

SUMMER  
2018

# Families

WEAVE A TAPESTRY OF FAITH

YOU, ME,  
AND THE SEA



Diving into Coral Reef Restoration



Photos ©New Heaven Reef Conservation Program; © dphphotos/Stock (background)



People need to breathe air. We cannot live underwater. But we have ways to explore the ocean's deepest life and mysteries. Snorkels and scuba equipment allow us to visit with colorful fish, glide with a sea current, or even repair a damaged coral reef.

Michelle Rediker loved scuba diving for fun on vacations. Then she learned about a marine conservation project on Thailand's island of Koh Tao, where volunteers could dive underwater to study and help protect the ocean and its creatures.

"Koh Tao" means "Turtle Island" in Thai. Many years ago, at certain times of the year, the shiny black shells of several species of turtles would cover Koh Tao's beaches. But Michelle, in her month with the New Heaven Reef Conservation Program, saw only one Hawksbill turtle.

**"A CORAL IS AN UNDERSEA COLONY  
MADE UP OF TINY, INDIVIDUAL  
ANIMALS CALLED POLYPS"**

As a volunteer diver, Michelle swam in a zigzag pattern across her assigned underwater area with a clipboard, counting and inspecting fishes, snails, and amazing sea slugs called *nudibranchs* (NOO-de-bronz; see photo, above left) and evaluating substrate, the ocean floor. She learned that a coral reef is an undersea colony made up of tiny, individual animals called polyps that can have many different shapes. The beautiful colors of coral come from the single-cell algae (plants) called *zooxanthalle* that live within the coral.

Michelle learned how changes in habitat can harm coral. If it is too hot or too cold,

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The Families pages are adapted from Tapestry of Faith lifespan faith development programs.

[uua.org/tapestry](http://uua.org/tapestry)

if there are too many or not enough nutrients, or if sunlight cannot penetrate murky water, coral can get stressed. Then, the coral will expel their zooxanthalle, and can die.

Yet a damaged coral reef can be healed, and sometimes even brought back to life. Michelle collected healthy fragments of broken coral she found rolling loose on the ocean floor. These could be transplanted to a coral nursery or an artificial reef. Michelle helped to build artificial reefs. One was about 10 feet long, sculpted to look like a large fish.

Michelle says she fell in love with many of the creatures that live under the sea. One that surprised her was the Boring Clam, not boring at all! "They look like a silk scarf that someone has laid on the floor," she says. "They billow beautifully! Sometimes they twitch, or if they feel threatened, they pull their mantle into their shell. I could have watched them for hours."

*Michelle A. Rediker works for the UU Funding Program. She hopes you'll visit [newheavenreefconservation.com](http://newheavenreefconservation.com) to learn how you can care for the oceans. She and her wife, Sue, live in Brighton, Mass., with their dog, Buster.*

## EXPLORING TOGETHER

**Do you live near the beach? Near the mountains? In the desert or on the plains? Wherever you live, your life depends on Earth's healthy oceans. ■ Today, our oceans are hurting from hundreds of years of careless human use. As Unitarian Universalists, we want to understand why we need our oceans, how their health depends on us, and how we can help turn the situation around.**



Answers on page 4.

## Meet Your Very Distant Cousins

Have you ever thought of all life as one big family? Charles Darwin did. In the 19th century, he showed how the world's diverse species evolved over millions of years from simple, microscopic, water-dwelling creatures.

Our closest ancestors were human. But in deep time and biology, we share a family tree of life with birds, mammals from anteaters to zebras, and creatures of the deep and shallow waters (who, fossil evidence shows, were here first).

**Contemplate a creature from the deep sea. What do you and they have in common?**

## Ocean Meditation Anywhere

**G**et on YouTube and search "ocean sounds no music" to find recordings of ocean waves. Sit quietly, with headphones if you have some. Listen, as if to a new song. Note the variety of sounds and the rhythm as waves crash, lap, or roll; or, just let the sounds happen to you.

Our human bodies are more than half water, so water is almost like a part of us. The sensation of quietly floating feels calming to many people. Some scientists believe that, even when we are grown, our bodies recognize the safe, watery place—our mother's womb—where we developed before we were born. One marine biologist says we naturally fall into a "mildly meditative" state, which he calls "blue mind," when we are near, in, or under water.





## Rehab at Pacific Marine Mammal Center

The Pacific Marine Mammal Center in Laguna Beach, California, rescues and rehabilitates seals and sea lions. Once animals are strong enough to compete for food, PMMC releases them back into their natural ocean habitat.



## Fun with Fake Fossils

Fish fossils can prove that a dry, inland place in Kansas or Texas used to be an ocean basin.

- Have fossils of ocean creatures ever been discovered where you live?
- Make a pretend fossil! Into soft clay, gently press a toy fish, a found sea star (starfish), or dinner leftovers like the dried spine and bones of a fish.



## Ocean Mosts

- Smallest creature, zooplankton – made up of many kinds of very tiny animals



- Largest creature ever to live, the blue whale



## How Hard Is It to Clean Up an Oil Spill?



Oil companies drill into the ocean floor, miles from shore, to get oil for our fuel. An accident can release gallons of heavy, raw oil into the water. Oil spills are a type of pollution that unbalances ocean environments.

The Exxon company caused an oil spill in 1989 along Alaska's coast, and British Petroleum caused one in 2010 in the Gulf of Mexico. Sea birds were stuck in oil, their wings too heavy for flight. Other animals were poisoned by eating their usual food, such as fish, that had swallowed the oil.

After the oil spills, workers and volunteers came to help clean animals. Yet they could not save all of them. The habitats cannot be fully cleaned, either. **Try this home experiment to see why.**

### You will need:

- ☐ Basin of water



- ☐ Blue food coloring



- ☐ Play sand

- ☐ Optional: Salt



- ☐ Small cup of vegetable oil



- ☐ Stuffed animals you can machine-wash after the experiment



1. **Set up your clean "ocean" with blue water, a sandy floor, animals, and plants.** Take some time to play in it!

2. **Pour in a cup of vegetable oil.** See how an oil spill affects the ocean.

3. **Get the oil out of there!** Hypothesize ways to get it out. Then, try to remove as much as you can. How much can you recover?

4. **Try to clean your ocean creatures (stuffed animals).** Hint: Dawn dish soap works... but does it hurt the ocean?

5. **How clean can you get the animals?** Is there a way to clean the water and animals without harming the ocean more? Which did you think it was more important to clean, the water or the animals? Why?



# Love and Respect All the Faces of the Ocean

by Rev. Qiyamah Rahman

The ocean has many different faces, which I've encountered close-up while living on the island of St. Croix. It is a playground for our water sports like swimming, paddle boarding, surfing, water skiing, and boating. It is a home for many species of birds and animals. The ocean can transport us from one place to another on small boats and gigantic ships, and it provides food and water for all forms of life, including humans.

The ocean that we love to be near for playing together, marrying one another, or sitting and letting our souls rest can reflect the beauty of a setting sun at the end of the day and the luminescent moon glowing from the sky. And it can be the source of destruction when it overflows, flooding the land.

After Hurricane Maria, the devastation brought volunteers together. Friends from the UU Fellowship of St. Croix and the community cleared debris from the yards of elderly and disabled neighbors. Many spent hours clearing the beaches.

The ocean's power is too big for any one of us alone.

**TEACH CHILDREN THAT THE OCEAN CAN BE OUR FRIEND.  
IT'S UP TO US TO HONOR AND RESPECT ITS POWER AND BEAUTY.**

- **HOW MANY WAYS DOES YOUR FAMILY USE THE OCEAN?**
- **HOW DO YOU BALANCE ENJOYMENT AND RESPECT?**



**Many sides of ocean life.**



Photo courtesy of Qiyamah A. Rahman

Photos courtesy of Kaleema H. Al-Nur

## A Blessing

**Spirit of the Ancestors, Keeper of all the Waters, oceans, rivers, lakes and ponds.**

**Help us to watch over the living oceans whose life nourishes and renews ours.**

**Let us always strive to keep them pure and clean.**

**Let their mysterious depths remind us of the majesty of nature.**

**Let us give appreciation, respect, and peace**

**To all the oceans of the world. Amen and Blessed Be!**

## YOU ARE THE MIGHTY OCEAN IN THE DROP.

— Rumi

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## FAMILIES: WEAVE A TAPESTRY OF FAITH

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## FIND OUT MORE

■ In the left-hand photo above, Sneferu Hotep and Hamil Milligan clear a ruined yard with St. Croix's Neighbor-to-Neighbor Project, a grantee of the UUA Disaster Relief Fund. Find out how to donate: <https://giving.uua.org/disaster-aid>

■ The National Resource Defense Council teaches about the value and vulnerabilities of our oceans. Watch the trailer for "Sonic Sea," their Emmy-winning 2017 film about the destructive effects of oceanic noise pollution. [www.nrdc.org](http://www.nrdc.org)

■ The National Oceanic and Atmospheric Administration (NOAA) last year engaged over 18,300 students in marine debris education and removed 1,600 metric tons of debris from our shores. See the inspiring "Solutions" web page for how you can help. <https://marinedebris.noaa.gov/discover-issue/solutions>

■ On YouTube watch the animation, "All the Way to the Ocean" (14:00). Upbeat music, a talking crane, and an engaging story help two children explore, "What do you think happens when our trash ends up in the ocean?"

Answers to the crossword puzzle: 1. Dolphin; 2. Octopus; 3. Seahorse; 4. Jellyfish; 5. Shark; 6. Crab; 7. Whale; 8. Turtle; 9. Starfish; 10. Coral; 11. Squid; 12. Fish.