



Outer Cape Environmental Awareness Newsletter

SafeHarborEnv.com

NOVEMBER, 2023
ISSUE NO. 63

What's inside this issue:

SAVING A LAKE IN THE SKY: LAKE PÁTZCUARO, MEXICO - 2
SUMMER INTERN PROFILES - 3
OCEAN EDITOR PERFORMS MARRIAGE FOR PREVIOUS ASSOCIATE EDITOR - 4
EDITOR'S PET PEEVE DEPARTMENT - 5
NEW SCRABBLE WORD: INVASIVORISM - 6
NOT SCIFI DEPT: GIGANTIC SNAILS - 7
LIVING WITH ENDANGERED GIANTS IN BELIZE - 8
EDITOR'S FINAL THOUGHTS - 10



A word from OCEAN's Editor: GORDON PEABODY

OCEAN 63 is the "Editor's Issue", providing some insight into who we are and a pet peeve from one of our first issues, regarding an ongoing Cape Cod problem. We have also included other articles from our Research Team, including one from our youngest but passionate researcher who lived with Manatees this summer. **OCEAN** is an advertising free, Environmental Education Publication, self-funded by Safe Harbor Environmental Services, a collaborative environmental consulting group on Cape Cod. Download and share back issues at WWW.SafeHarborEnv.com.

-Gordon Peabody, Editor

Saving a Lake in the Sky: Lake Pátzcuaro, Mexico

These four young women have studied community problems and social action through the arts for several years in their home of Pátzcuaro. Molly Penalzoa; Ileri Servin; Valeria Aguilar; Alejandra Garcia. They received a Grant from The National Park Service to visit Cape Cod and learn from the Herring River Restoration community learning process. Many of the social, commercial and ecological issues facing their degrading lake were similar to problems successfully resolved with our local Herring River Restoration Project. They met with several local leaders and educators involved with the Herring River, including OCEAN Editor Gordon Peabody, who was Chair of the Herring River Technical Committee that spent nearly two years of community interaction, creating the Conceptual Restoration Plan.



Summer Intern Profiles



Camille Smokelin,
Tufts University



Camille was one of our summer interns, planting native coastal species with us. This photo of her was at a lobster party. As an Eco Representative at Tufts University, Camille coordinated and planned educational events to promote community sustainability. She engaged with 300+ community members in Fall 2022 alone! In this role, she collaborated with campus groups and local businesses, worked on social media content, and conducted data collection regarding campus sustainability.

Tess Holland,
Bates College



Tess Holland has spent her summer working as a lead instructor at the Cape Cod Museum of Natural History in the KidSummer department. She led nature-focused curriculum each week to inform the campers of Cape Cod's diverse ecology and to encourage them to be kind to and conscientious of the environment. Tess also implemented a Native Plant Community Garden last year at Stony Brook Elementary School in Brewster. It is currently thriving with native plants. Tess is a freshman at Bates College and is planning on studying biology and environmental studies.



OCEAN Editor Performs Marriage for Previous Associate Editor

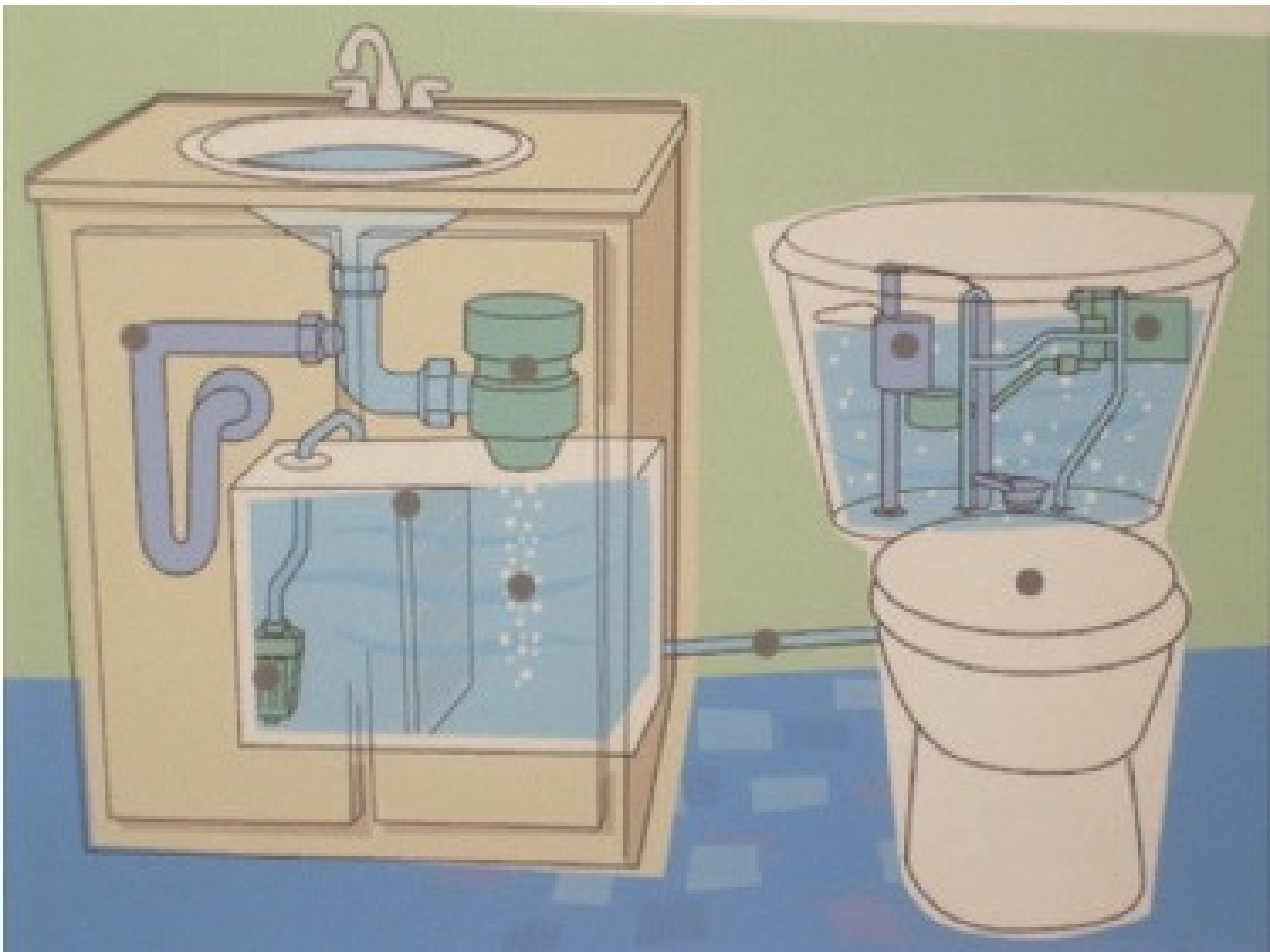
Samantha Thywissen and Malcolm Fano were married on Cape Cod this summer, at a ceremony officiated by **OCEAN** Editor Gordon Peabody. Malcolm and Samantha met while attending Mass Maritime Academy. Samantha worked as OCEAN Associate Editor for many years and also worked with Safe Harbor. The ceremony was highlighted by Samantha and Malcolm's pet Husky delivering their wedding rings. On behalf of our readers, we wish them every happiness.



Editor's Pet Peeve Department

THANK YOU TO **OCEAN** EDITOR,
GORDON PEABODY

Cape Cod benefits from the cleanest, sand filtered rainwater in New England. It has always been a mystery to me why we are using our drinking water to flush toilets. There was a time when our natural resources must have seemed inexhaustible but our sensibilities have changed. Clean water is our most precious resource and there are plenty of secondary, household water sources to flush toilets. When I first investigated using "grey water" systems to flush our toilets, I was discouraged by State Officials because they had concerns "someone might drink from your toilet" (from one of our first issues of OCEAN). I am hoping "things" have changed.



New Scrabble Word: “Invasivorism”

THANK YOU TO **OCEAN**
RESEARCHER TESS HOLLAND



Over the past few years, more and more people have been turning towards invasivorism—the consumption of invasive species—to quell invasive species populations across the globe. Invasive species are species that are not native to a given area; when introduced into a new environment they can create significant damage to ecosystems and destroy populations of other native organisms. The concept of invasivorism was first introduced in 2004 by Joe Roman, a conservation ecologist at the University of Vermont. Roman argued that consuming invasive species could be a useful tactic in significantly reducing population size, like how over-hunting and over-fishing have done so. Since then, many chefs have supported Roman’s idea and have incorporated various invasive species into their menus; from three-cornered leek to sika deer to Japanese knotweed, it is no longer unusual to find the most unusual foods on your plate. A New Hampshire distillery has even turned invasive green crabs into whiskey (see [OCEAN Issue 62](#) for more information). Douglas McMaster, the owner and chef of the Hackney Wick restaurant, stated “not only is eating invasive species a solution, but we’re taking pressure off the food system, saving resources”.

However, some skeptics question the effectiveness of invasivorism. For one, simply harvesting fruits or leaves of invasive plants will not stop the plants from growing and reproducing. Additionally, if consuming a particular invasive species becomes popular, then there is a risk of its population growing. Martin Nuñez, an ecologist at the University of Tennessee, explains in [Scientific American](#), “if you make money off a species... then that’s an incentive to help it spread”. Although invasivorism is a creative approach to tackling a global and pressing issue, it is too new of a concept to determine if it will actually lead to significant reduction in invasive species populations.



Further Information:

- <https://www.scientificamerican.com/article/can-we-really-eat-invasive-species-into-submission/#:~:text=%E2%80%9CInvasivorism%2C%E2%80%9D%20or%20eating%20invasive,careful%20management%20of%20invasive%20populations.>
- https://www.theguardian.com/food/2023/may/27/squirrel-haggis-and-japanese-knotweed-reach-uk-menus-as-invasive-species-trend-grows?CMP=oth_b-aplnews_d-1

Image Source:

<https://www.popsci.com/environment/eating-invasive-species/>

Not SciFi Dept: Gigantic Snails

THANK YOU TO **OCEAN**
RESEARCHER TESS HOLLAND



This past summer, three Florida counties—Broward, Lee, and Pasco County—were placed under quarantine after giant African land snails had been spotted in the areas according to the Florida Department of Agriculture and Consumer Services. This is not the first time that the snail has been found in Florida; previously there have been two detections of the snail in 1969 and 2011, followed by eradications of it in 1975 and 2011, respectively.

The giant African land snail is an extremely damaging invasive species, capable of consuming at least 500 known plant species—for instance, beans, peas, rubber, and peanut—that are deemed “economically important” by the United States Department of Agriculture. Additionally, the snails can cause meningitis in humans due to the parasite, rat lungworm, that they carry. It is recommended that humans do not touch the snails without gloves.

To quell increasing populations of the snail, the Florida Department of Agriculture and Consumer Services is treating the quarantined areas with metaldehyde, a pesticide that inhibits the snails’ mucus production which impairs their digestion and mobility and eventually leads to death. Moreover, under the quarantine law, it is forbidden to move the snail from the area and forbidden to remove of any raw materials such as plants, yard waste, soil, debris, and compost. This helps to keep the snails contained to the quarantined areas and avoids spreading into other regions. If found, it is important to report sightings to the Florida Division of Plant Industry.



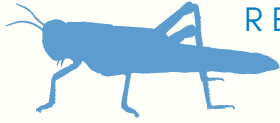
Further Information:

- <https://www.fdacs.gov/Agriculture-Industry/Pests-and-Diseases/Plant-Pests-and-Diseases/Invasive-Mollusks/Giant-African-Land-Snail>.
- <https://abcnews.go.com/US/giant-african-land-snail-spotted-florida-section-county/story?id=100251716>.

Image Source: <https://www.momscleanairforce.org/artificial-grass-isnt-always-greener-toxic-chemicals-in-synthetic-turf/>

New Cuisine Innovation, Insect Pasta

THANK YOU TO **OCEAN**
RESEARCHER PARKER DAVENPORT



Flour and eggs have been the core ingredients of pasta for as long as anyone can remember. However, would you ever expect crickets to be one of these ingredients? Crickets serve as a great source of vitamins, fiber, minerals, and amino acids and are causing some “chirping” in the culinary world. Located near the Alps in northern Italy, the Italian Cricket Farm, serves as the largest insect farm in the country. Owner Ivan Albano facilitates the process of turning over a million crickets into bread, pancakes, energy bars, and pasta. Once assembled, the crickets are frozen, boiled, dried, and pulverized into a fine powder that can be added to recipes. Additionally, crickets are incredibly sustainable. Albano notes that cricket pasta not only has more iron and magnesium than steak, but it only takes 12 liters of water to produce as opposed to the thousands needed to produce the same amount of protein from steak. He notes, “What we do here is sustainable...the impact on the environment is almost zero.” Farming insects also takes a fraction of the land and resources as opposed to traditional cattle or poultry.

Yet, even with these considerations, there are just as many reservations about the new products. First, pasta containing crickets is almost eight times more expensive than pasta without them. Moreover, there are concerns about deviating from culinary tradition. Rancher and fourth generation farmer Claudio Lauteri voiced these opinions. Lauteri’s family has been eating meat for centuries, and within moderation, believes it to be a healthy way to uphold the Mediterranean diet. He even goes as far as saying, “[...] they could be a threat to people [...] we don’t know what eating insects can do to our bodies [...] I’m absolutely against these new food products. I refuse to eat them.” Although controversial, this did not stop Daniel Scognamiglio from incorporating a cricket tagliatelle into his menu. Scognamiglio noticed some ordering the pasta out of curiosity, while others criticized him as they did not want to change their eating habits. Nonetheless, eating insects continues to evolve in Europe and could make a surge very soon. Albano closes stating, “We are a piece of the puzzle that could save the planet.”



Further Information:

- <https://www.cricketpasta.com>
- <https://www.newfoodmagazine.com/article/22749/cricket-pasta-the-edible-insect-revolution-is-served/>

Image Source:

<https://www.bbc.com/news/world-europe-66022857>

Living with Endangered Giants in Belize

THANK YOU TO **OCEAN**
RESEARCHER ALEXANDRA AKMAEVA

The Antillean manatee (*Trichechus manatus manatus*) is an iconic marine mammal living in the coastal waters of Belize, along with other regions within the Gulf of Mexico and the Caribbean Sea. With a length of up to 13 feet, a weight that can reach 3,500 pounds, and an average speed of only 3–5 miles per hour, these gentle giants are a testament to nature’s wonders. Despite their imposing size, these herbivores pose no threat to humans or fellow ocean inhabitants due to their plant-based diet. However, manatees in Belize are on the precipice of critical endangerment status with only about 1,000 manatees living along the entirety of the Belizean coast. Jamal Galves, an esteemed conservationist and National Geographic Explorer, warns in the EDGE of Existence Programme that “If the numbers in Belize continue to dwindle, there is a possibility that this species may become extinct.” This decline is caused by a number of factors, with illegal hunting and bycatch, collision with boats, and habitat loss emerging as the most fatal among them.

Once an integral part of Belizean culture consisted of the hunting of manatees for their hides, oil, and flesh. However, in 1981 the enactment of protective measures helped shield the vulnerable species from hunting. Today, hunting manatees in Belize can land one in prison for months. [cont...]

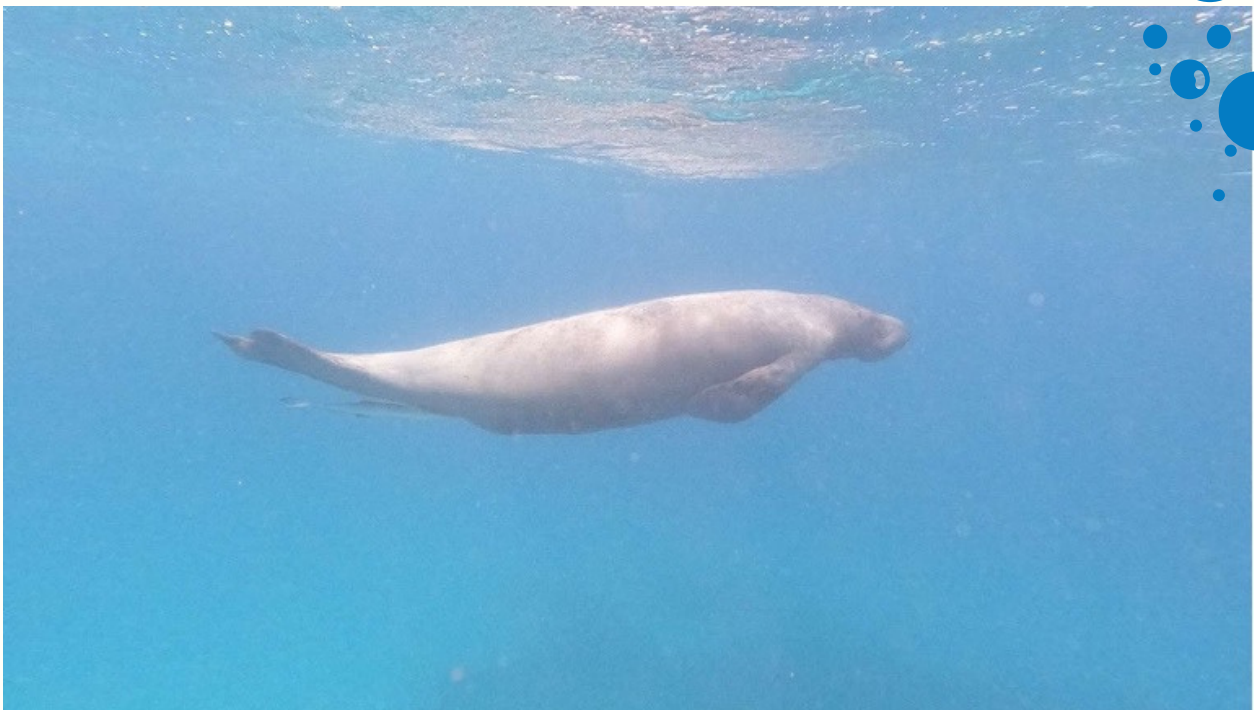


Image Source: **OCEAN** Researcher, Alexandra Akmaeva

Living with Endangered Giants in Belize Cont.

[Cont...] Before 1997, poaching was the main cause of manatee deaths, but was overtaken in 2010 by boat collisions. Acknowledging the escalating threat of boat collisions, the Belizean government has introduced speed regulations for watercraft and set wildlife safety patrols to penalize those transgressing these limits. However, due to the vast expanse of the Belizean coastline, stretching over 174 miles (over four times the length of the Cape Cod National Seashore), thus it is difficult to effectively monitor speeding vessels.

Rapid coastal development, dredging, and tourist boat trafficking have also led to the loss and degradation of vital manatee habitats such as seagrass beds, mangroves, and estuaries. These havens provide sustenance and shelter, with mangroves crucial in nurturing manatee offspring. Despite challenges, ongoing efforts to raise awareness, enforce regulations, and preserve these habitats are helping to ensure the survival and well-being of the Antillean manatee in Belize's waters.



Image Source: Doug Perrine Photography,
<https://dougerrine.photoshelter.com/image/I0000otXNE5I4T1o>

Further Information:

- <https://www.edgeofexistence.org/blog/saving-the-manatees-of-belize/>
- <http://www.wildtracksusa.org/manatee-rehab-center>
- <https://www.sanpedrosun.com/pets-animals/2016/12/16/increasing-number-manatee-deaths-boat-collision/>
- <https://www.oryxthejournal.org/blog/trouble-on-the-horizon-for-belizes-endangered-antillean-manatees/>

Thank you!

Editor's Final Thoughts:

I am especially grateful to Associate Editor Catherine Urquhart and Research Coordinator Jessica Hillman, for supporting my commitment to environmental education.

-Gordon Peabody, **OCEAN** Editor.

Check out our website for other free publications:

www.safeharborenv.com/ocean-newsletter

Thank you for your support!



Gordon Peabody,
*Safe Harbor
Director*



Jessica Hillman,
*Research
Coordinator*



Catherine Urquhart,
*Associate
Editor*

www.safeharborenv.com