.commonTitles}>Lemur Leaf Frog

</View>

<Image

resizeMode = 'contain'

source={require('./assets/Images/137\_Agalychnis\_lemur/Agalychnis-lemur-2.png')}

style = {styles.image}

>

<Text style = {styles.sectionTitles}>Description

<Text style = {styles.paragraphs}>A medium-sized (~35-55mm, ~1.4-2.2in), and thin-framed frog. The dorsal coloration, which is subject to metachrosis, can vary from lime green to reddish-orange, additionally having numerous darker red spots scattered throughout. The flanks are light yellow. They have large eyes that have a vertically elliptical pupil, and iris coloration that varies from silvery white to dark gray (also subject to metachrosis). The ventral surface of the body is white. Similar to other <Text style={{fontStyle: 'italic'}}>Agalychnis</Text> species, they have expanded terminal pads on the digits. However, <Text style={{fontStyle: 'italic'}}>Agalychnis lemur</Text> lacks interdigital webbing on the hands and feet. They have a truncate snout profile.{"\n"}</Text>

<Text style = {styles.sectionTitles}>Calls{"\n"}</Text>

<Text style = {styles.paragraphs}>Males call from vegetation near small pools formed within seepages, or small ponds. The advertisement call of <Text style={{fontStyle: 'italic'}}>Agalychnis lemur</Text> consists of a single short whistle-like note, or a "chuk" similar to that of <Text style={{fontStyle: 'italic'}}>A. callidryas</Text>. {"\n"}</Text>

<Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>

<Text style = {styles.paragraphs}>In Costa Rica, this now rare nocturnal species once had a relatively wide distribution along the Caribbean slopes of Talamanca, the Central Volcanic Range, and Tilarán. Unfortunately, Agalychnis lemur disappeared from most of its known range, and is currently only known to exist at a few sites within the lower limits of its historical range in the central and southeastern Caribbean foothills. The historical elevational range was from ~450-1,600m, but the known extant populations are between ~450- 850m. <Text style={{fontStyle: 'italic'}}>Agalychnis lemur</Text> tends to prefer old-growth forest. {"\n"}</Text>

```
<Image
  resizeMode = 'contain'
  source={require('./assets/Images/137_Agalychnis_lemur/Agalychnis-lemur-range-2.png')}
  style = {styles.image}
/>
```

<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>

<Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Agalychnis lemur</Text>, with its vertically elliptical pupil, truncate snout, and lack of interdigital webbing on the hands and feet, is not likely to be confused with any other frog in Costa Rica. {"\n"}</Text>

```
</ScrollView>
);
}
}
class SaltatorPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#5F8AA8',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#77add2"}}>
          <Text style = {styles.scientificTitles}>Agalychnis
saltator{"\n"}</Text>
          <Text style = {styles.commonTitles}>Jumping Leaf Frog{"\n"}</Text>
```

```

</View>

<Image
  resizeMode = 'contain'

  source={require('./assets/Images/138_Agalychnis_saltator/Agalychnis-saltator-
2.png')}
  style = {styles.image}
/>

<Text style = {styles.sectionTitles}>Description{"\n"}</Text>
<Text style = {styles.paragraphs}>A medium-sized frog (~35-65mm, ~1.4-
2.6in). The dorsal coloration, which is subject to metachrosis, can vary from lime
green to reddish-orange, normally having numerous darker transversal stripes. Some
specimens also have large white spots on the dorsal surface of the body. The uniformly
colored flanks range from light blue to purple. The eye has a vertically elliptical
pupil, and iris coloration can vary from red to orange. The ventral surface of the
body is white. Agalychnis saltator has only weak to moderate interdigital webbing on
the hands and feet. Similar to other Agalychnis species, they have expanded terminal
pads on the digits. Males have a subgular vocal sac and dark nuptial pads on the
thumbs. Agalychnis saltator has a sloping snout profile.{"\n"}</Text>

<Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
<Text style = {styles.paragraphs}>Males call from vegetation in or near
ponds. The advertisement call of <Text style={{fontStyle: 'italic'}}>Agalychnis
saltator</Text> normally consists of a short double whistle-like note.{"\n"}</Text>

<Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
<Text style = {styles.paragraphs}>In Costa Rica, this uncommon nocturnal
species is widely distributed throughout much of the Caribbean lowlands and foothills.
The elevational range for <Text style={{fontStyle: 'italic'}}>Agalychnis
saltator</Text> is from near sea level to ~1,000m. This species tends to prefer old-
growth forest, where it lays its eggs attached to the vegetation, vines, and branches
overhanging ponds during explosive breeding events.{"\n"}</Text>

<Image
  resizeMode = 'contain'

  source={require('./assets/Images/138_Agalychnis_saltator/Agalychnis-saltator-
range-2.png')}
  style = {styles.image}
/>

<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
<Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Agalychnis saltator</Text>, with its vertically elliptical pupil, red to
orange iris, dark transversal stripes on the dorsum, and uniform blue to purple
flanks, is not likely to be confused with any other frog in Costa Rica.{"\n"}</Text>

</ScrollView>
);
}
}
class SpurrelliPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#5F8AA8',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',

```

```

    },
    };
    render() {
    return (
        <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
            <View style = {styles.colorBar, {backgroundColor: "#77add2"}}>
                <Text style = {styles.scientificTitles}>Agalychnis
spurrelli{"\n"}</Text>
                <Text style = {styles.commonTitles}>Spurrell's Leaf
Frog{"\n"}</Text>
            </View>

            <Image
                resizeMode = 'contain'

                source={require('./assets/Images/139_Agalychnis_spurrelli/Agalychnis-spurrelli-
2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
            <Text style = {styles.paragraphs}>A medium to large-sized frog (~45-95mm,
~1.8-3.7in). The dorsal coloration, which is subject to metachrosis, varies from lime
green to dark green, normally having large white spots on the body. The uniformly
colored flanks are light yellow. The eye has a vertically elliptical pupil, and a dark
maroon iris. The ventral surface of the body can vary from uniform white to yellow.
<Text style={{fontStyle: 'italic'}}>Agalychnis spurrelli</Text> has moderate to
extensive interdigital webbing on the hands and feet. Males have a subgular vocal sac
and dark colored nuptial pads on the thumbs. <Text style={{fontStyle:
'italic'}}>Agalychnis spurrelli</Text> has a strongly sloping snout profile.
Considerable differences in size, extent of interdigital webbing, and ventral
coloration can be found between the populations on the Pacific and Caribbean
versants.{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
            <Text style = {styles.paragraphs}>Males call from vegetation in or near
still water of ponds. The advertisement call consists of a rough, low single note
"rruumm."{"\n"}</Text>

            <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Agalychnis spurrelli</Text> is an uncommon nocturnal species that inhabits
the eastern portion of both the Caribbean and Pacific versants. The elevational range
is from near sea level to ~900m. This species tends to prefer old-growth forest, but
can also occasionally be observed in more disturbed habitats. On the Caribbean slopes,
especially within the private reserve of the Costa Rican Amphibian Research Center,
this species has proven to have a preference of timing its explosive breeding events
during the full-moon phase.{"\n"}</Text>

            <Image
                resizeMode = 'contain'

                source={require('./assets/Images/139_Agalychnis_spurrelli/Agalychnis-spurrelli-
range-2.png')}
                style = {styles.image}
            />

            <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
            <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Agalychnis spurrelli</Text>, with its vertically elliptical pupil, maroon

```

iris, large white spots on the dorsum, and uniform yellow flanks, is not likely to be confused with any other frog in Costa Rica.

```
        </ScrollView>
    );
}
}
class CalcariferPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#BB6C18',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
                <View style = {styles.colorBar, {backgroundColor: "#ea891e"}}>
                    <Text style = {styles.scientificTitles}>Cruziohyala
calcarifer{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Splendid Leaf
Frog{"\n"}</Text>
                </View>

                <Image
                    resizeMode = 'contain'

                    source={require('./assets/Images/140_Cruziohyala_calcarifer/Cruziohyala-
calcarifer-2.png')}
                    style = {styles.image}
                />

                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
                <Text style = {styles.paragraphs}>A moderate to large-sized frog (~60-
85mm, ~2.4-3.3in). The dorsal coloration, which is subject to metachrosis, can vary
from light green to dark green, with lighter green to bluish-green spots. The flanks
are light yellow to orange with vertical black bars. The eye has a vertically
elliptical pupil, and a gray and yellow colored iris. <Text style={{fontStyle:
'italic'}}>Cruziohyala calcarifer</Text> has a rounded snout profile. The ventral
surfaces can vary in color from yellow (throat) to orange (body and limbs). On the tip
of the heel there is a fleshy triangular flap, which is known as a "calcar". This
structure is where this species gets its name "calcarifer", which comes from the Latin
words calcar (meaning spur) and fero (meaning to carry or bear). <Text
style={{fontStyle: 'italic'}}>Cruziohyala calcarifer</Text> has moderate to extensive
interdigital webbing on the hands and feet.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
                <Text style = {styles.paragraphs}>The advertisement call of <Text
style={{fontStyle: 'italic'}}>Cruziohyala calcarifer</Text> is a low and soft "rruuh",
often emitted in a series of notes.{"\n"}</Text>

                <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
                <Text style = {styles.paragraphs}>This uncommon nocturnal species
inhabits the Caribbean lowlands and foothills. The elevational range is from near sea
level to ~800m. This species tends to prefer old-growth forest, where it lays its eggs
attached to the vegetation, bark, wood, or vines overhanging pools of water that have
formed in the cavities of standing or fallen trees, or root-buttresses. Occasionally,
```



<Text style={{fontStyle: 'italic'}}>C. calcarifer</Text> has also been observed breeding at terrestrial pools and small ponds.{"\n"}</Text>

```
    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/140_Cruziohyala_calcarifer/Cruziohyala-
calcarifer-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Cruziohyala calcarifer</Text>, with its vertically elliptical pupil, yellow
and gray iris, yellow to orange flanks marked with black vertical bars, and calcar on
the heel, is not likely to be confused with any other frog in Costa Rica.{"\n"}</Text>

  </ScrollView>
);
}
}
/**** END PHYLLomedusidae PAGES *****/
/*****/
*****/
```

```
/*****/
/**** BEGIN RANIDAE PAGES *****/
class Ranidae extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#51391E',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f9f9f9"}}>
        <View style = {styles.colorBar, {backgroundColor: "#664826"}}>
          <Text style = {styles.familyTitles}>Ranidae (True Frogs)</Text>
        </View>

        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/ranidae-main.png')}
          style = {styles.image}
        />

        <Text style = {styles.paragraphs}>
          The family Ranidae, commonly known as True Frogs, is a large family with
          380 species currently recognized (Frost, 2017). Taxonomic revisions suggested by Frost
          et al. (2006) resulted in the change to <Text style={{fontStyle:
          'italic'}}>Lithobates</Text>, from the more familiar genus <Text style={{fontStyle:
          'italic'}}>Rana</Text> formerly applied to Costa Rican ranids. <Text
          style={{fontStyle: 'italic'}}>Lithobates</Text> (5 species) is the only genus of
          Ranidae that occurs in Costa Rica.{"\n"}{"\n"}
        </Text>
      </ScrollView>
    );
  }
}
```

The family Ranidae is not only species-rich, but also has a widespread distribution, with species on all continents except Antarctica (Vitt and Caldwell, 2016). Ranids are also widely distributed in Costa Rica, occurring in all provinces, in both dry and wet forests, and at elevations ranging from near sea level up to 2,700m.

Ranids can be found in a variety of habitat types, ranging from open agricultural areas, to mature forests. But, regardless of vegetation type, most ranids are found in or near the still water of ponds and marshes where they breed. They will however, forage away from water and may be found some distance from ponds particularly after the breeding season. *Lithobates warszewitschii* is different from the other ranids of Costa Rica in that they use streams for reproduction, and can be found in forests near streams or rivers, but also at times far from water.

Key physical features of ranids in Costa Rica include long hind limbs and webbed hind feet. Both of these traits make these frogs adept swimmers. The long, robust hind limbs also make them excellent jumpers, able to leap quickly to safety. Most ranids in Costa Rica will congregate at ponds and wetlands for breeding. However, their choruses are sometimes difficult to hear because advertisement calls for Costa Rica ranids are relatively quiet. The tadpoles for most ranid species grow quite large, and are the largest of Costa Rica's tadpoles.

```

</Text>

<Text style = {styles.speciesInFamilyTitle}>Species in this
Family:</Text>
<Button color = "#7ca2d0"
  title="Lithobates forreri"
  onPress={() => this.props.navigation.navigate('ForreriPage')}
/>
<Button color = "#7ca2d0"
  title="Lithobates taylori"
  onPress={() => this.props.navigation.navigate('TayloriPage')}
/>
<Button color = "#7ca2d0"
  title="Lithobates vaillanti"
  onPress={() => this.props.navigation.navigate('VaillantiPage')}
/>
<Button color = "#7ca2d0"
  title="Lithobates vibicarius"
  onPress={() => this.props.navigation.navigate('VibicariusPage')}
/>
<Button color = "#7ca2d0"
  title="Lithobates warszewitschii"
  onPress={() =>
this.props.navigation.navigate('WarszewitschiiPage')}
/>
</ScrollView>
);
}
}
class ForreriPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#51391E',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {

```

```

return (
  <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
    <View style = {styles.colorBar, {backgroundColor: "#664826"}}>
      <Text style = {styles.scientificTitles}>Lithobates
forreri{"\n"}</Text>
      <Text style = {styles.commonTitles}>Forrer's Leopard
Frog{"\n"}</Text>

    </View>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/141_Lithobates_forreri/Lithobates-forreri-
2.png')}

      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A large-sized frog (~65-90mm, ~2.5-
3.5in males; ~85-115mm, ~3.5-4.5in females). The skin is relatively smooth, with
distinct, light colored dorsolateral folds that extend unbroken to near the vent, and
often with one or more smaller pair(s) of medial folds that may be discontinuous. The
snout is pointed and the eyes are large, with horizontal pupils. Tympanic membranes
are easily visible. A dark stripe extends from the snout to the eye, parallel to the
dorsolateral folds. The dorsal coloration is variable, but is generally tan with dark
spots or blotches faintly outlined with a light ground color. The venter is light
colored. The fingers and toes lack expanded pads or tips, and the toes have extensive
webbing. The bottoms of the feet and tarsi are smooth. Males have brown nuptial pads
on the thumbs and lateral vocal sacs.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call from the shallows of still
water, producing a fairly quiet, short guttural call.{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>This common species occurs on the
Pacific slope, from near sea level to ~1,550m. They are usually found in, or near
ponds and wetlands where they live and reproduce.{"\n"}</Text>

    <Image
      resizeMode = 'contain'

      source={require('./assets/Images/141_Lithobates_forreri/Lithobates-forreri-
range-2.png')}

      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Lithobates forreri</Text> is most likely to be confused with Leptodactylus
species, or other ranids. Leptodactylus species all lack toe webbing. <Text
style={{fontStyle: 'italic'}}>Lithobates taylori</Text> is most similar, but differs
in having dorsolateral folds that are discontinuous and they occur in the Cordilleras
or on the Atlantic slope. <Text style={{fontStyle: 'italic'}}>Lithobates
vaillanti</Text> may occur sympatrically, but they lack the "leopard" spots and are
usually shaded green anteriorly.{"\n"}</Text>

  </ScrollView>
);
}
}

```

```

class TayloriPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#51391E',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
        <View style = {styles.colorBar, {backgroundColor: "#664826"}}>
          <Text style = {styles.scientificTitles}>Lithobates
taylori{"\n"}</Text>
          <Text style = {styles.commonTitles}>Taylor's Leopard
Frog{"\n"}</Text>
        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/142_Lithobates_taylori/Lithobates-taylori-
2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A large-sized frog (~60-80mm, ~2.4-
3.2in males; ~70-90mm, ~2.75-3.5in females). The skin is smooth with distinct,
discontinuous dorsolateral folds (gap near the vent). The snout is pointed and the
eyes are large, with horizontal pupils. Tympanic membranes are easily visible. A dark
stripe extends from the snout to the eye, in line with the dorsolateral folds. The
dorsal coloration is variable, but is generally tan or green with dark spots or
blotches faintly outlined with a light ground color. The venter is light colored. The
fingers and toes lack expanded pads or tips. The fingers lack webbing, but the toes
have extensive webbing. The bottoms of the feet and tarsi are smooth. Males have brown
nuptial pads on the thumbs and lateral vocal sacs.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from the shallows of still
water, producing a fairly quiet, short guttural call.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This common species occurs on the
Atlantic slope and Cordilleras, from near sea level to ~1,850m. They are usually found
in, or near ponds and wetlands where they live and reproduce.{"\n"}</Text>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/142_Lithobates_taylori/Lithobates-taylori-
range-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Lithobates taylori</Text> is most likely to be confused with Leptodactylus
species, or other ranids. Leptodactylus species all lack toe webbing. <Text

```

style={{fontStyle: 'italic'}}>Lithobates forreri</Text> is most similar, but differs in having dorsolateral folds that are continuous and occurring principally on the Pacific slope. <Text style={{fontStyle: 'italic'}}>Lithobates vaillanti</Text> may occur sympatrically, but they lack the "leopard" spots and are usually shaded green anteriorly.{"\n"}</Text>

```

    </ScrollView>
  );
}
}
class VaillantiPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#51391E',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#664826"}}>
          <Text style = {styles.scientificTitles}>Lithobates
vaillanti{"\n"}</Text>
          <Text style = {styles.commonTitles}>Vaillant's Frog{"\n"}</Text>
        </View>
        <Image
          resizeMode = 'contain'
          source={require('./assets/Images/143_Lithobates_vaillanti/Lithobates-vaillanti-2.png')}
          style = {styles.image}
        />
        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A large-sized frog (~65-95mm, ~2.5-3.75in males; ~75-125mm, ~3-5in females). The dorsal surface has scattered small tubercles and distinct dorsolateral folds. An additional fold branches inferiorly towards the shoulder. The snout is pointed and the eyes are large with horizontal pupils. Tympanic membranes are easily visible. The dorsal coloration is variable, but is generally tan fading to green anteriorly, sometimes with small dark spots. Dark lateral stripes may be on and/or below the dorsolateral folds, and a light (often yellow or green) lip stripe is usually present, extending from the eye to the shoulder. The venter is light colored. The fingers and toes have rounded tips. The fingers lack webbing, but the toes have extensive webbing. The bottoms of the feet and tarsi are smooth. Males have nuptial pads on the thumbs and paired vocal sacs.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from the shallows of still water, producing a series of low-pitched grunts.{"\n"}</Text>
        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This common species occurs on both the Pacific and the Atlantic slopes from near sea level to ~700 m. They are usually found in, or near ponds and wetlands where they live and reproduce.{"\n"}</Text>
        <Image

```

```

        resizeMode = 'contain'

        source={require('./assets/Images/143_Lithobates_vaillanti/Lithobates-vaillanti-
range-2.png')}
        style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Lithobates vaillanti</Text> is most likely to be confused with
Leptodactylus species, or other ranids. Leptodactylus species all lack toe webbing.
<Text style={{fontStyle: 'italic'}}>Lithobates vaillanti</Text> lacks the large dark,
but light-bordered "leopard" spots of <Text style={{fontStyle: 'italic'}}>L.
taylori</Text> and <Text style={{fontStyle: 'italic'}}>L. forreri</Text>. <Text
style={{fontStyle: 'italic'}}>Lithobates vibicarius</Text> usually has red on the
limbs and has green eyes.{"\n"}</Text>

    </ScrollView>
  );
}
}
class VibicariusPage extends React.Component {
  static navigationOptions = {
    headerStyle: {
      backgroundColor: '#51391E',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
        <View style = {styles.colorBar, {backgroundColor: "#664826"}}>
          <Text style = {styles.scientificTitles}>Lithobates
vibicarius{"\n"}</Text>>
          <Text style = {styles.commonTitles}>Green-eyed Frog{"\n"}</Text>

        </View>

        <Image
          resizeMode = 'contain'

          source={require('./assets/Images/144_Lithobates_vibicarius/Lithobates-
vibicarius-2.png')}
          style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
        <Text style = {styles.paragraphs}>A large-sized frog (~60-70mm, ~2.4-
2.75in males; ~65-90mm, ~2.5-3.5in females). The skin is relatively smooth, with
distinct dorsolateral folds. The snout is pointed. They have large pale green eyes
with horizontal pupils. Tympanic membranes are large and easily visible. The dorsal
coloration is brown with a pale lip stripe, and a dark stripe extending from the
snout, through the eye and continuing posteriorly below the dorsolateral folds. In
juveniles, the dorsal color is green and the stripe covers the entire lateral
surfaces. The venter is darkly mottled and there is often a red suffusion of color on
the groin, thighs, axillae and feet. The fingers and toes have rounded tips. The
fingers lack webbing, but the toes have extensive webbing. The bottoms of the feet and
tarsi are smooth. Males have brown nuptial pads on the thumbs, but lack vocal
sacs.{"\n"}</Text>

```

```

        <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
        <Text style = {styles.paragraphs}>Males call from the shallows of still
water, where they produce a fairly quiet, guttural call that may be followed by
additional chortles.{"\n"}</Text>

        <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
        <Text style = {styles.paragraphs}>This rare species occurs in the
Cordilleras (Tilarán, Central, Talamanca) from ~1,400 to 2,700m. They are usually
found in primary forests, near or in ponds and swamps. During the breeding season
(May-June) males may be found day or night, and females may be found entering or
leaving the breeding ponds.{"\n"}</Text>

        <Image
            resizeMode = 'contain'

            source={require('./assets/Images/144_Lithobates_vibicarius/Lithobates-
vibicarius-range-2.png')}
            style = {styles.image}
        />

        <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
        <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Lithobates vibicarius</Text> is most likely to be confused with
Leptodactylus species, or other ranids. Leptodactylus species all lack toe webbing.
All other Lithobates species lack green eyes.{"\n"}</Text>

    </ScrollView>
    );
}
}
class WarszewitschiiPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#51391E',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f9f9f9"}}>
                <View style = {styles.colorBar, {backgroundColor: "#664826"}}>
                    <Text style = {styles.scientificTitles}>Lithobates
warszewitschii{"\n"}</Text>>
                    <Text style = {styles.commonTitles}>Warszewitsch's
Frog{"\n"}</Text>

                </View>

                <Image
                    resizeMode = 'contain'

                    source={require('./assets/Images/145_Lithobates_warszewitschii/Lithobates-
warszewitschii-2.png')}
                    style = {styles.image}
                />

                <Text style = {styles.sectionTitles}>Description{"\n"}</Text>

```

```
<Text style = {styles.paragraphs}>A medium-sized frog (~40-50mm, ~1.6-2in males; ~45-65mm, ~1.8-2.6in females). The skin is relatively smooth, with distinct dorsolateral folds. The snout is pointed and the sides are somewhat perpendicular to the dorsum. They have large eyes with horizontal pupils. Tympanic membranes are large and easily visible. The dorsal coloration is brown with several to many light green blotches. Pale stripes extend from the snout and over the eyes, and occur on the lips as well. The venter is yellow and darkly mottled, and the ventral surfaces of the legs and feet are red. There are bright yellow spots on the posterior thighs. The fingers and toes have rounded tips. The fingers lack webbing, but the toes have moderate webbing. The bottoms of the feet and tarsi are smooth. Males have nuptial pads on the thumbs, but lack vocal sacs.{"\n"}</Text>
```

```
<Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
```

```
<Text style = {styles.paragraphs}>The advertisement call is a short, fairly quiet, low-pitched trill.{"\n"}</Text>
```

```
<Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
```

```
<Text style = {styles.paragraphs}>This common species occurs on both the Pacific and Atlantic slopes from near sea level to ~1,750m. They may be found day and night on the forest floor, and may be near streams or far from water.{"\n"}</Text>
```

```
<Image
```

```
  resizeMode = 'contain'
```

```
  source={require('./assets/Images/145_Lithobates_warszewitschii/Lithobates-warszewitschii-range-2.png')}
```

```
  style = {styles.image}
```

```
<Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
```

```
<Text style = {styles.paragraphs}><Text style={{fontStyle: 'italic'}}>Lithobates warszewitschii</Text> is most likely to be confused with Leptodactylus species, or other ranids. Leptodactylus species all lack toe webbing. All other Lithobates species lack yellow spots on the thighs. <Text style={{fontStyle: 'italic'}}>Lithobates vibicarius</Text> also has red coloration on the limbs and dark lateral coloration, but they have green eyes.{"\n"}</Text>
```

```
</ScrollView>
```

```
);
```

```
}
```

```
}
```

```
/**** END RANIDAE PAGES *****/
```

```
/******  
******/
```

```
/******  
******/
```

```
/**** BEGIN RHINOPHRYNIDAE PAGES *****/
```

```
class Rhinophrynidae extends React.Component {
```

```
  static navigationOptions = {
```

```
    headerStyle: {
```

```
      backgroundColor: '#413838',
```

```
    },
```

```
    headerTintColor: '#fff',
```

```
    headerTitleStyle: {
```

```
      fontWeight: 'bold',
```

```
    },
```

```
  };
```

```
  render() {
```

```
    return (
```

```
      <ScrollView style = {{alignContent : "stretch", backgroundColor: "#fcfcfc"}}>
```



```

        <View style = {styles.colorBar, {backgroundColor: "#524646"}}>
            <Text style = {styles.familyTitles}>Rhinophrynidae (Burrowing
Toad)</Text>
        </View>

        <Image
            resizeMode = 'contain'
            source={require('./assets/Images/rhinophrynidae-main.png')}
            style = {styles.image}
        />

        <Text style = {styles.paragraphs}>
            The family Rhinophrynidae has a single species, Rhinophrynus dorsalis,
commonly known as the Mexican Burrowing Toad (Frost, 2017). As the common name
implies, this species occurs from southern United States, throughout Mexico and
Central America, and reaches the southern limit of its distribution in Costa Rica.
This fossorial species is usually associated with dry forest and agricultural areas,
and in Costa Rica is limited to the Guanacaste region at elevations below
300m.{"\n"}{"\n"}

            Mexican Burrowing Toads spend nearly all of their time underground,
coming to the surface only to breed in shallow ponds and marshes at the beginning of
the rainy season. They have numerous adaptations for burrowing including their short
stocky limbs, and a toughened tubercle on the hind feet for digging. Relative to their
body size, their eyes are among the smallest of any Costa Rican frog or toad. These
anurans feed while underground on termites and ants, and adaptations for feeding
include a calloused, cone-shaped snout with an opening through which they can extend
their tongue. The tongue is anchored posteriorly (Pough et al. 2016), a condition
unique among anurans. Other characteristics this species exhibits are the absence of
teeth, and tadpoles with paired spiracles (uncommon in tadpoles).{"\n"}{"\n"}

        </Text>

        <Text style = {styles.speciesInFamilyTitle}>Species in this
Family:</Text>
        <Button color = "#7ca2d0"
            title="Rhinophrynus dorsalis"
            onPress={() => this.props.navigation.navigate('DorsalisPage')}
        />
    </ScrollView>
    );
}
}
class DorsalisPage extends React.Component {
    static navigationOptions = {
        headerStyle: {
            backgroundColor: '#413838',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    };
    render() {
        return (
            <ScrollView style = {{alignContent : "stretch", backgroundColor: "#f0f0f0"}}>
                <View style = {styles.colorBar, {backgroundColor: "#524646"}}>
                    <Text style = {styles.scientificTitles}>Rhinophrynus
dorsalis{"\n"}</Text>
                    <Text style = {styles.commonTitles}>Mexican Burrowing
Toad{"\n"}</Text>
                </View>

```

```

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/147_Rhinophrynus_dorsalis/147-
Rhinophrynus-dorsalis-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Description{"\n"}</Text>
    <Text style = {styles.paragraphs}>A medium-sized frog (50-89mm; ~2-
3.5in). The skin is relatively smooth with scattered pustules. The body is round and
sack-like, enfolding the proximal limbs. They have small dark eyes and a small head
with a cone shaped snout. The end of the snout is calloused and the nostrils are
placed dorsally near the eyes. The tympanic membrane is hidden. The dorsal coloration
is dark gray with an orange/red middorsal stripe and scattered blotches on the sides.
The venter is light gray. Males lack nuptial pads or spines, but have dark lateral
vocal sacs. The fingers and toes lack webbing and terminal pads. Only four toes are
readily visible on the feet, as the first toe is obscured by two large
spades>{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Calls{"\n"}</Text>
    <Text style = {styles.paragraphs}>Males call after heavy rains at the
beginning of the rainy season (May-June) from temporary ponds and puddles. Males
produce a short "bwoorp" that is repeated rapidly>{"\n"}</Text>

    <Text style = {styles.sectionTitles}>Range and Habitat{"\n"}</Text>
    <Text style = {styles.paragraphs}>This common species occurs nearly
entirely in dry forests of the Pacific slope, from near sea level to ~300m elevation.
Because they are fossorial, they are usually only found during the breeding season
(early wet season), near lentic water in open and/or disturbed habitats>{"\n"}</Text>

    <Image
      resizeMode = 'contain'
      source={require('./assets/Images/147_Rhinophrynus_dorsalis/147-
Rhinophrynus-dorsalis-range-2.png')}
      style = {styles.image}
    />

    <Text style = {styles.sectionTitles}>Similar Species{"\n"}</Text>
    <Text style = {styles.paragraphs}><Text style={{fontStyle:
'italic'}}>Rhinophrynus dorsalis</Text> is so unique it is nearly impossible to
misidentify. Superficially they may resemble <Text style={{fontStyle:
'italic'}}>Ctenophryne aterrima</Text>. However, <Text style={{fontStyle:
'italic'}}>C. aterrima</Text> has a transverse fold behind the head, and lacks the
orange/red markings, the calloused nose and the dorsally placed nostrils of <Text
style={{fontStyle: 'italic'}}>R. dorsalis</Text>>{"\n"}</Text>

  </ScrollView>
);
}
}
/**** END RHINOPHRYNIDAE PAGES *****/
/*****
*****/

/**** HOME MENU LIST OF FROG FAMILIES *****/
class FamilyList extends React.Component {
  static navigationOptions = {
    title: "Frogs by Family",
  headerStyle: {
    backgroundColor: '#16438B',

```

```

    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  },
  };
  render() {
    return (
      <ScrollView style = {{alignContent : "stretch", backgroundColor:
"#f0f0f0"}}>
        <Button color = "#7ca2d0"
          title="Aromobatidae"
          onPress={ () =>
this.props.navigation.navigate('Aromobatidae')}
        />
        <Button color = "#7ca2d0"
          title="Bufonidae"
          onPress={ () =>
this.props.navigation.navigate('Bufonidae')}
        />
        <Button color = "#7ca2d0"
          title="Centrolenidae"
          onPress={ () =>
this.props.navigation.navigate('Centrolenidae')}
        />
        <Button color = "#7ca2d0"
          title="Craugastoridae"
          onPress={ () =>
this.props.navigation.navigate('Craugastoridae')}
        />
        <Button color = "#7ca2d0"
          title="Dendrobatidae"
          onPress={ () =>
this.props.navigation.navigate('Dendrobatidae')}
        />
        <Button color = "#7ca2d0"
          title="Eleutherodactylidae"
          onPress={ () =>
this.props.navigation.navigate('Eleutherodactylidae')}
        />
        <Button color = "#7ca2d0"
          title="Hemiphractidae"
          onPress={ () =>
this.props.navigation.navigate('Hemiphractidae')}
        />
        <Button color = "#7ca2d0"
          title="Hylidae"
          onPress={ () =>
this.props.navigation.navigate('Hylidae')}
        />
        <Button color = "#7ca2d0"
          title="Leptodactylidae"
          onPress={ () =>
this.props.navigation.navigate('Leptodactylidae')}
        />
        <Button color = "#7ca2d0"
          title="Microhylidae"
          onPress={ () =>
this.props.navigation.navigate('Microhylidae')}
        />
        <Button color = "#7ca2d0"
          title="Phyllomedusidae"

```

```

                                onPress={ () =>
this.props.navigation.navigate('Phyllomedusidae')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Ranidae"
                                  onPress={ () =>
this.props.navigation.navigate('Ranidae')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Rhinophrynidae"
                                  onPress={ () =>
this.props.navigation.navigate('Rhinophrynidae')}
                                />
                                </ScrollView>
                                );
                                }
                                }
/**** END HOME MENU LIST OF FROG FAMILIES *****/

/**** BEGIN MENU OF FROGS BY COMMON NAME*****/
class CommonNamesList extends React.Component {
  static navigationOptions = {
    title: "Common Names",
    headerStyle: {
      backgroundColor: '#16438B',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  };
  render() {
    return (
      <ScrollView style = {{backgroundColor: "#f0f0f0"}}>

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>A</Text>
        <Button color = "#7ca2d0"
          title="Angel Flesh-bellied frog"
          onPress={ () =>
this.props.navigation.navigate('AngelicusPage')}
        />
        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>B</Text>
        <Button color = "#7ca2d0"
          title="Bare-Hearted Glass Frog"
          onPress={ () =>
this.props.navigation.navigate('ColymbiphylumPage')}
        />
        <Button color = "#7ca2d0"
          title="Barva Treefrog"
          onPress={ () =>
this.props.navigation.navigate('XanthostictaPage')}
        />
        <Button color = "#7ca2d0"
          title="Big-headed Flesh-bellied Frog"
          onPress={ () =>
this.props.navigation.navigate('MegacephalusPage')}
        />
        <Button color = "#7ca2d0"
          title="Big-throated Flesh-bellied Frog"
          onPress={ () =>
this.props.navigation.navigate('GulosusPage')}

```

```

        />
        <Button color = "#7ca2d0"
            title="Black Narrow-Mouthed Frog"
            onPress={ () =>
this.props.navigation.navigate('AterrimaPage')}
        />
        <Button color = "#7ca2d0"
            title="Black-backed Foam Frog"
            onPress={ () =>
this.props.navigation.navigate('MelanonotusPage')}
        />
        <Button color = "#7ca2d0"
            title="Black-spotted Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('MelanostictusPage')}
        />
        <Button color = "#7ca2d0"
            title="Bloody Robber Frog"
            onPress={ () =>
this.props.navigation.navigate('CruentusPage')}
        />
        <Button color = "#7ca2d0"
            title="Blue-Jens, Strawberry, or Red Poison Frog"
            onPress={ () =>
this.props.navigation.navigate('PumilioPage')}
        />
        <Button color = "#7ca2d0"
            title="Boulenger's Snouted Treefrog"
            onPress={ () =>
this.props.navigation.navigate('BoulengeriPage')}
        />
        <Button color = "#7ca2d0"
            title="Bransford's Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('BransfordiiPage')}
        />
        <Button color = "#7ca2d0"
            title="Bull Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('TaurusPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>C</Text>
        <Button color = "#7ca2d0"
            title="Calypsa Treefrog"
            onPress={ () =>
this.props.navigation.navigate('CalypsaPage')}
        />
        <Button color = "#7ca2d0"
            title="Cascade Glass Frog"
            onPress={ () =>
this.props.navigation.navigate('AlbomaculataPage')}
        />
        <Button color = "#7ca2d0"
            title="Central Volcanic Dwarf Toad"
            onPress={ () =>
this.props.navigation.navigate('ChompipePage')}
        />
        <Button color = "#7ca2d0"
            title="Cherry-thighed Robber Frog"
            onPress={ () =>
this.props.navigation.navigate('CerasinusPage')}

```

```

        />
        <Button color = "#7ca2d0"
            title="Chiriqui Harlequin Frog"
            onPress={ () =>
this.props.navigation.navigate('ChiriquiensisPage')}
        />
        <Button color = "#7ca2d0"
            title="Chirriipo Harlequin Frog"
            onPress={ () =>
this.props.navigation.navigate('ChirriipoensisPage')}
        />
        <Button color = "#7ca2d0"
            title="Common Dink Frog"
            onPress={ () =>
this.props.navigation.navigate('DiastemaPage')}
        />
        <Button color = "#7ca2d0"
            title="Coral-spotted Robber Frog"
            onPress={ () =>
this.props.navigation.navigate('AltaePage')}
        />
        <Button color = "#7ca2d0"
            title="Crowned Treefrog"
            onPress={ () =>
this.props.navigation.navigate('HylidaeSpinosaPage')}
        />
        <Button color = "#7ca2d0"
            title="Cuban Treefrog"
            onPress={ () =>
this.props.navigation.navigate('SeptentrionalisPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>D</Text>
        <Button color = "#7ca2d0"
            title="Diane's Bare-Hearted Glass Frog"
            onPress={ () =>
this.props.navigation.navigate('DianaePage')}
        />
        <Button color = "#7ca2d0"
            title="Disdainful Toad"
            onPress={ () =>
this.props.navigation.navigate('FastidiosusPage')}
        />
        <Button color = "#7ca2d0"
            title="Diving Stream frog"
            onPress={ () =>
this.props.navigation.navigate('ColymbaPage')}
        />
        <Button color = "#7ca2d0"
            title="Drag Treefrog"
            onPress={ () =>
this.props.navigation.navigate('SordidaPage')}
        />
        <Button color = "#7ca2d0"
            title="Dry Forest Toad"
            onPress={ () =>
this.props.navigation.navigate('CocciferPage')}
        />
        <Button color = "#7ca2d0"
            title="Dusty Glass Frog"
            onPress={ () =>
this.props.navigation.navigate('PulverataPage')}

```

```

        />
        <Button color = "#7ca2d0"
            title="Dwarf Glass Frog"
            onPress={ () =>
this.props.navigation.navigate('SpinosaPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>E</Text>
        <Button color = "#7ca2d0"
            title="Emerald Glass Frog"
            onPress={ () =>
this.props.navigation.navigate('ProsobleponPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>F</Text>
        <Button color = "#7ca2d0"
            title="Fitzinger's Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('FitzingeriPage')}
        />
        <Button color = "#7ca2d0"
            title="Fleischmann's Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('CraugastoridaeFleischmanniPage')}
        />
        <Button color = "#7ca2d0"
            title="Fleischmann's Glass Frog"
            onPress={ () =>
this.props.navigation.navigate('CentrolenidaeFleischmanniPage')}
        />
        <Button color = "#7ca2d0"
            title="Forrer's Leopard Frog"
            onPress={ () =>
this.props.navigation.navigate('ForreriPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>G</Text>
        <Button color = "#7ca2d0"
            title="Gabb's Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('GabbiPage')}
        />
        <Button color = "#7ca2d0"
            title="Gauge's Robber Frog"
            onPress={ () =>
this.props.navigation.navigate('GageiPage')}
        />
        <Button color = "#7ca2d0"
            title="Ghost Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('PhasmaPage')}
        />
        <Button color = "#7ca2d0"
            title="Ghost Glass Frog"
            onPress={ () =>
this.props.navigation.navigate('IlexPage')}
        />
        <Button color = "#7ca2d0"
            title="Giant Toad"

```

```

                                onPress={ () =>
this.props.navigation.navigate('HorribilisPage')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Golden Toad"
                                  onPress={ () =>
this.props.navigation.navigate('PeriglenesPage')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Golfo Dulce or Striped Poison Frog"
                                  onPress={ () =>
this.props.navigation.navigate('VittatusPage')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Gollmer's Masked Flesh-bellied frog"
                                  onPress={ () =>
this.props.navigation.navigate('GollmeriPage')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Granular Glass Frog"
                                  onPress={ () =>
this.props.navigation.navigate('GranulosaPage')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Granular Poison Frog"
                                  onPress={ () =>
this.props.navigation.navigate('GranuliferaPage')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Green and Black Poison Frog"
                                  onPress={ () =>
this.props.navigation.navigate('AuratusPage')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Green Climbing Toad"
                                  onPress={ () =>
this.props.navigation.navigate('ConiferusPage')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Green-eyed Frog"
                                  onPress={ () =>
this.props.navigation.navigate('VibicariusPage')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Greenhouse Frog"
                                  onPress={ () =>
this.props.navigation.navigate('PlanirostrisPage')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Guanacaste Mountain Dwarf Toad"
                                  onPress={ () =>
this.props.navigation.navigate('GuanacastePage')}
                                />
                                <Button color = "#7ca2d0"
                                  title="Gulf Coast Toad"
                                  onPress={ () =>
this.props.navigation.navigate('VallicepsPage')}
                                />

```

```

                                <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>H</Text>

```

```

                                <Button color = "#7ca2d0"

```



```

                title="Highland or Bouquete Rocket Frog"
                onPress={ () =>
this.props.navigation.navigate('NubicolaPage')}
            />
            <Button color = "#7ca2d0"
                title="Holdridge's Toad"
                onPress={ () =>
this.props.navigation.navigate('HoldridgeiPage')}
            />
            <Button color = "#7ca2d0"
                title="Horned Marsupial Frog"
                onPress={ () =>
this.props.navigation.navigate('CornutaPage')}
            />
            <Button color = "#7ca2d0"
                title="Hourglass Treefrog"
                onPress={ () =>
this.props.navigation.navigate('EbraccatusPage')}
            />

            <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>J</Text>
            <Button color = "#7ca2d0"
                title="Johnstone's Whistling Frog"
                onPress={ () =>
this.props.navigation.navigate('JohnstoneiPage')}
            />
            <Button color = "#7ca2d0"
                title="Jumping Leaf Frog"
                onPress={ () =>
this.props.navigation.navigate('SaltatorPage')}
            />

            <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>K</Text>
            <Button color = "#7ca2d0"
                title="Karen's Flesh-bellied Frog"
                onPress={ () =>
this.props.navigation.navigate('CatalinaePage')}
            />

            <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>L</Text>
            <Button color = "#7ca2d0"
                title="Lancaster's Treefrog"
                onPress={ () =>
this.props.navigation.navigate('LancasteriPage')}
            />
            <Button color = "#7ca2d0"
                title="Leaf Litter Toad"
                onPress={ () =>
this.props.navigation.navigate('HaematiticusPage')}
            />
            <Button color = "#7ca2d0"
                title="Legler's Red-eyed stream Frog"
                onPress={ () =>
this.props.navigation.navigate('LegleriPage')}
            />
            <Button color = "#7ca2d0"
                title="Lemur Leaf Frog"
                onPress={ () =>
this.props.navigation.navigate('LemurPage')}
            />

```

```

        <Button color = "#7ca2d0"
            title="Leopard Robber Frog"
            onPress={ () =>
this.props.navigation.navigate('ParadalisPage')}
        />
        <Button color = "#7ca2d0"
            title="Lightning Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('RayoPage')}
        />
        <Button color = "#7ca2d0"
            title="Loquacious Treefrog"
            onPress={ () =>
this.props.navigation.navigate('LoquaxPage')}
        />
        <Button color = "#7ca2d0"
            title="Lovely or Yellow-striped Poison Frog"
            onPress={ () =>
this.props.navigation.navigate('LugubrisPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>M</Text>
        <Button color = "#7ca2d0"
            title="Many Folds Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('PolyptychusPage')}
        />
        <Button color = "#7ca2d0"
            title="Marbled Foam Frog"
            onPress={ () =>
this.props.navigation.navigate('InsularumPage')}
        />
        <Button color = "#7ca2d0"
            title="Masked Treefrog"
            onPress={ () =>
this.props.navigation.navigate('PhaeotaPage')}
        />
        <Button color = "#7ca2d0"
            title="Meadow Treefrog"
            onPress={ () =>
this.props.navigation.navigate('PseudopumaPage')}
        />
        <Button color = "#7ca2d0"
            title="Mexican Burrowing Toad"
            onPress={ () =>
this.props.navigation.navigate('DorsalisPage')}
        />
        <Button color = "#7ca2d0"
            title="Mexican Treefrog"
            onPress={ () =>
this.props.navigation.navigate('BaudiniiPage')}
        />
        <Button color = "#7ca2d0"
            title="Mimic Masked Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('MimusPage')}
        />
        <Button color = "#7ca2d0"
            title="Mohr's Robber Frog"
            onPress={ () =>
this.props.navigation.navigate('MoroPage')}
        />

```

```

        <Button color = "#7ca2d0"
            title="Montane Dink Frog"
            onPress={ () =>
this.props.navigation.navigate('HylaeformisPage')}
        />
        <Button color = "#7ca2d0"
            title="Mountain Stream Treefrog"
            onPress={ () =>
this.props.navigation.navigate('RivularisPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>N</Text>
        <Button color = "#7ca2d0"
            title="Narrow-lined Treefrog"
            onPress={ () =>
this.props.navigation.navigate('AngustilineataPage')}
        />
        <Button color = "#7ca2d0"
            title="Noble's Masked Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('NobleiPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>O</Text>
        <Button color = "#7ca2d0"
            title="Obese Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('ObesusPage')}
        />
        <Button color = "#7ca2d0"
            title="Olive Snouted Treefrog"
            onPress={ () =>
this.props.navigation.navigate('ElaeochrousPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>P</Text>
        <Button color = "#7ca2d0"
            title="Painted-foot Treefrog"
            onPress={ () =>
this.props.navigation.navigate('PictipesPage')}
        />
        <Button color = "#7ca2d0"
            title="Palm Glass Frog"
            onPress={ () =>
this.props.navigation.navigate('ChirripoiPage')}
        />
        <Button color = "#7ca2d0"
            title="Palmer's Green Stream Frog"
            onPress={ () =>
this.props.navigation.navigate('PalmeriPage')}
        />
        <Button color = "#7ca2d0"
            title="Pepper Frog or Milk Frog"
            onPress={ () =>
this.props.navigation.navigate('TyphoniusPage')}
        />
        <Button color = "#7ca2d0"
            title="Picado's Treefrog"
            onPress={ () =>
this.props.navigation.navigate('PicadoiPage')}

```

```

        />
        <Button color = "#7ca2d0"
            title="Piglet Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('PodiciferusPage')}
        />
        <Button color = "#7ca2d0"
            title="Puerto Rican Coqui"
            onPress={ () =>
this.props.navigation.navigate('CoquiPage')}
        />
        <Button color = "#7ca2d0"
            title="Pug-nosed Treefrog"
            onPress={ () =>
this.props.navigation.navigate('SilaPage')}
        />
        <Button color = "#7ca2d0"
            title="Pygmy Robber Frog"
            onPress={ () =>
this.props.navigation.navigate('RidensPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>Q</Text>
        <Button color = "#7ca2d0"
            title="Quaker Flesh-bellied frog"
            onPress={ () =>
this.props.navigation.navigate('CuaqueroPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>R</Text>
        <Button color = "#7ca2d0"
            title="Rainforest or Floating Rocket Frog"
            onPress={ () =>
this.props.navigation.navigate('FlotatorPage')}
        />
        <Button color = "#7ca2d0"
            title="Rainforest Toad"
            onPress={ () =>
this.props.navigation.navigate('AucoinePage')}
        />
        <Button color = "#7ca2d0"
            title="Ranid-like Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('RanoidesPage')}
        />
        <Button color = "#7ca2d0"
            title="Red-eyed Leaf Frog"
            onPress={ () =>
this.props.navigation.navigate('CallidryasPage')}
        />
        <Button color = "#7ca2d0"
            title="Red-eyed Stream Frog"
            onPress={ () =>
this.props.navigation.navigate('UranochroaPage')}
        />
        <Button color = "#7ca2d0"
            title="Red-webbed Gladiator Frog"
            onPress={ () =>
this.props.navigation.navigate('RufitelaPage')}
        />
        <Button color = "#7ca2d0"

```

```

        title="Reticulated Glass Frog"
        onPress={ () =>
this.props.navigation.navigate('ValerioiPage')}
    />
    <Button color = "#7ca2d0"
        title="Rosenberg's Gladiator Frog"
        onPress={ () =>
this.props.navigation.navigate('RosenbergiPage')}
    />
    <Button color = "#7ca2d0"
        title="Rufus-eyed Stream Frog"
        onPress={ () =>
this.props.navigation.navigate('RufioculisPage')}
    />

    <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>S</Text>
    <Button color = "#7ca2d0"
        title="Savage's Red-eyed Stream Frog"
        onPress={ () =>
this.props.navigation.navigate('LythrodesPage')}
    />
    <Button color = "#7ca2d0"
        title="Savage's Thin-Toed Frog"
        onPress={ () =>
this.props.navigation.navigate('SavageiPage')}
    />
    <Button color = "#7ca2d0"
        title="Scott's Flesh-bellied Frog"
        onPress={ () =>
this.props.navigation.navigate('EscocesPage')}
    />
    <Button color = "#7ca2d0"
        title="Shaman Fringe-limbed Treefrog"
        onPress={ () =>
this.props.navigation.navigate('SukiaPage')}
    />
    <Button color = "#7ca2d0"
        title="Sharp-snouted Robber Frog"
        onPress={ () =>
this.props.navigation.navigate('CaryophyllaceusPage')}
    />
    <Button color = "#7ca2d0"
        title="Sheep Frog"
        onPress={ () =>
this.props.navigation.navigate('VariolosusPage')}
    />
    <Button color = "#7ca2d0"
        title="Similar Flesh-bellied Frog"
        onPress={ () =>
this.props.navigation.navigate('PersimilisPage')}
    />
    <Button color = "#7ca2d0"
        title="Slope-snouted Glass Frog"
        onPress={ () =>
this.props.navigation.navigate('EuknemosPage')}
    />
    <Button color = "#7ca2d0"
        title="Small-headed Treefrog"
        onPress={ () =>
this.props.navigation.navigate('MicrocephalusPage')}
    />
    <Button color = "#7ca2d0"

```

```

        title="Smooth Fringe-limbed Treefrog"
        onPress={ () =>
this.props.navigation.navigate('FimbrimembraPage')}
      />
      <Button color = "#7ca2d0"
        title="Southern Narrow-mouthed Frog"
        onPress={ () =>
this.props.navigation.navigate('PictiventrisPage')}
      />
      <Button color = "#7ca2d0"
        title="Spiny Fringe-limbed Treefrog"
        onPress={ () =>
this.props.navigation.navigate('MiliariaPage')}
      />
      <Button color = "#7ca2d0"
        title="Splendid Leaf Frog"
        onPress={ () =>
this.props.navigation.navigate('CalcariferPage')}
      />
      <Button color = "#7ca2d0"
        title="Spotted-belly Dink Frog"
        onPress={ () =>
this.props.navigation.navigate('VentrimaculatusPage')}
      />
      <Button color = "#7ca2d0"
        title="Spurrell's Leaf Frog"
        onPress={ () =>
this.props.navigation.navigate('SpurrelliPage')}
      />
      <Button color = "#7ca2d0"
        title="Starrett's Flesh-bellied Frog"
        onPress={ () =>
this.props.navigation.navigate('AndiPage')}
      />
      <Button color = "#7ca2d0"
        title="Stauffer's Snouted Treefrog"
        onPress={ () =>
this.props.navigation.navigate('StaufferiPage')}
      />
      <Button color = "#7ca2d0"
        title="Stejneger's Flesh-bellied Frog"
        onPress={ () =>
this.props.navigation.navigate('StejnegerianusPage')}
      />
      <Button color = "#7ca2d0"
        title="Striped Glass Frog"
        onPress={ () =>
this.props.navigation.navigate('VireovittatumPage')}
      />
      <Button color = "#7ca2d0"
        title="Striped Robber Frog"
        onPress={ () =>
this.props.navigation.navigate('TaeniatusPage')}
      />

      <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>T</Text>
      <Button color = "#7ca2d0"
        title="Talamanca Glass Frog"
        onPress={ () =>
this.props.navigation.navigate('HyTalamancaePage')}
      />
      <Button color = "#7ca2d0"

```

```

        title="Talamancan Cryptic Forest Frog"
        onPress={ () =>
this.props.navigation.navigate('TalamancaePage')}
    />
    <Button color = "#7ca2d0"
        title="Talamancan Dwarf Toad"
        onPress={ () =>
this.props.navigation.navigate('EpioticusPage')}
    />
    <Button color = "#7ca2d0"
        title="Talamancan Flesh-bellied Frog"
        onPress={ () =>
this.props.navigation.navigate('CraugastoridaeTalamancaePage')}
    />
    <Button color = "#7ca2d0"
        title="Tawny Treefrog"
        onPress={ () =>
this.props.navigation.navigate('PumaPage')}
    />
    <Button color = "#7ca2d0"
        title="Taylor's Leopard Frog"
        onPress={ () =>
this.props.navigation.navigate('TayloriPage')}
    />
    <Button color = "#7ca2d0"
        title="Thick-fingered Flesh-bellied Frog"
        onPress={ () =>
this.props.navigation.navigate('CrassidigitusPage')}
    />
    <Button color = "#7ca2d0"
        title="Tico Treefrog"
        onPress={ () =>
this.props.navigation.navigate('TicaPage')}
    />
    <Button color = "#7ca2d0"
        title="Tiger Dink Frog"
        onPress={ () =>
this.props.navigation.navigate('TigrilloPage')}
    />
    <Button color = "#7ca2d0"
        title="Toad-like Robber Frog"
        onPress={ () =>
this.props.navigation.navigate('BufoniformisPage')}
    />
    <Button color = "#7ca2d0"
        title="Torrent Flesh-bellied Frog"
        onPress={ () =>
this.props.navigation.navigate('RhyacobatrachusPage')}
    />
    <Button color = "#7ca2d0"
        title="Tungara Frog"
        onPress={ () =>
this.props.navigation.navigate('PustulosusPage')}
    />
    <Button color = "#7ca2d0"
        title="Turbo White-Lipped Foam Frog"
        onPress={ () =>
this.props.navigation.navigate('PoecilochilusPage')}
    />

    <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>U</Text>
    <Button color = "#7ca2d0"

```

```

        title="Underwood's Flesh-bellied Frog"
        onPress={ () =>
this.props.navigation.navigate('UnderwoodiPage')}
    />

    <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>V</Text>
        <Button color = "#7ca2d0"
            title="Vaillant's Frog"
            onPress={ () =>
this.props.navigation.navigate('VaillantiPage')}
        />
        <Button color = "#7ca2d0"
            title="Variable Harlequin Frog"
            onPress={ () =>
this.props.navigation.navigate('VariusPage')}
        />
        <Button color = "#7ca2d0"
            title="Veined Treefrog"
            onPress={ () =>
this.props.navigation.navigate('PhlebodesPage')}
        />
        <Button color = "#7ca2d0"
            title="Vociferous Dink Frog"
            onPress={ () =>
this.props.navigation.navigate('VocatorPage')}
        />

    <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>W</Text>
        <Button color = "#7ca2d0"
            title="Warszewitsch's Frog"
            onPress={ () =>
this.props.navigation.navigate('WarszewitschiiPage')}
        />
        <Button color = "#7ca2d0"
            title="Weak-voiced Treefrog"
            onPress={ () =>
this.props.navigation.navigate('DebilisPage')}
        />
        <Button color = "#7ca2d0"
            title="Wet Forest Toad"
            onPress={ () =>
this.props.navigation.navigate('MelanochlorusPage')}
        />
        <Button color = "#7ca2d0"
            title="White-lipped Foam Frog"
            onPress={ () =>
this.props.navigation.navigate('FragilisPage')}
        />
        <Button color = "#7ca2d0"
            title="Wizened Harlequin Frog"
            onPress={ () =>
this.props.navigation.navigate('SenexPage')}
        />
        <Button color = "#7ca2d0"
            title="Wrinkled Flesh-bellied Frog"
            onPress={ () =>
this.props.navigation.navigate('RugosusPage')}
        />

    <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>Y</Text>

```



```

        <Button color = "#7ca2d0"
              title="Yellow Toad"
              onPress={ () =>
this.props.navigation.navigate('LuetkeniiPage')}
        />
        <Button color = "#7ca2d0"
              title="Yellow-eyed Fringe-limbed Treefrog"
              onPress={ () =>
this.props.navigation.navigate('BailarinaPage')}
        />
        <Button color = "#7ca2d0"
              title="Yellow-eyed Leaf Frog"
              onPress={ () =>
this.props.navigation.navigate('AnnaePage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>Z</Text>
        <Button color = "#7ca2d0"
              title="Zetek's Treefrog"
              onPress={ () =>
this.props.navigation.navigate('ZetekiPage')}
        />

    </ScrollView>
  );
}
}

/**** END MENU OF FROGS BY COMMON NAME*****/

/**** BEGIN MENU OF FROGS BY SCIENTIFIC NAME*****/
class ScientificNamesList extends React.Component {
  static navigationOptions = {
    title: "Scientific Names",
    headerStyle: {
      backgroundColor: '#16438B',
    },
    headerTintColor: '#fff',
    headerTitleStyle: {
      fontWeight: 'bold',
    },
  },
  };
  render() {
    return (
      <ScrollView style = {{backgroundColor: "#fcfcfc"}}>

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>A</Text>
        <Button color = "#7ca2d0"
              title="Agalychnis annae"
              onPress={ () =>
this.props.navigation.navigate('AnnaePage')}
        />
        <Button color = "#7ca2d0"
              title="Agalychnis callidryas"
              onPress={ () =>
this.props.navigation.navigate('CallidryasPage')}
        />
        <Button color = "#7ca2d0"
              title="Agalychnis lemur"
              onPress={ () =>
this.props.navigation.navigate('LemurPage')}

```

```

        />
        <Button color = "#7ca2d0"
            title="Agalychnis saltator"
            onPress={ () =>
this.props.navigation.navigate('SaltatorPage')}
        />
        <Button color = "#7ca2d0"
            title="Agalychnis spurrelli"
            onPress={ () =>
this.props.navigation.navigate('SpurrelliPage')}
        />
        <Button color = "#7ca2d0"
            title="Allobates Talamancae"
            onPress={ () =>
this.props.navigation.navigate('TalamancaePage')}
        />
        <Button color = "#7ca2d0"
            title="Anotheca spinosa"
            onPress={ () =>
this.props.navigation.navigate('HylidaeSpinosaPage')}
        />
        <Button color = "#7ca2d0"
            title="Atelopus chiriquiensis"
            onPress={ () =>
this.props.navigation.navigate('ChiriquiensisPage')}
        />
        <Button color = "#7ca2d0"
            title="Atelopus chirripoensis"
            onPress={ () =>
this.props.navigation.navigate('ChirripoensisPage')}
        />
        <Button color = "#7ca2d0"
            title="Atelopus senex"
            onPress={ () =>
this.props.navigation.navigate('SenexPage')}
        />
        <Button color = "#7ca2d0"
            title="Atelopus varius"
            onPress={ () =>
this.props.navigation.navigate('VariusPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>B</Text>
        <Button color = "#7ca2d0"
            title="Boana rosenbergi"
            onPress={ () =>
this.props.navigation.navigate('RosenbergiPage')}
        />
        <Button color = "#7ca2d0"
            title="Boana rufitela"
            onPress={ () =>
this.props.navigation.navigate('RufitelaPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>C</Text>
        <Button color = "#7ca2d0"
            title="Cochranella euknemos"
            onPress={ () =>
this.props.navigation.navigate('EuknemosPage')}
        />
        <Button color = "#7ca2d0"

```

```

                title="Cochranella granulosa"
                onPress={ () =>
this.props.navigation.navigate('GranulosaPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor andi"
                onPress={ () =>
this.props.navigation.navigate('AndiPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor angelicus"
                onPress={ () =>
this.props.navigation.navigate('AngelicusPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor bransfordii"
                onPress={ () =>
this.props.navigation.navigate('BransfordiiPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor catalinae"
                onPress={ () =>
this.props.navigation.navigate('CatalinaePage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor crassidigitus"
                onPress={ () =>
this.props.navigation.navigate('CrassidigitusPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor cuaquero"
                onPress={ () =>
this.props.navigation.navigate('CuaqueroPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor escoces"
                onPress={ () =>
this.props.navigation.navigate('EscocesPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor fitzingeri"
                onPress={ () =>
this.props.navigation.navigate('FitzingeriPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor fleischmanni"
                onPress={ () =>
this.props.navigation.navigate('CraugastoridaeFleischmanniPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor gabbi"
                onPress={ () =>
this.props.navigation.navigate('GabbiPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor gollmeri"
                onPress={ () =>
this.props.navigation.navigate('GollmeriPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor gulosus"
                onPress={ () =>
this.props.navigation.navigate('GulosusPage')}

```

```

        />
        <Button color = "#7ca2d0"
            title="Craugastor megacephalus"
            onPress={ () =>
this.props.navigation.navigate('MegacephalusPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor melanostictus"
            onPress={ () =>
this.props.navigation.navigate('MelanostictusPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor mimus"
            onPress={ () =>
this.props.navigation.navigate('MimusPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor noblei"
            onPress={ () =>
this.props.navigation.navigate('NobleiPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor obesus"
            onPress={ () =>
this.props.navigation.navigate('ObesusPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor persimilis"
            onPress={ () =>
this.props.navigation.navigate('PersimilisPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor phasma"
            onPress={ () =>
this.props.navigation.navigate('PhasmaPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor podiciferus"
            onPress={ () =>
this.props.navigation.navigate('PhasmaPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor polyptychus"
            onPress={ () =>
this.props.navigation.navigate('PolyptychusPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor rayo"
            onPress={ () =>
this.props.navigation.navigate('RayoPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor rhyacobatrachus"
            onPress={ () =>
this.props.navigation.navigate('RhyacobatrachusPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor rugosus"
            onPress={ () =>
this.props.navigation.navigate('RugosusPage')}
        />
        <Button color = "#7ca2d0"
            title="Craugastor stejnegerianus"

```

```

                onPress={ () =>
this.props.navigation.navigate('StejnegerianusPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor talamancae"
                onPress={ () =>
this.props.navigation.navigate('CraugastoridaeTalamancaePage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor taurus"
                onPress={ () =>
this.props.navigation.navigate('TaurusPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor underwoodi"
                onPress={ () =>
this.props.navigation.navigate('UnderwoodiPage')}
            />
            <Button color = "#7ca2d0"
                title="Craugastor ranoides"
                onPress={ () =>
this.props.navigation.navigate('RanoidesPage')}
            />
            <Button color = "#7ca2d0"
                title="Cruziohyla calcarifer"
                onPress={ () =>
this.props.navigation.navigate('CalcariferPage')}
            />
            <Button color = "#7ca2d0"
                title="Ctenophryne aterrima"
                onPress={ () =>
this.props.navigation.navigate('AterrimaPage')}
            />

            <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>D</Text>
            <Button color = "#7ca2d0"
                title="Dendrobates auratus"
                onPress={ () =>
this.props.navigation.navigate('AuratusPage')}
            />
            <Button color = "#7ca2d0"
                title="Dendropsophus ebraccatus"
                onPress={ () =>
this.props.navigation.navigate('EbraccatusPage')}
            />
            <Button color = "#7ca2d0"
                title="Dendropsophus microcephalus"
                onPress={ () =>
this.props.navigation.navigate('MicrocephalusPage')}
            />
            <Button color = "#7ca2d0"
                title="Dendropsophus phlebodes"
                onPress={ () =>
this.props.navigation.navigate('PhlebodesPage')}
            />
            <Button color = "#7ca2d0"
                title="Diasporus diastema"
                onPress={ () =>
this.props.navigation.navigate('DiastemaPage')}
            />
            <Button color = "#7ca2d0"
                title="Diasporus hylaeformis"

```

```

                onPress={ () =>
this.props.navigation.navigate('HylaeformisPage')}
            />
            <Button color = "#7ca2d0"
                title="Diasporus tigrillo"
                onPress={ () =>
this.props.navigation.navigate('TigrilloPage')}
            />
            <Button color = "#7ca2d0"
                title="Diasporus ventrimaculatus"
                onPress={ () =>
this.props.navigation.navigate('VentrimaculatusPage')}
            />
            <Button color = "#7ca2d0"
                title="Diasporus vocator"
                onPress={ () =>
this.props.navigation.navigate('VocatorPage')}
            />
            <Button color = "#7ca2d0"
                title="Duellmanohyla lythrodes"
                onPress={ () =>
this.props.navigation.navigate('LythrodesPage')}
            />
            <Button color = "#7ca2d0"
                title="Duellmanohyla rufiocus"
                onPress={ () =>
this.props.navigation.navigate('RufiocusPage')}
            />
            <Button color = "#7ca2d0"
                title="Duellmanohyla uranochroa"
                onPress={ () =>
this.props.navigation.navigate('UranochroaPage')}
            />

            <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>E</Text>
            <Button color = "#7ca2d0"
                title="Ecnomiohyla miliaria"
                onPress={ () =>
this.props.navigation.navigate('MiliariaPage')}
            />
            <Button color = "#7ca2d0"
                title="Ecnomiohyla bailarina"
                onPress={ () =>
this.props.navigation.navigate('BailarinaPage')}
            />
            <Button color = "#7ca2d0"
                title="Ecnomiohyla fimbrimembra"
                onPress={ () =>
this.props.navigation.navigate('FimbrimembraPage')}
            />
            <Button color = "#7ca2d0"
                title="Ecnomiohyla sukia"
                onPress={ () =>
this.props.navigation.navigate('SukiaPage')}
            />
            <Button color = "#7ca2d0"
                title="Eleutherodactylus coqui"
                onPress={ () =>
this.props.navigation.navigate('CoquiPage')}
            />
            <Button color = "#7ca2d0"
                title="Eleutherodactylus johnstonei"

```

```

                onPress={ () =>
this.props.navigation.navigate('JohnstoneiPage')}
            />
            <Button color = "#7ca2d0"
                title="Eleutherodactylus planirostris"
                onPress={ () =>
this.props.navigation.navigate('PlanirostrisPage')}
            />
            <Button color = "#7ca2d0"
                title="Engystomops pustulosus"
                onPress={ () =>
this.props.navigation.navigate('PustulosusPage')}
            />
            <Button color = "#7ca2d0"
                title="Espadarana prosoblepon"
                onPress={ () =>
this.props.navigation.navigate('ProsobleponPage')}
            />

            <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>G</Text>
            <Button color = "#7ca2d0"
                title="Gastrotheca cornuta"
                onPress={ () =>
this.props.navigation.navigate('CornutaPage')}
            />

            <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>H</Text>
            <Button color = "#7ca2d0"
                title="Hyalinobatrachium chirripoi"
                onPress={ () =>
this.props.navigation.navigate('ChirripoiPage')}
            />
            <Button color = "#7ca2d0"
                title="Hyalinobatrachium colymbiphylum"
                onPress={ () =>
this.props.navigation.navigate('ColymbiphylumPage')}
            />
            <Button color = "#7ca2d0"
                title="Hyalinobatrachium diana"
                onPress={ () =>
this.props.navigation.navigate('DianaPage')}
            />
            <Button color = "#7ca2d0"
                title="Hyalinobatrachium fleischmanni"
                onPress={ () =>
this.props.navigation.navigate('FleischmanniPage')}
            />
            <Button color = "#7ca2d0"
                title="Hyalinobatrachium talamancae"
                onPress={ () =>
this.props.navigation.navigate('HyTalamancaePage')}
            />
            <Button color = "#7ca2d0"
                title="Hyalinobatrachium valerioi"
                onPress={ () =>
this.props.navigation.navigate('ValerioiPage')}
            />
            <Button color = "#7ca2d0"
                title="Hyalinobatrachium vireovittatum"
                onPress={ () =>
this.props.navigation.navigate('VireovittatumPage')}

```

```

        />
        <Button color = "#7ca2d0"
            title="Hyloscirtus colymba"
            onPress={ () =>
this.props.navigation.navigate('ColymbaPage')}
        />
        <Button color = "#7ca2d0"
            title="Hyloscirtus palmeri"
            onPress={ () =>
this.props.navigation.navigate('PalmeriPage')}
        />
        <Button color = "#7ca2d0"
            title="Hypopachus pictiventris"
            onPress={ () =>
this.props.navigation.navigate('PictiventrisPage')}
        />
        <Button color = "#7ca2d0"
            title="Hypopachus variolosus"
            onPress={ () =>
this.props.navigation.navigate('VariolosusPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>I</Text>
        <Button color = "#7ca2d0"
            title="Incilius aucoinae"
            onPress={ () =>
this.props.navigation.navigate('AucoinePage')}
        />
        <Button color = "#7ca2d0"
            title="Incilius chompipe"
            onPress={ () =>
this.props.navigation.navigate('ChompipePage')}
        />
        <Button color = "#7ca2d0"
            title="Incilius coccifer"
            onPress={ () =>
this.props.navigation.navigate('CocciferPage')}
        />
        <Button color = "#7ca2d0"
            title="Incilius coniferus"
            onPress={ () =>
this.props.navigation.navigate('ConiferusPage')}
        />
        <Button color = "#7ca2d0"
            title="Incilius epioticus"
            onPress={ () =>
this.props.navigation.navigate('EpioticusPage')}
        />
        <Button color = "#7ca2d0"
            title="Incilius fastidiosus"
            onPress={ () =>
this.props.navigation.navigate('FastidiosusPage')}
        />
        <Button color = "#7ca2d0"
            title="Incilius guanacaste"
            onPress={ () =>
this.props.navigation.navigate('GuanacastePage')}
        />
        <Button color = "#7ca2d0"
            title="Incilius holdridgei"
            onPress={ () =>
this.props.navigation.navigate('HoldridgeiPage')}

```



```

        />
        <Button color = "#7ca2d0"
            title="Incilius luetkenii"
            onPress={ () =>
this.props.navigation.navigate('LuetkeniiPage')}
        />
        <Button color = "#7ca2d0"
            title="Incilius melanochlorus"
            onPress={ () =>
this.props.navigation.navigate('MelanochlorusPage')}
        />
        <Button color = "#7ca2d0"
            title="Incilius periglenes"
            onPress={ () =>
this.props.navigation.navigate('PeriglenesPage')}
        />
        <Button color = "#7ca2d0"
            title="Incilius valliceps"
            onPress={ () =>
this.props.navigation.navigate('VallicepsPage')}
        />
        <Button color = "#7ca2d0"
            title="Isthmohyla angustilineata"
            onPress={ () =>
this.props.navigation.navigate('AngustilineataPage')}
        />
        <Button color = "#7ca2d0"
            title="Isthmohyla calypsa"
            onPress={ () =>
this.props.navigation.navigate('CalypsaPage')}
        />
        <Button color = "#7ca2d0"
            title="Isthmohyla debilis"
            onPress={ () =>
this.props.navigation.navigate('DebilisPage')}
        />
        <Button color = "#7ca2d0"
            title="Isthmohyla lancasteri"
            onPress={ () =>
this.props.navigation.navigate('LancasteriPage')}
        />
        <Button color = "#7ca2d0"
            title="Isthmohyla picadoi"
            onPress={ () =>
this.props.navigation.navigate('PicadoiPage')}
        />
        <Button color = "#7ca2d0"
            title="Isthmohyla pictipes"
            onPress={ () =>
this.props.navigation.navigate('PictipesPage')}
        />
        <Button color = "#7ca2d0"
            title="Isthmohyla pseudopuma"
            onPress={ () =>
this.props.navigation.navigate('PseudopumaPage')}
        />
        <Button color = "#7ca2d0"
            title="Isthmohyla rivularis"
            onPress={ () =>
this.props.navigation.navigate('RivularisPage')}
        />
        <Button color = "#7ca2d0"
            title="Isthmohyla tica"

```

```

                                onPress={ () =>
this.props.navigation.navigate('TicaPage')}
                                />
                                <Button color = "#7ca2d0"
                                    title="Isthohyla xanthosticta"
                                    onPress={ () =>
this.props.navigation.navigate('XanthostictaPage')}
                                />
                                <Button color = "#7ca2d0"
                                    title="Isthohyla zeteki"
                                    onPress={ () =>
this.props.navigation.navigate('ZetekiPage')}
                                />

                                <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>L</Text>
                                <Button color = "#7ca2d0"
                                    title="Leptodactylus fragilis"
                                    onPress={ () =>
this.props.navigation.navigate('FragilisPage')}
                                />
                                <Button color = "#7ca2d0"
                                    title="Leptodactylus insularum"
                                    onPress={ () =>
this.props.navigation.navigate('InsularumPage')}
                                />
                                <Button color = "#7ca2d0"
                                    title="Leptodactylus melanonotus"
                                    onPress={ () =>
this.props.navigation.navigate('MelanonotusPage')}
                                />
                                <Button color = "#7ca2d0"
                                    title="Leptodactylus poecilochilus"
                                    onPress={ () =>
this.props.navigation.navigate('PoecilochilusPage')}
                                />
                                <Button color = "#7ca2d0"
                                    title="Leptodactylus savagei"
                                    onPress={ () =>
this.props.navigation.navigate('SavageiPage')}
                                />
                                <Button color = "#7ca2d0"
                                    title="Lithobates forreri"
                                    onPress={ () =>
this.props.navigation.navigate('ForreriPage')}
                                />
                                <Button color = "#7ca2d0"
                                    title="Lithobates taylori"
                                    onPress={ () =>
this.props.navigation.navigate('TayloriPage')}
                                />
                                <Button color = "#7ca2d0"
                                    title="Lithobates vaillanti"
                                    onPress={ () =>
this.props.navigation.navigate('VaillantiPage')}
                                />
                                <Button color = "#7ca2d0"
                                    title="Lithobates vibicarius"
                                    onPress={ () =>
this.props.navigation.navigate('VibicariusPage')}
                                />
                                <Button color = "#7ca2d0"
                                    title="Lithobates warszewitschii"

```

```

                                onPress={ () =>
this.props.navigation.navigate('WarszewitschiiPage')}
                                />

                                <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>0</Text>
                                <Button color = "#7ca2d0"
                                title="Oophaga granulifera"
                                onPress={ () =>
this.props.navigation.navigate('GranuliferaPage')}
                                />
                                <Button color = "#7ca2d0"
                                title="Oophaga pumilio"
                                onPress={ () =>
this.props.navigation.navigate('PumilioPage')}
                                />
                                <Button color = "#7ca2d0"
                                title="Osteopilus septentrionalis"
                                onPress={ () =>
this.props.navigation.navigate('SeptentrionalisPage')}
                                />

                                <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>P</Text>
                                <Button color = "#7ca2d0"
                                title="Phyllobates lugubris"
                                onPress={ () =>
this.props.navigation.navigate('LugubrisPage')}
                                />
                                <Button color = "#7ca2d0"
                                title="Phyllobates vittatus"
                                onPress={ () =>
this.props.navigation.navigate('VittatusPage')}
                                />
                                <Button color = "#7ca2d0"
                                title="Pristimantis altae"
                                onPress={ () =>
this.props.navigation.navigate('AltaePage')}
                                />
                                <Button color = "#7ca2d0"
                                title="Pristimantis caryophyllaceus"
                                onPress={ () =>
this.props.navigation.navigate('CaryophyllaceusPage')}
                                />
                                <Button color = "#7ca2d0"
                                title="Pristimantis cerasinus"
                                onPress={ () =>
this.props.navigation.navigate('CerasinusPage')}
                                />
                                <Button color = "#7ca2d0"
                                title="Pristimantis cruentus"
                                onPress={ () =>
this.props.navigation.navigate('CruentusPage')}
                                />
                                <Button color = "#7ca2d0"
                                title="Pristimantis gaigei"
                                onPress={ () =>
this.props.navigation.navigate('GageiPage')}
                                />
                                <Button color = "#7ca2d0"
                                title="Pristimantis moro"
                                onPress={ () =>
this.props.navigation.navigate('MoroPage')}

```

```

        />
        <Button color = "#7ca2d0"
            title="Pristimantis pardalis"
            onPress={ () =>
this.props.navigation.navigate('PardalisPage')}
        />
        <Button color = "#7ca2d0"
            title="Pristimantis ridens"
            onPress={ () =>
this.props.navigation.navigate('RidensPage')}
        />
        <Button color = "#7ca2d0"
            title="Pristimantis taeniatus"
            onPress={ () =>
this.props.navigation.navigate('TaeniatusPage')}
        />
        <Button color = "#7ca2d0"
            title="Ptychohyla legleri"
            onPress={ () =>
this.props.navigation.navigate('LegleriPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>R</Text>
        <Button color = "#7ca2d0"
            title="Rhaebo haematiticus"
            onPress={ () =>
this.props.navigation.navigate('HaematiticusPage')}
        />
        <Button color = "#7ca2d0"
            title="Rhinella horribilis"
            onPress={ () =>
this.props.navigation.navigate('HorribilisPage')}
        />
        <Button color = "#7ca2d0"
            title="Rhinophrynus dorsalis"
            onPress={ () =>
this.props.navigation.navigate('DorsalisPage')}
        />

        <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>S</Text>
        <Button color = "#7ca2d0"
            title="Sachatamia albomaculata"
            onPress={ () =>
this.props.navigation.navigate('AlbomaculataPage')}
        />
        <Button color = "#7ca2d0"
            title="Sachatamia illex"
            onPress={ () =>
this.props.navigation.navigate('IlexPage')}
        />
        <Button color = "#7ca2d0"
            title="Scinax boulengeri"
            onPress={ () =>
this.props.navigation.navigate('BoulengeriPage')}
        />
        <Button color = "#7ca2d0"
            title="Scinax elaeochrous"
            onPress={ () =>
this.props.navigation.navigate('ElaeochrousPage')}
        />
        <Button color = "#7ca2d0"

```

```

        title="Scinax staufferi"
        onPress={ () =>
this.props.navigation.navigate('StaufferiPage')}
      />
      <Button color = "#7ca2d0"
        title="Silverstoneia flotator"
        onPress={ () =>
this.props.navigation.navigate('FlotatorPage')}
      />
      <Button color = "#7ca2d0"
        title="Silverstoneia nubicola"
        onPress={ () =>
this.props.navigation.navigate('NubicolaPage')}
      />
      <Button color = "#7ca2d0"
        title="Smilisca baudinii"
        onPress={ () =>
this.props.navigation.navigate('BaudiniiPage')}
      />
      <Button color = "#7ca2d0"
        title="Smilisca phaeota"
        onPress={ () =>
this.props.navigation.navigate('PhaeotaPage')}
      />
      <Button color = "#7ca2d0"
        title="Smilisca puma"
        onPress={ () =>
this.props.navigation.navigate('PumaPage')}
      />
      <Button color = "#7ca2d0"
        title="Smilisca sila"
        onPress={ () =>
this.props.navigation.navigate('SilaPage')}
      />
      <Button color = "#7ca2d0"
        title="Smilisca sordida"
        onPress={ () =>
this.props.navigation.navigate('SordidaPage')}
      />
      <Button color = "#7ca2d0"
        title="Strabomantis bufoniformis"
        onPress={ () =>
this.props.navigation.navigate('BufoniformisPage')}
      />

      <Text style = {{textAlign: "center", fontSize: 22,
textDecorationLine: "underline"}}>T</Text>
      <Button color = "#7ca2d0"
        title="Teratohyla pulverata"
        onPress={ () =>
this.props.navigation.navigate('PulverataPage')}
      />
      <Button color = "#7ca2d0"
        title="Teratohyla spinosa"
        onPress={ () =>
this.props.navigation.navigate('SpinosaPage')}
      />
      <Button color = "#7ca2d0"
        title="Tlalocohyla loquax"
        onPress={ () =>
this.props.navigation.navigate('LoquaxPage')}
      />
      <Button color = "#7ca2d0"

```

```

                title="Trachycephalus typhonius"
                onPress={ () =>
this.props.navigation.navigate('TyphoniusPage')}
            />

        </ScrollView>
    );
}
}
/**** END MENU OF FROGS BY SCIENTIFIC NAME*****/

/**** BEGIN ABOUT PAGE*****/
class AboutApp extends React.Component {
    static navigationOptions = {
        title: "About",
        headerStyle: {
            backgroundColor: '#16438B',
        },
        headerTintColor: '#fff',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    },
    };
    render() {
        return (
            <ScrollView style = {{backgroundColor: "#fcfcfc"}}>
                <Text style = {styles.paragraphs}>This app created by Emily
Kelly{"\n"}</Text>
                <Text style = {styles.paragraphs}>Northwest Nazarene
University{"\n"}</Text>
                <Text style = {styles.paragraphs}>All information within
app from the eBook <Text style = {{fontStyle: "italic"}}>Field Guide to the Frogs and
Toads of Costa Rica</Text> by Dr. John Cossel (Northwest Nazarene University) and
Brian Kubicki.{"\n"}</Text>
                <Text style = {styles.paragraphs}>For more information
about this application, send an email to costaricanfrogs@gmail.com.{"\n"}</Text>
            </ScrollView>
        );
    }
}
/**** END ABOUT PAGE*****/

class MainMenu extends React.Component {
    static navigationOptions = {
        title: 'Main Menu',
        headerStyle: {
            backgroundColor: '#16438B',
        },
        headerTintColor: 'white',
        headerTitleStyle: {
            fontWeight: 'bold',
        },
    },
    };
    render() {
        return (
            <ScrollView style = {{backgroundColor: "#fcfcfc", flex: 1}}>
                <View style = {styles.mainMenuItems}>
                    <Button color = "#133258"
                        title="Frogs by Family"
                        onPress={ () =>
this.props.navigation.navigate('FamilyList')}
                    />

```

```

        </View>

        <View style = {styles.mainMenuItems}>
            <Button color = "#133258"
                title="Frogs by Scientific Name"
                onPress={ () =>
this.props.navigation.navigate('ScientificNamesList')}
            />
        </View>

        <View style = {styles.mainMenuItems}>
            <Button color = "#133258"
                title="Frogs by Common Name"
                onPress={ () =>
this.props.navigation.navigate('CommonNamesList')}
            />
        </View>

        <View style = {styles.mainMenuItems}>
            <Button color = "#133258"
                title="About this App"
                onPress={ () =>
this.props.navigation.navigate('AboutApp')}
            />
        </View>
    </ScrollView>
    );
}
}

```

```

const MenuStack = createStackNavigator({
  MainMenu : MainMenu,
  Home: HomeScreen,
  FamilyList : FamilyList,
  ScientificNamesList : ScientificNamesList,
  CommonNamesList : CommonNamesList,
  AboutApp : AboutApp,

  Aromobatidae: Aromobatidae,
    TalamancaePage: TalamancaePage,
  Bufonidae: Bufonidae,
    ChiriquiensisPage: ChiriquiensisPage,
    ChirriipoensisPage: ChirriipoensisPage,
    SenexPage: SenexPage,
    VariusPage: VariusPage,
    AucoinePage: AucoinePage,
    ChompipePage: ChompipePage,
    CocciferPage: CocciferPage,
    ConiferusPage: ConiferusPage,
    EpioticusPage: EpioticusPage,
    FastidiosusPage: FastidiosusPage,
    GuanacastePage: GuanacastePage,
    HoldridgeiPage: HoldridgeiPage,
    LuetkeniiPage: LuetkeniiPage,
    MelanochlorusPage: MelanochlorusPage,
    PeriglenesPage: PeriglenesPage,
    VallicepsPage: VallicepsPage,
    HaematiticusPage: HaematiticusPage,
    HorribilisPage: HorribilisPage,
  Centrolenidae: Centrolenidae,
    EuknemosPage: EuknemosPage,

```

GranulosaPage: GranulosaPage,  
 ProsobleponPage: ProsobleponPage,  
 ChirripoiPage: ChirripoiPage,  
 ColymbiphyllumPage: ColymbiphyllumPage,  
 DianaePage: DianaePage,  
 CentrolenidaeFleischmanniPage: CentrolenidaeFleischmanniPage,  
 HyTalamancaePage: HyTalamancaePage,  
 ValerioiPage: ValerioiPage,  
 VireovittatumPage: VireovittatumPage,  
 AlbomaculataPage: AlbomaculataPage,  
 IlexPage: IlexPage,  
 PulverataPage: PulverataPage,  
 SpinosaPage: SpinosaPage,  
 Craugastoridae: Craugastoridae,  
 AndiPage: AndiPage,  
 AngelicusPage: AngelicusPage,  
 BransfordiiPage: BransfordiiPage,  
 CatalinaePage: CatalinaePage,  
 CrassidigitusPage: CrassidigitusPage,  
 CuaqueroPage: CuaqueroPage,  
 EscocesPage: EscocesPage,  
 FitzingeriPage: FitzingeriPage,  
 CraugastoridaeFleischmanniPage: CraugastoridaeFleischmanniPage,  
 GabbiPage: GabbiPage,  
 GollmeriPage: GollmeriPage,  
 GulosusPage: GulosusPage,  
 MegacephalusPage: MegacephalusPage,  
 MelanostictusPage: MelanostictusPage,  
 MimusPage: MimusPage,  
 NobleiPage: NobleiPage,  
 ObesusPage: ObesusPage,  
 PersimilisPage: PersimilisPage,  
 PhasmaPage: PhasmaPage,  
 PodiciferusPage: PodiciferusPage,  
 PolyptychusPage: PolyptychusPage,  
 RanoidesPage: RanoidesPage,  
 RayoPage: RayoPage,  
 RhyacobatrachusPage: RhyacobatrachusPage,  
 RugosusPage: RugosusPage,  
 StejnegerianusPage: StejnegerianusPage,  
 CraugastoridaeTalamancaePage: CraugastoridaeTalamancaePage,  
 TaurusPage: TaurusPage,  
 UnderwoodiPage: UnderwoodiPage,  
 AltaePage: AltaePage,  
 CaryophyllaceusPage: CaryophyllaceusPage,  
 CerasinusPage: CerasinusPage,  
 CruentusPage: CruentusPage,  
 GaigeiPage: GaigeiPage,  
 MoroPage: MoroPage,  
 ParadalisPage: ParadalisPage,  
 RidensPage: RidensPage,  
 TaeniatusPage: TaeniatusPage,  
 BufoniformisPage: BufoniformisPage,  
 Dendrobatidae: Dendrobatidae,  
 AuratusPage: AuratusPage,  
 GranuliferaPage: GranuliferaPage,  
 PumilioPage: PumilioPage,  
 LugubrisPage: LugubrisPage,  
 VittatusPage: VittatusPage,  
 FlotatorPage: FlotatorPage,  
 NubicolaPage: NubicolaPage,  
 Eleutherodactylidae: Eleutherodactylidae,  
 DiastemaPage: DiastemaPage,



HylaeformisPage: HylaeformisPage,  
 TigrilloPage: TigrilloPage,  
 VentrimalaculatusPage: VentrimalaculatusPage,  
 VocatorPage: VocatorPage,  
 CoquiPage: CoquiPage,  
 JohnstoneiPage: JohnstoneiPage,  
 PlanirostrisPage: PlanirostrisPage,  
 Hemiphractidae: Hemiphractidae,  
 CornutaPage: CornutaPage,  
 Hylidae: Hylidae,  
 HylidaeSpinosaPage: HylidaeSpinosaPage,  
 RosenbergiPage: RosenbergiPage,  
 RuffitelaPage: RuffitelaPage,  
 EbraccatusPage: EbraccatusPage,  
 MicrocephalusPage: MicrocephalusPage,  
 PhlebodesPage: PhlebodesPage,  
 LythrodesPage: LythrodesPage,  
 RuffiocularisPage: RuffiocularisPage,  
 UranochroaPage: UranochroaPage,  
 BailarinaPage: BailarinaPage,  
 FimbrimembraPage: FimbrimembraPage,  
 MiliariaPage: MiliariaPage,  
 SukiaPage: SukiaPage,  
 ColymbaPage: ColymbaPage,  
 PalmeriPage: PalmeriPage,  
 AngustilineataPage: AngustilineataPage,  
 CalypsaPage: CalypsaPage,  
 DebilisPage: DebilisPage,  
 LancasteriPage: LancasteriPage,  
 PicadoiPage: PicadoiPage,  
 PictipesPage: PictipesPage,  
 PseudopumaPage: PseudopumaPage,  
 RivularisPage: RivularisPage,  
 TicaPage: TicaPage,  
 XanthostictaPage: XanthostictaPage,  
 ZetekiPage: ZetekiPage,  
 SeptentrionalisPage: SeptentrionalisPage,  
 LegleriPage: LegleriPage,  
 BoulengeriPage: BoulengeriPage,  
 ElaeochrousPage: ElaeochrousPage,  
 StaufferiPage: StaufferiPage,  
 BaudiniiPage: BaudiniiPage,  
 PhaeotaPage: PhaeotaPage,  
 PumaPage: PumaPage,  
 SilaPage: SilaPage,  
 SordidaPage: SordidaPage,  
 LoquaxPage: LoquaxPage,  
 TyphoniusPage: TyphoniusPage,  
 Leptodactylidae: Leptodactylidae,  
 PustulosusPage: PustulosusPage,  
 FragilisPage: FragilisPage,  
 InsularumPage: InsularumPage,  
 MelanonotusPage: MelanonotusPage,  
 PoecilochilusPage: PoecilochilusPage,  
 SavageiPage: SavageiPage,  
 Microhylidae: Microhylidae,  
 AterrimaPage: AterrimaPage,  
 PictiventrisPage: PictiventrisPage,  
 VariolosusPage: VariolosusPage,  
 Phyllomedusidae: Phyllomedusidae,  
 AnnaePage: AnnaePage,  
 CallidryasPage: CallidryasPage,  
 LemurPage: LemurPage,

```

        SaltatorPage: SaltatorPage,
        SpurrelliPage: SpurrelliPage,
        CalcariferPage: CalcariferPage,
    Ranidae: Ranidae,
        ForreriPage: ForreriPage,
        TayloriPage: TayloriPage,
        VaillantiPage: VaillantiPage,
        VibicariusPage: VibicariusPage,
        WarszewitschiiPage: WarszewitschiiPage,
    Rhinophrynidae: Rhinophrynidae,
        DorsalisPage: DorsalisPage,
});

const TabNavigator = createBottomTabNavigator(
  {
    Menu: MenuStack,
  }
);

export default class App extends React.Component {
  render() {
    return <TabNavigator />;
  }
}

```