

Creep into the Deep:  
Discovering Deep-Sea Coral

# Bailey Skinner

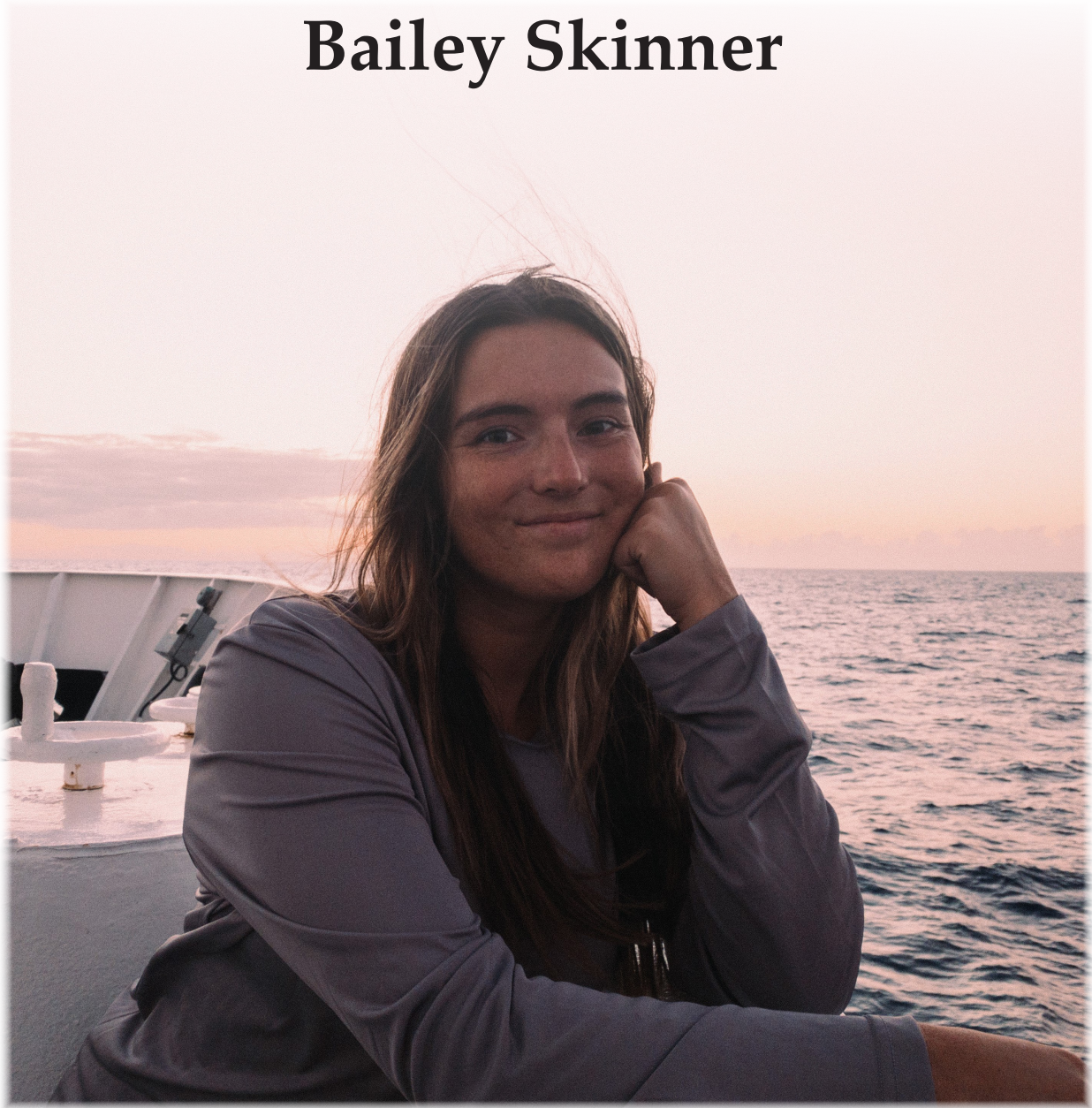
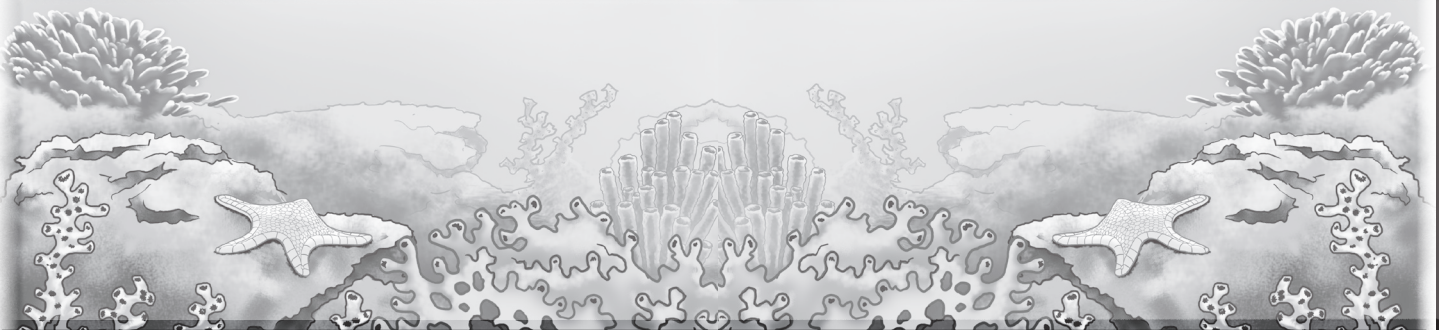


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Defying Dissolution: North Pacific Deep-Sea Scleractinian  
Reefs in Undersaturated Water (NSF OCE-1851378)

Creep into the Deep:  
Discovering Deep-Sea Coral

# Bailey Skinner

Graduate Student  
Texas A&M University

## Studies:

Environmental Geosciences and Ocean Science and Technology

## Research Focus:

Determining if aragonite saturation state is a good predictor of total alkalinity

## Has Studied:

Water samples collected from a CTD in the middle of the Northwest Pacific Ocean. Does statistical analysis to determine relationships of environmental variables in an acidifying ocean.

## Three things Bailey does to help the Earth:

Limits single-plastic use such as straws, water bottles, sandwich and grocery bags; shares with others about the environment, reduces meat consumption.

## Something surprising about Bailey:

*I play soccer in my free time. I love being outside especially near water and taking my puppies for walks. I also enjoy reading mystery books.*

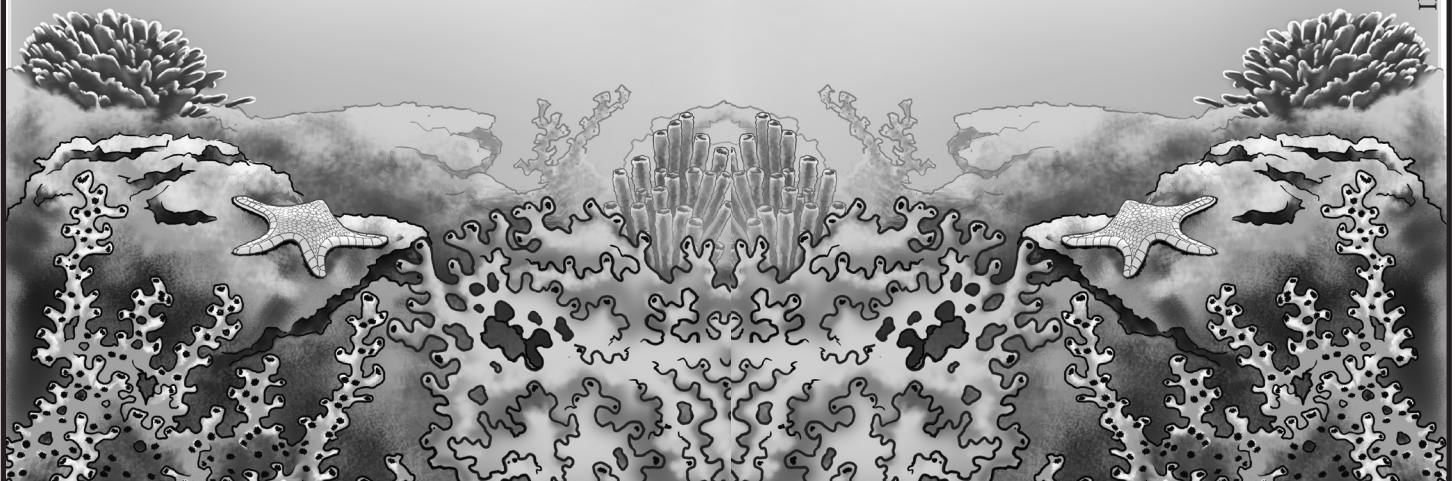


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DEEP-SEA EXPLORER  
**Makeda Mills**



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## Creep into the Deep: Discovering Deep-Sea Coral

# Makeda Mills

Graduate Student  
Texas A&M University

### Studies:

Bacteria that live on deep-sea corals

### Research Focus:

How bacteria that live on deep-sea corals may help corals survive in difficult and unexpected areas throughout the Northwestern Hawaiian seamounts (underwater landforms similar to islands).

### Has Studied:

The mode of transmission of stony coral tissue loss disease in the U.S. Virgin Islands (Makeda's home). Conducted research on the growth rates of three Caribbean coral species mounted to three different types of substrata.

### Three things Makeda does to help the Earth:

Replaced single use items with silicon or aluminum. For example, instead of plastic sandwich bags uses bags made of silicone and carries bamboo utensils everywhere. Takes the bus on weekdays and uses car on weekends to run errands. Re-purposes empty glass containers for gardening or storage.

### Something surprising about Makeda:

*I enjoy playing piano, gardening, going to the beach, and traveling to try new foods and experiences.*

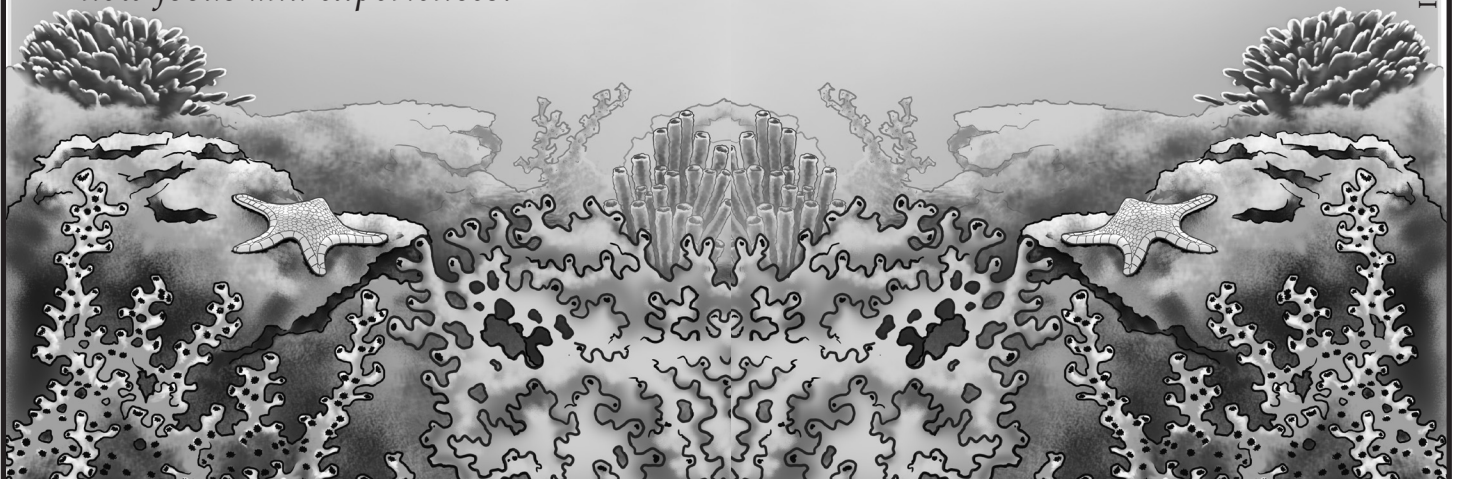


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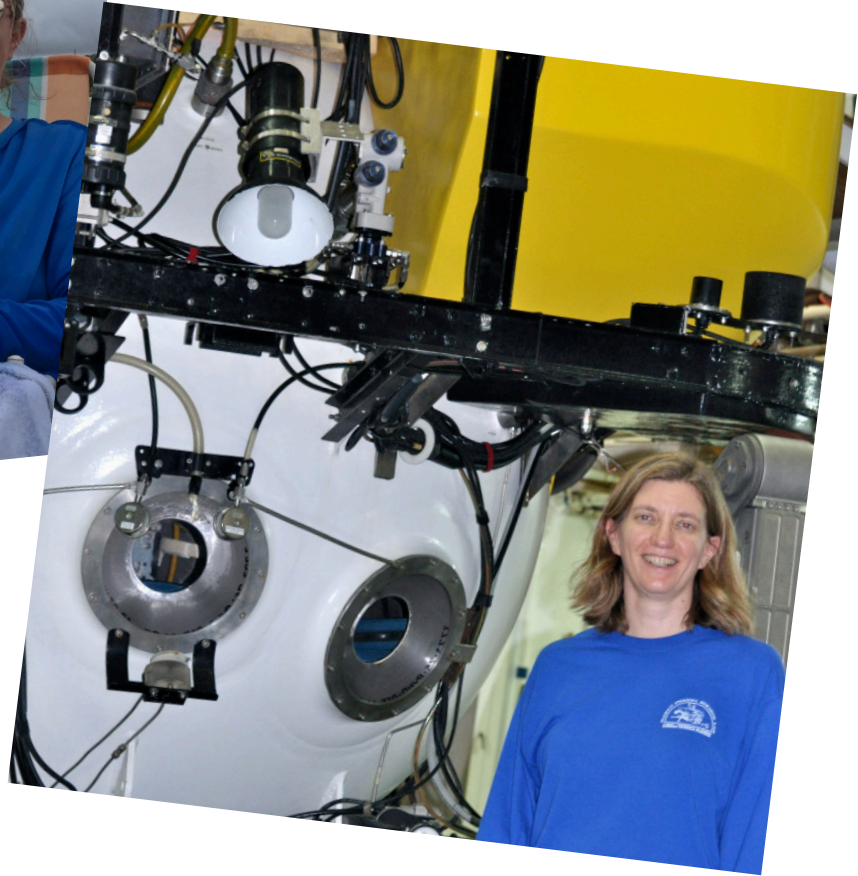


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DEEP-SEA EXPLORER  
**Amy Baco-Taylor**



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## Creep into the Deep: Discovering Deep-Sea Coral

### Amy Baco-Taylor, PhD

Professor of Oceanography and Environmental Science  
Florida State University

#### Studies:

Deep-sea coral and seamount ecology.

#### Research Focus:

Exploring to discover the full extent of deep-sea coral reefs on seamounts in the North Pacific. Interested in understanding how they can occur in an area where the seawater chemistry is all wrong for reef formation

#### Has Studied:

Has explored the ocean in submersibles, with ROVs, and AUVs. Has led over 150 submersible dives, 50+ ROV dives, and 25+ Sentry dives in deep-sea ecosystems off Hawaii, Alaska, New Zealand, Antarctica, the Bahamas, the Gulf of Mexico, and California.

#### Three things Amy does to help the Earth:

Obsessively recycles and uses as few single-use plastics as possible.  
Conducts research that can help provide better understanding, protection, and management of the deep oceans.

#### Something surprising about Amy:

*I have two kids. I am the best MarioKart™ player in my house. I love hiking and biking.*

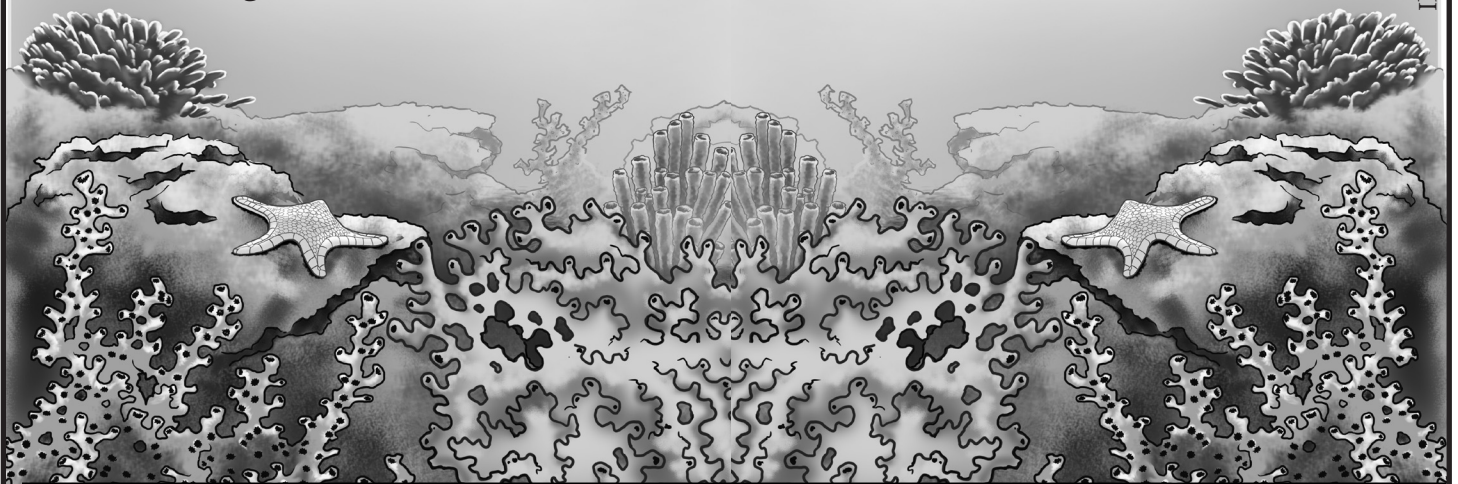


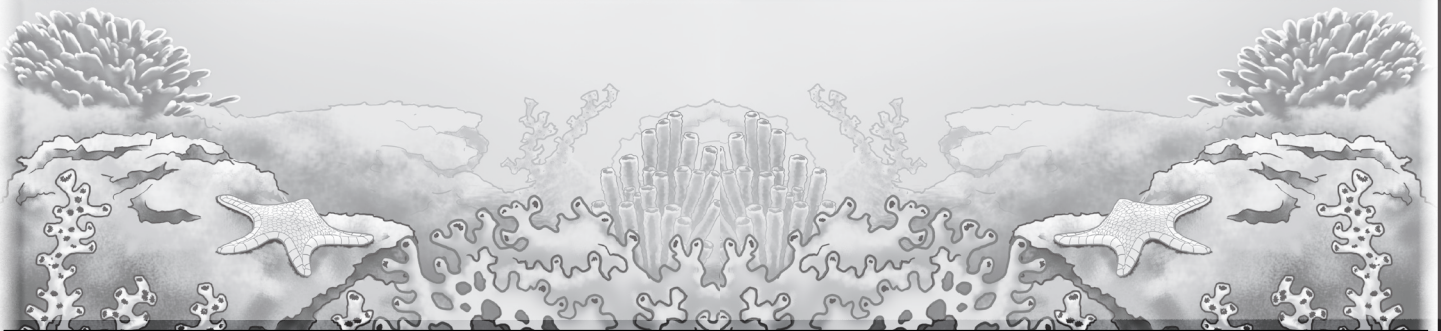
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DEEP-SEA EXPLORER  
**Laura Anthony**

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# Laura Anthony

Graduate Student  
Florida State University

## Studies:

Reef-forming deep-sea coral reproductive ecology

## Research Focus:

Discovering if lower aragonite saturation (pH) impacts the reproductive output of reef-forming deep-sea corals.

## Has Studied:

Deep-sea corals in the Atlantic Ocean and cold seep mussels in the Gulf of Mexico using both ROVs and submersibles.

## Three things Laura does to help the Earth:

Use reusable shopping bags, vegetarian diet, and organized beach clean-ups throughout college.

## Something surprising about Laura:

*I play the electric guitar.*



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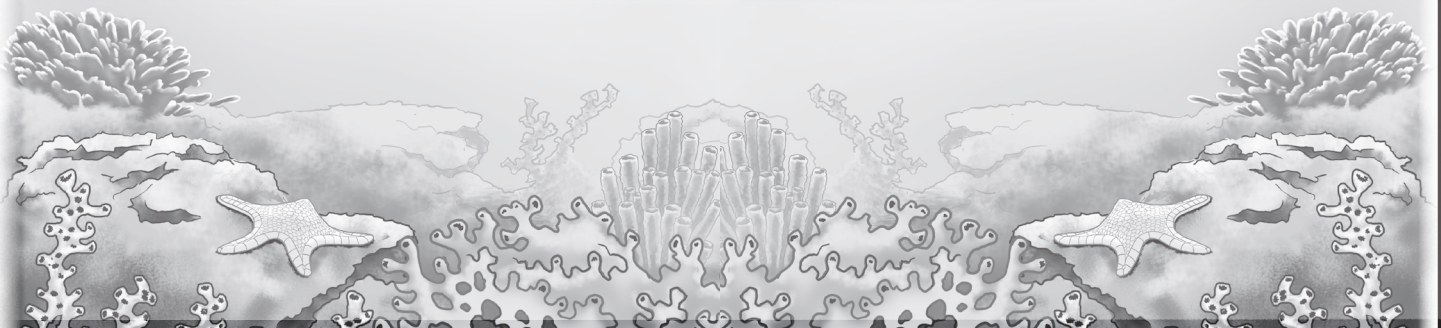


# Creep into the Deep: Discovering Deep-Sea Coral



## DEEP-SEA EXPLORER **Virginia Biede**

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# Virginia Biede

Graduate Student  
Florida State University

## Studies:

Deep-sea corals, their homes, and how they are able to create homes for other animals.

## Research Focus:

Studies deep-sea coral communities and how they differ across the deep-sea environment.

## Has Studied:

Estuaries in Maine, abyssal plains of the North Atlantic Ocean, and seamounts in the Pacific Ocean.

## Three things Virginia does to help the Earth:

Eats vegetarian diet to decrease carbon footprint. Compost food scraps.  
Tries purchase used goods and clothes as much as possible.

## Something surprising about Virginia:

*Something kids might find surprising is that I am actually a twin!*

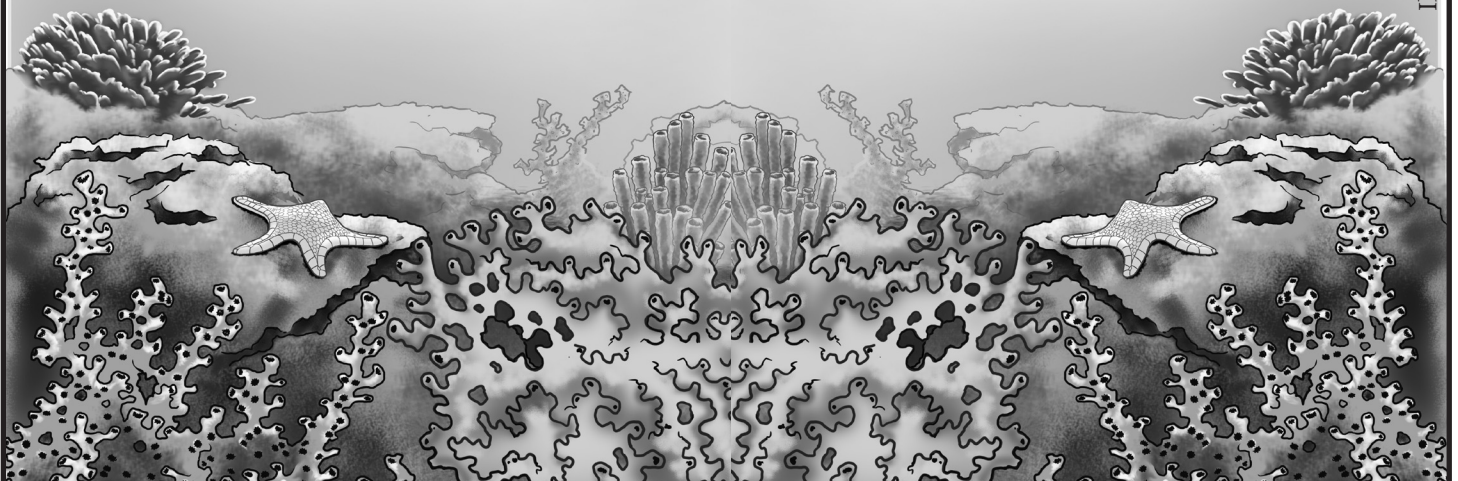


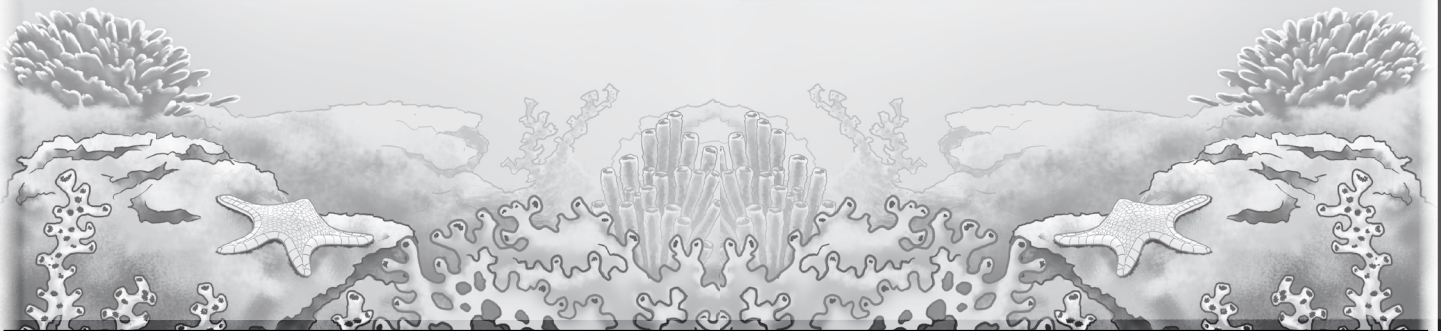
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# Creep into the Deep: Discovering Deep-Sea Coral



## DEEP-SEA EXPLORER **Alyssa Schultz**

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# Alyssa Schultz

Graduate Student  
Texas A&M University

## Studies:

The ocean's past, called paleoceanography

## Research Focus:

Studying fossil corals which serve as a fingerprint of past climatic events and variability. This will further inform us how the ocean has responded to past climatic events.

## Has Studied:

Long-haul research cruises in the North Pacific, using an ROV. Previous research, used deep-sea sediments and microfossils from the sediments for water mass reconstructions in the Cretaceous (130 million years ago).

## Three things Alyssa does to help the Earth:

Makes sure to recycle and compost as much as possible! Upcycle or buy second-hand (clothes, appliances, really anything!) and try to eat less meat.

## Something surprising about Alyssa:

*I really enjoy hiking and backpacking, and have even hiked up a volcano and swam in the hot springs below it!*

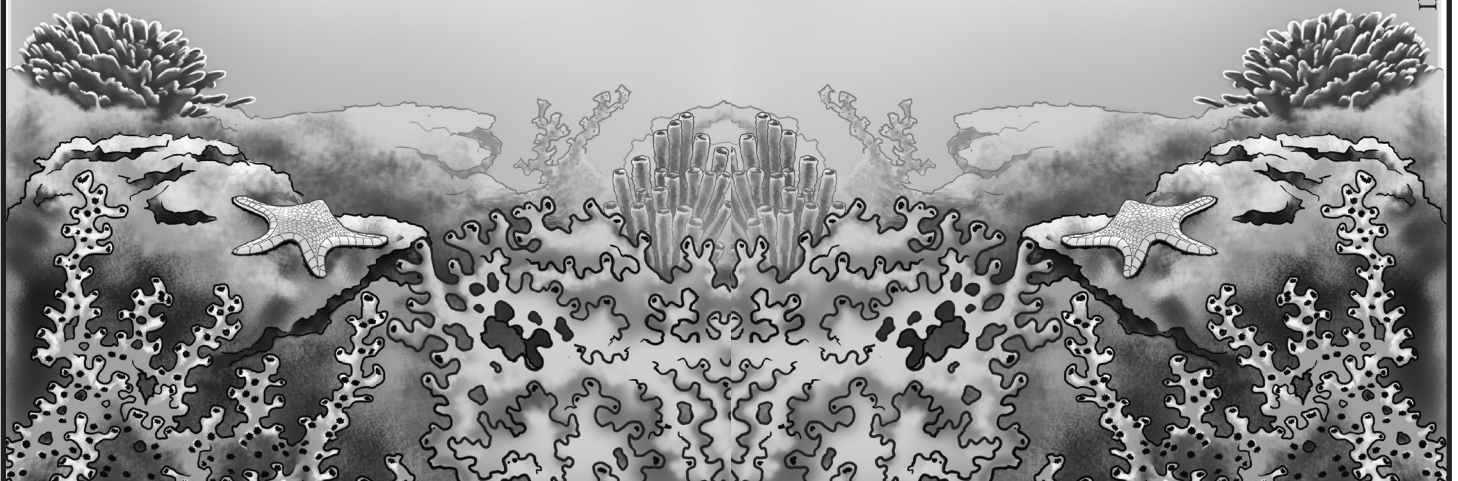


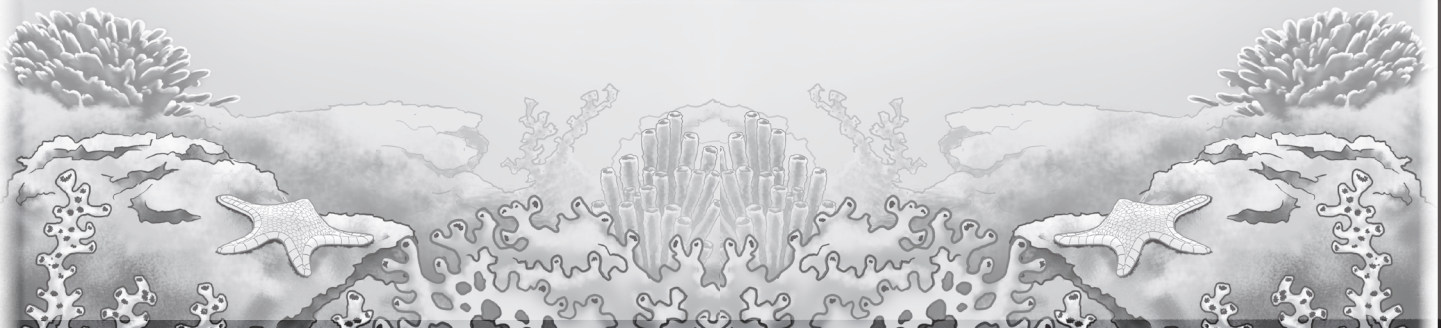
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DEEP-SEA EXPLORER  
**Kathryn E. F. Shamberger**

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## Kathryn E. F. Shamberger, PhD

Department of Oceanography  
Texas A&M University

### Studies:

The chemistry of seawater, how humans are changing the chemistry of seawater, and how those changes affect the health of corals and coral reefs.

### Research Focus:

Deep-sea coral reefs that we found in the North Pacific live where the water has so much carbon dioxide. Want to know if the coral skeletons that form the reef are dissolving. If so, how fast? If not, why not?

### Has Studied:

Tropical, shallow water coral reefs all over the world including in Hawaii, Florida Keys, Gulf of Mexico, Caribbean, Great Barrier Reef Australia, and Taiwan. Snorkeled to study shallow reefs. Uses underwater robots to study the deep-sea reefs.

### Three things Katie does to help the Earth:

Teaches college students about how important the ocean is. Drives a hybrid car. Reduces water use by collecting rain running off roof in big rain barrels then uses to water the garden and house plants.

### Something surprising about Katie:

*I used to live in Hawaii and met my husband there. Now we have 2 kids and a white golden retriever named Ke'oke'o, which is Hawaiian for the color white. We call him Keo for short.*

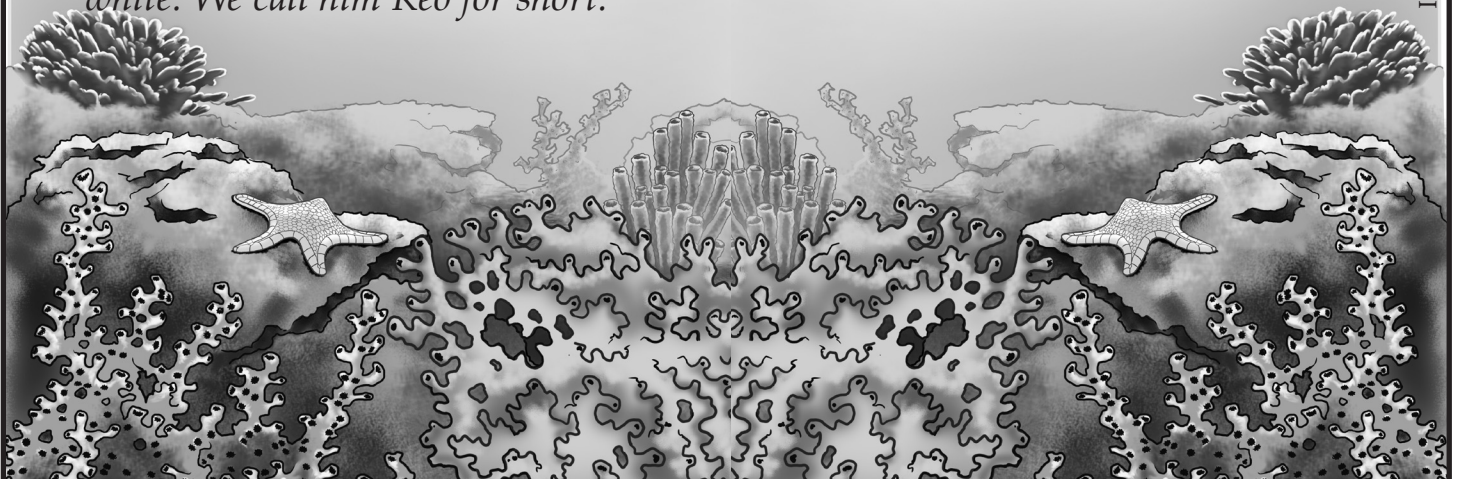


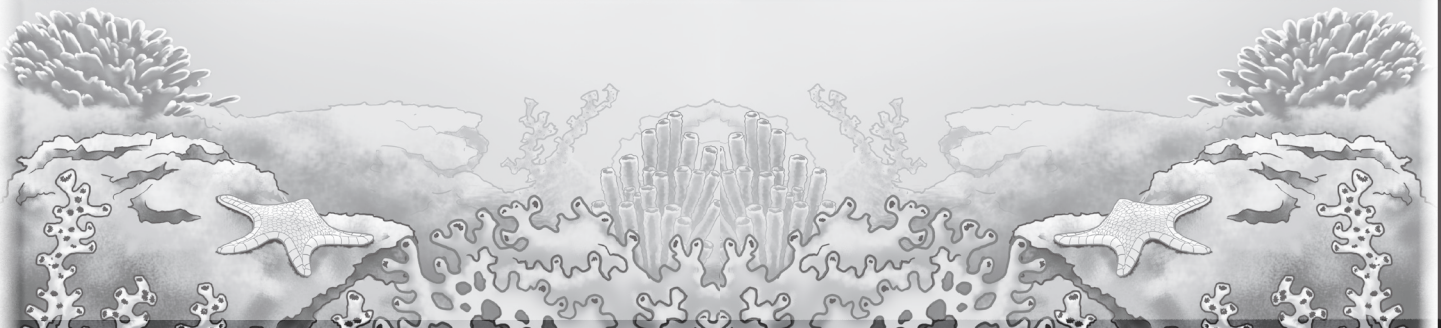
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DEEP-SEA EXPLORER  
**JiAnne Robinson**

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# JiAnne Robinson

Research Assistant/Senior Undergraduate  
Texas A&M University

## Studies:

Environmental geoscience with a specialization in human impact on the environment. Particular interest in urban and environmental management along with sustainability.

## Research Focus:

Assist in research in the Stable Isotope Geoscience Facility (SIGF) at A&M to analyze the chemistry of the coral and water samples.

## Has Studied:

Oceanography, marine pollution, environmental politics, environmental justice, data analysis, urban issues, along with scripting and mapping softwares.

## Three things JiAnne does to help the Earth:

To reduce waste, I purchase reusable items, re-purpose items rather than throw them away, and get around town almost exclusively on my moped, Zelda.

## Something surprising about JiAnne:

*I have three little sisters, play cello, love to read, and have skydived from an airplane at a height of 10,000ft. One day I hope to swim with sharks!*

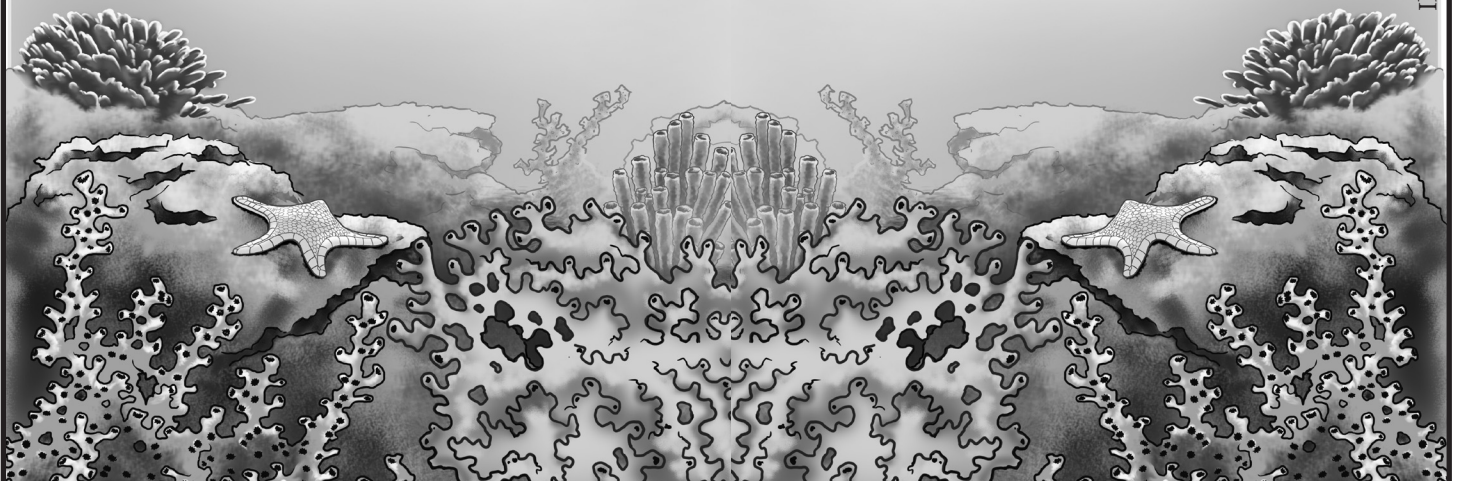
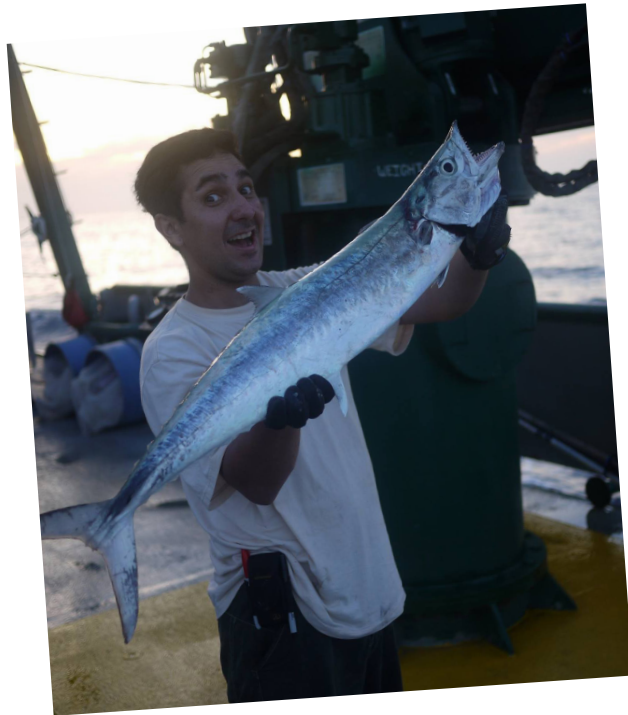


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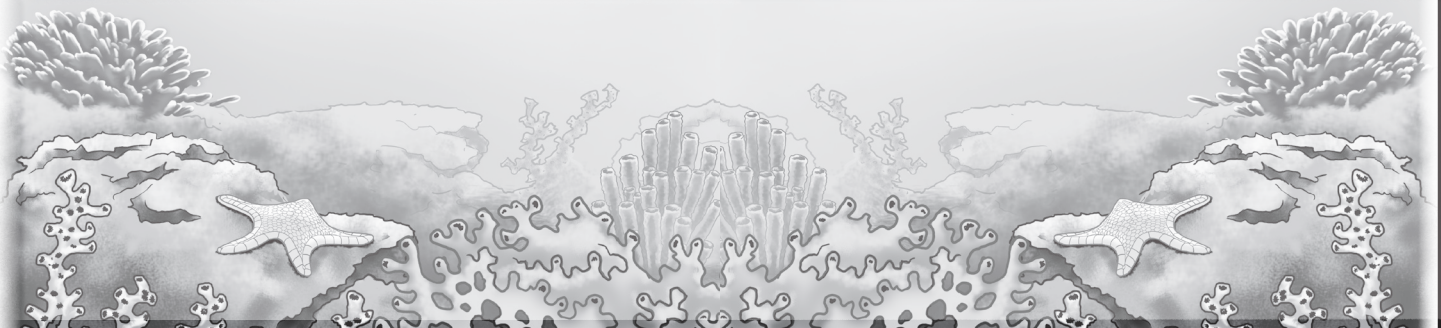


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## DEEP-SEA EXPLORER **Mauricio Silva**

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## Mauricio Silva, PhD

Researcher and Postdoctoral Fellow  
Florida State University

### Studies:

Deep-sea ecology and geomorphology, hydrocarbon systems, remote sensing, and environmental modeling.

### Research Focus:

Creates Habitat Suitability Models used to find the deep-sea corals reefs and try to find out why they are there. Endeavoring to understand what is affecting the earth and its organisms and how can be fixed.

### Has Studied:

Studies using interdisciplinary data from echosounders, satellite images, numerical predictive oceanographic models and images from subs, Remotely Operated Vehicles (ROV) and Autonomous Underwater Vehicles (AUV). Dove in the Alvin Submarine in the Gulf of Mexico.

### Three things Mauricio does to help the Earth:

My family and I recycle all our trash in five categories: organics, paper and cardboard, plastics, metal and glass. I drive a Hybrid car and plan to get an electric car soon.

### Something surprising about Mauricio:

*I am a soccer coach for a soccer club and Varsity High School girls' soccer. I fish from the shore and a boat. In college, hobbies included SCUBA, free-diving, and surfing.*

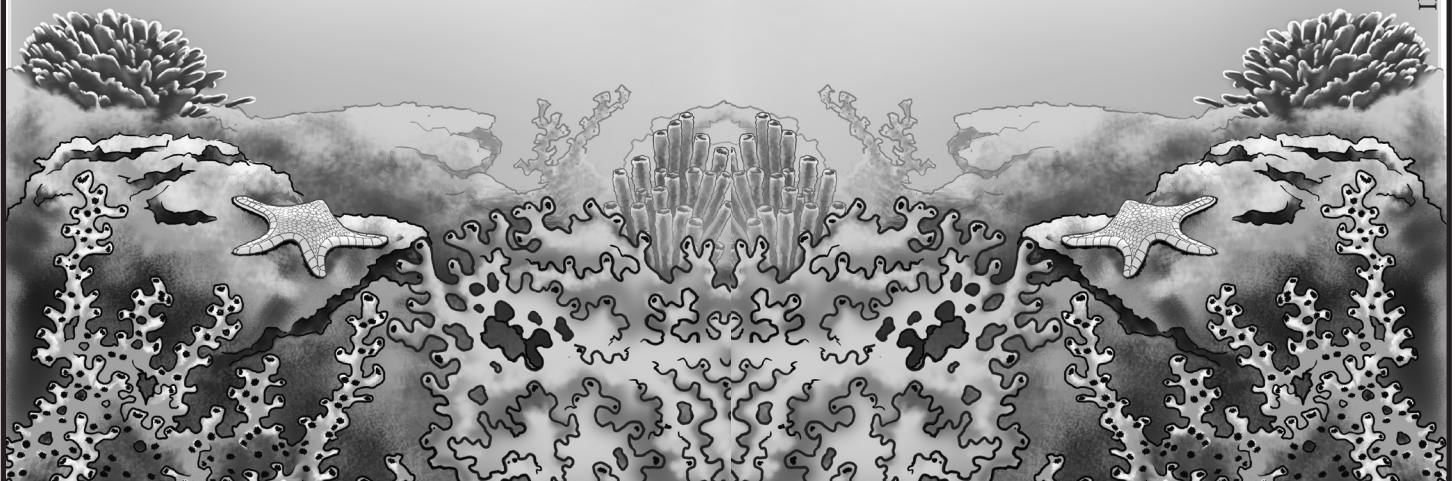


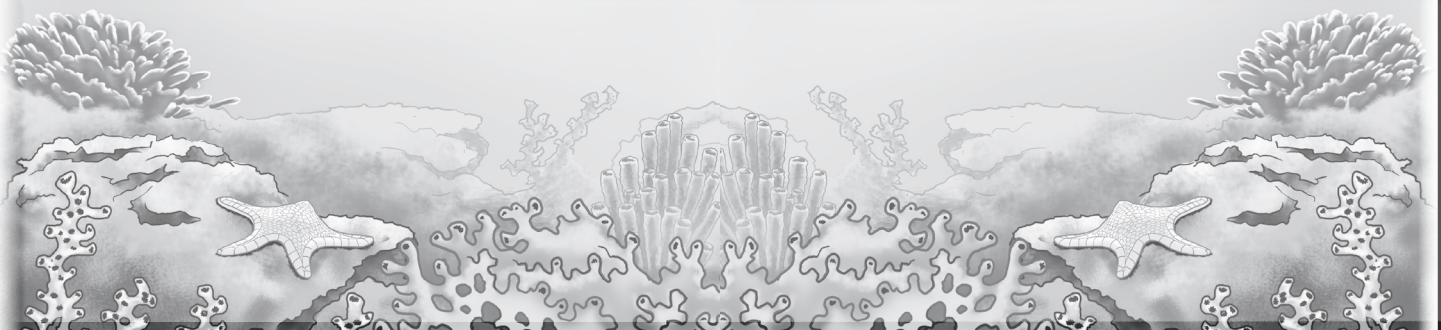
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DEEP-SEA EXPLORER  
**Morgan Dansby**

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# Morgan Dansby

Florida State University

### Studies:

Corals, sharks, and plastic pollution.

### Research Focus:

Processing the video footage taken from ROV on a previous cruise that documents the seafloor substrate to identify deep-sea coral habitat. Learning more about deep-sea corals and their habitat!

### Has Studied:

Fish: smallmouth and largemouth bass, and Umpqua chub; microplastic pollution; Loggerhead, green, leatherback, Kemp's Ridley, and Hawksbill sea turtles.

### Three things Morgan does to help the Earth:

Tries to use as little plastic as possible, carries reusable containers and silverware; and purchases groceries at local farmers' markets that do not use plastic. Also bikes or walks almost everywhere. And, picks up litter.

### Something surprising about Morgan:

*I skipped first grade. I am a wild land firefighter, I played third base on a travel softball team that won the World Series at Walt Disney world. And, I have jumped into a dormant volcano!*

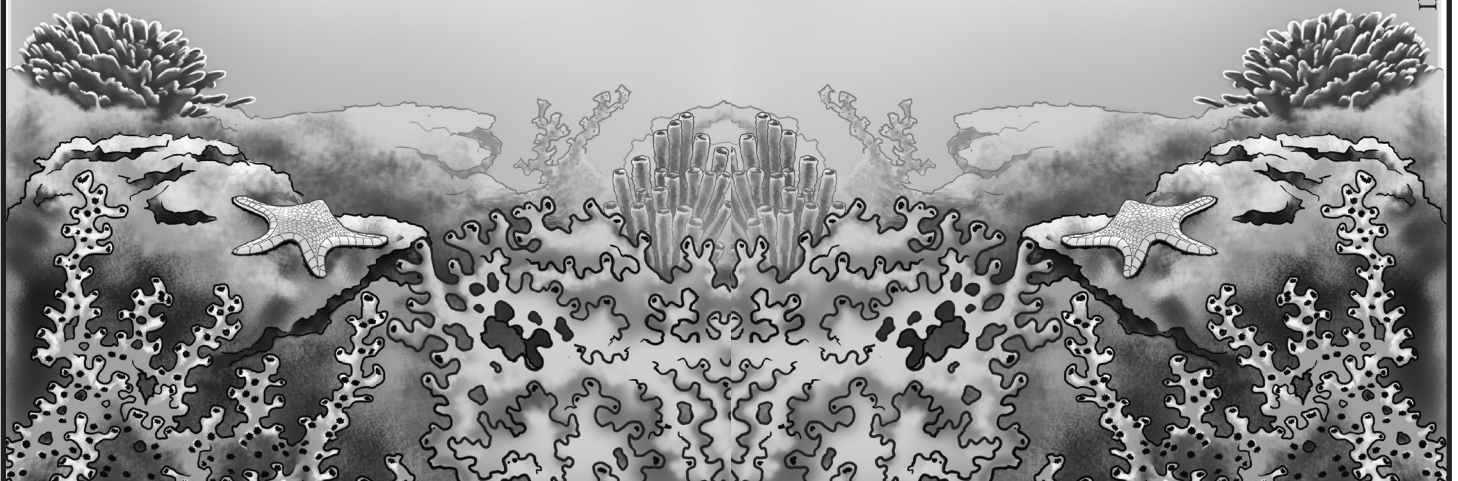


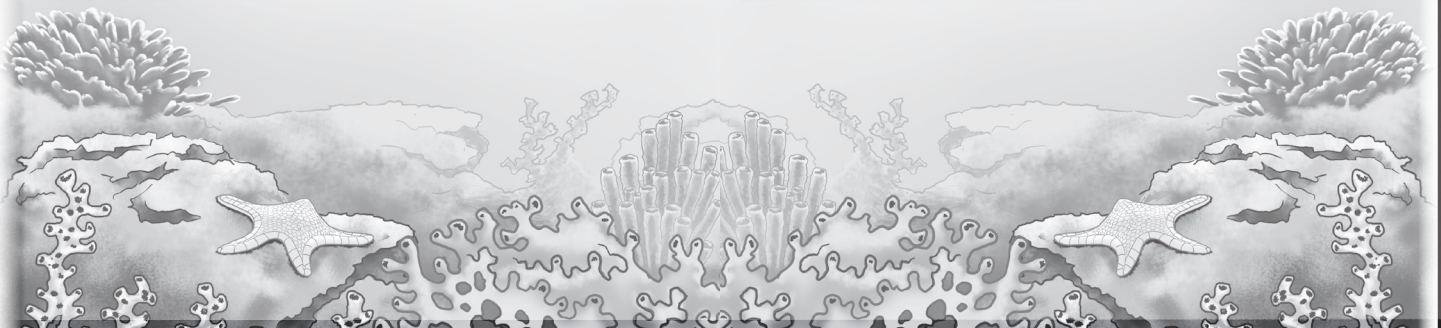
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# Creep into the Deep: Discovering Deep-Sea Coral



## DEEP-SEA EXPLORER **Siobhan Kassem**

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# Siobhan Kassem

Florida State University

## Studies:

Studies chemical oceanography

## Research Focus:

Looking at the ocean chemistry around deep-sea coral reefs. Trying to understand the chemistry of the water in order to understand why and how corals are living in unexpected location.

## Has Studied:

Ocean chemistry in California, Florida, Texas, and Hawaii from a pier, small boat, and research ships.

## Three things Siobhan does to help the Earth:

Turns off the water when not using it while brushing teeth, eats less meat and walks instead of driving as much as possible.

## Something surprising about Siobhan:

*I played soccer growing up and made it to state finals. I also love hiking!*



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