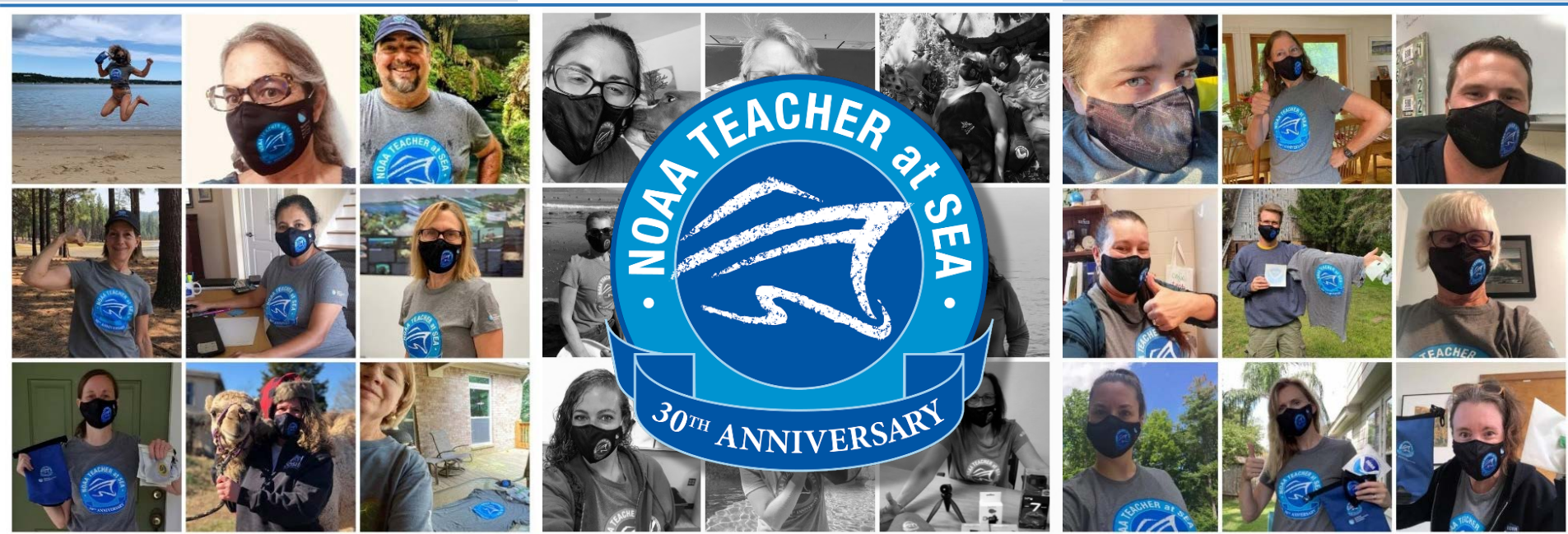
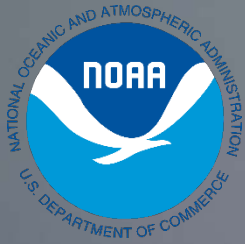


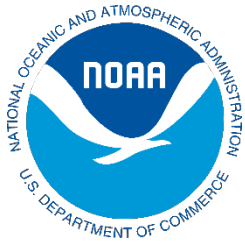
NOAA's Teacher at Sea Program



2020 Year in Review



CELEBRATING 30 YEARS OF NEW FRONTIERS 1990 - 2020



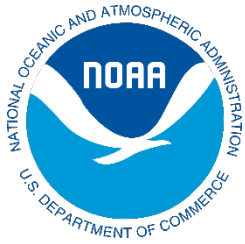
30 Years of NOAA's Teacher at Sea Program



In **1990**, NOAA Corps Officer LT Ilene Byron, educational coordinator at Monitor National Marine Sanctuary, selected high school teacher Debora Mosher from Norfolk, Virginia, to sail on a scallop survey aboard NOAA Ship *Oregon II*.

TAS '90 Debora Mosher shows off scallops from her 1990 Teacher at Sea experience

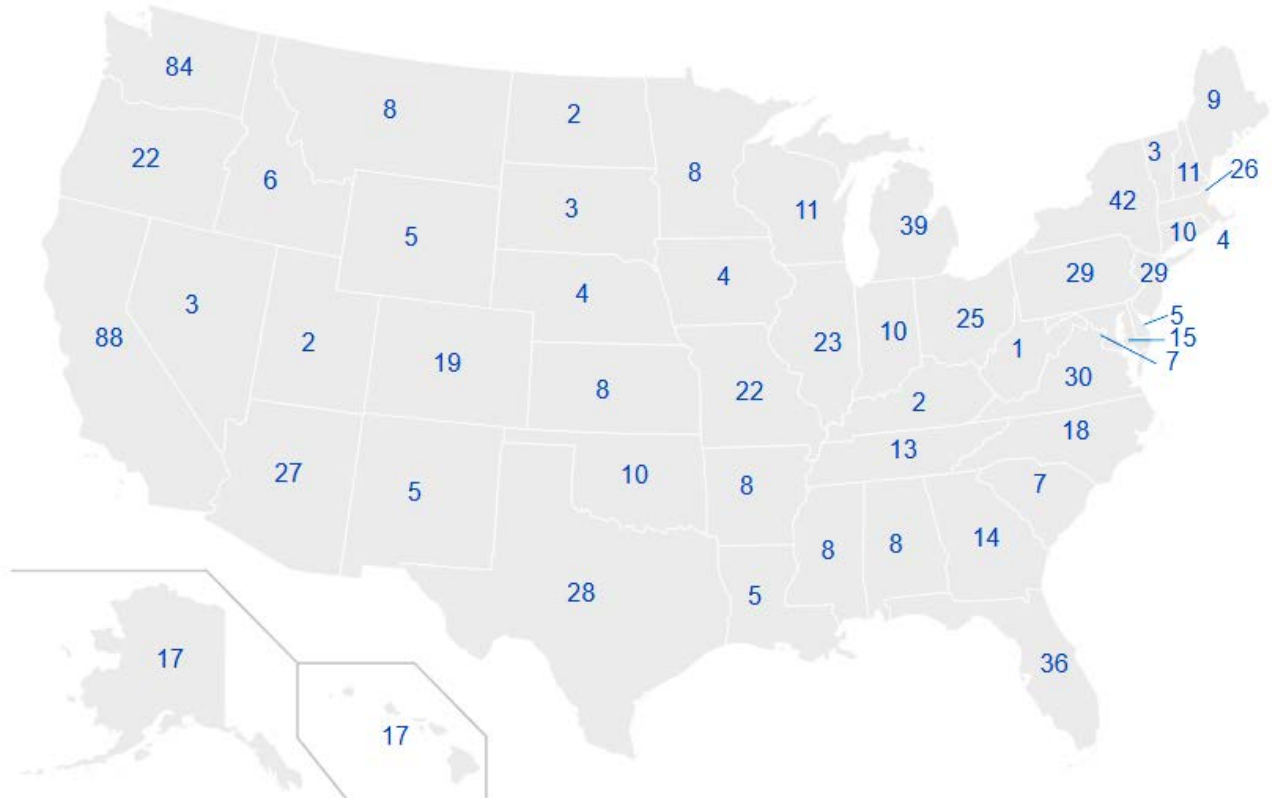




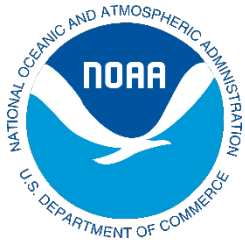
30 Years of NOAA's Teacher at Sea Program



Since then, **more than 850 teachers** have sailed on NOAA or NOAA-partner vessels through the Teacher at Sea Program.



Number of known Teacher at Sea participants from each state, from 1990-2019. No teachers sailed in 2020.



30 Years of NOAA's Teacher at Sea Program



NOAA Teacher at Sea Alumni

Northwest Southwest Gulf of Mexico Great Lakes New England Tri-State

Arctic Ocean

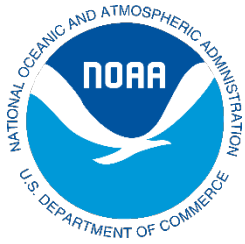
PACIFIC NORTH AMERICA

Atlantic Ocean

Pacific

In March 2020, we rolled out a new tool to tell the story of our alumni across the nation: an **interactive story map** that displays the locations of alumni in each region.

teacheratsea.noaa.gov/#/storymap/



Response to COVID-19



- 2020 Season
 - Selected and notified 20 teachers in January 2020
 - Postponed 2020 season and notified teachers on March 9, 2020
 - Keeping teachers in finalist status for the 2021 sailing season
- 30th Anniversary Symposium
 - Canceled the two-day celebration in Washington, DC
 - Published a virtual celebration with videos, web stories, & social media posts
 - Shipped 30th anniversary gear to alumni for distance celebration
- Teacher at Sea Alumni Association Partnership
 - Provided mini-grants for 60 teachers to receive school supplies to support virtual learning
 - Hosted an alumni webinar
 - Facilitated a virtual alumni workshop
 - Created a private alumni Facebook group to share best teaching practices and resources

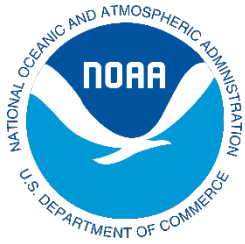


Celebrating 30 Years *from a Distance*



- Alumni Videos
- Web features
- #ThrowbackThursday social media campaign
- Partnering with Alumni Association to provide supplies





30 Years of New Frontiers: *Why Send Teachers to Sea?*



Teacher at Sea 30th Anniversary video feature



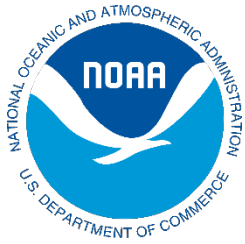
*Teachers at Sea have collectively supported more than **150,000 hours of NOAA research at sea**, working alongside scientists. But they not only help to advance the science. They also communicate the value of NOAA's work to new audiences.*



**National
Marine Sanctuary
Foundation**

Watch the video here:

<https://go.usa.gov/xA626>



30 Years of New Frontiers: *Facing Your Fears*



Teacher at Sea 30th Anniversary video feature

30 Years of New Frontiers: Facing Your Fears ← [Share](#)

NOAA Teachers at Sea discuss fears and apprehensions about part...

You gain strength, courage, and confidence by every experience in which you really stop to look fear in the face.



-Eleanor Roosevelt

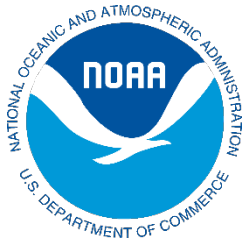
*NOAA's Teacher at Sea Program **presents a new frontier to educators.** It pushes them into unfamiliar territory, which can sometimes be intimidating.*



**National
Marine Sanctuary
Foundation**

Watch the video here:

<https://go.usa.gov/xA627>



30 Years of New Frontiers: *The Journey is Just the Beginning*



Teacher at Sea 30th Anniversary video feature



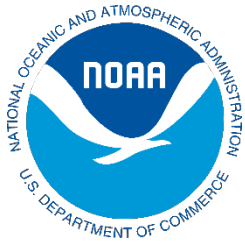
*More than **850**
Teacher at Sea alumni
across the nation create
a collaborative network
of educators who share a
passion for bringing
ocean science to life for
their students.*



**National
Marine Sanctuary
Foundation**

Watch the video here:

<https://go.usa.gov/xA62s>



30 Years of New Frontiers: *Looking Back on 30 Years of Teachers at Sea*



NOAA Fisheries web feature story

NEWS

Looking Back On 30 Years of Teachers at Sea

July 17, 2020

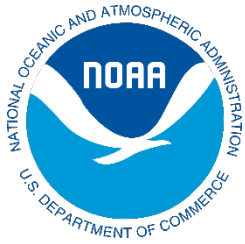
This week, we celebrate the 30th anniversary of NOAA's Teacher at Sea program. Join us as we look back at the history and accomplishments of this groundbreaking program.

[Feature Story](#) | National



For three decades, the Teacher at Sea program has helped teachers participate in annual NOAA research surveys conducted by our scientists. Teachers from around the country embark on a two to three week expedition at sea. They gain invaluable on-the-job experience and communicate their journey through a series of blogs and lesson plans.

<https://www.fisheries.noaa.gov/feature-story/looking-back-30-years-teachers-sea>



30 Years of New Frontiers: *Teachers at Sea Explore New Frontiers with Alumni Association*



NOAA Fisheries web feature story

NEWS

Teachers at Sea Continue To Learn, Educate, and Explore New Frontiers with Alumni Association

July 17, 2020

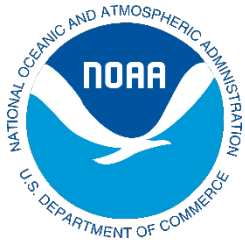
The Teacher at Sea Alumni Association provides networking and funding opportunities for hundreds of teachers across the country.

[Feature Story](#) | National



The Teacher at Sea Alumni Association formed in January 2011 to connect and support teachers who participated in the NOAA Teacher at Sea Program. Across the country, there are more than 300 active Teacher at Sea alumni serving as NOAA ambassadors.

<https://www.fisheries.noaa.gov/feature-story/teachers-sea-continue-learn-educate-and-explore-new-frontiers-alumni-association>



Highlighting History



#ThrowbackThursday social media campaign

Campaign highlighted Teacher at Sea program history by featuring recently digitized archive material such as:

- Newspaper articles
- Scanned photos and logs
- Letters from scientists



Photo of NOAA Ship *Miller Freeman* by
TAS '92 Ken Vandenheuvel

Highlighting History

#ThrowbackThursday social media campaign

Sample featured archive material:

Teacher Embarks on a Voyage of Discovery Aboard Ship Tending Weather Buoys

By ANDY ROCKS
Times Staff Writer

November, 1996



"So far, this ship has been a vast playground for the mind. Weather . . . physics, geology capture my imagination and curiosity."

BERRY JOHNSON
Environmental science teacher,
in dispatch from NOAA vessel

chairs and tables that anchor them to the ocean floor.

"The boats will attach their lines to them, and sometimes they're pulled off course, or they sink," she said. A few of the buoys they found had fishing lines still attached.

They reached the first buoy Aug. 4. A school of pilot whales swam around the site, some leaping and diving as if playing. A flock of birds perched on a mass of tangled lobster pot and a few multi-male

4 Community Life
COLUMBIANA COUNTY
Area teacher takes part in ocean research study

By GINA GULUTZ
Review Staff Writer

EAST LIVERPOOL — Curriculum sites across by Lac-Martin Elementary School teacher Marylin Parkes during her 25 days at sea will fit into place



The Townsend Cromwell, a ship in the National Oceanic and Atmospheric Association research program, is what teacher Marylin Parkes called home for 25 days at sea.

The fourth-grade teacher recently returned from the Pacific Ocean off the coast of Hawaii, where she participated in a National Oceanic and Atmospheric Association (NOAA) research study. For nearly the length of her stay, she sailed the NOAA ship, the Townsend Cromwell, home.

The Broadbill Scaupfish was the focus of the NOAA study, according to Parkes. Scientists and fishermen are interested in finding out more about the species' habits and determine. One of the goals was to figure out a way to catch the fish on a fishing line and when it would there was some to had little success in performing such a method because the species fights the line so hard.

Parkes said the first lesson she taught the first lesson was about the NOAA project that is open to teachers about two years ago while attending a workshop. She met a teacher from Michigan, "who was talking about a different opportunity that existed. The teacher advised other teachers might find it well worth the effort to get into the program."

Parkes accepted, a NOAA proposal was filed, and she was interviewed. She was told that if they were not with me, because of the 23-day period, she would be accepted. She was told that if they were not with me, because of the 23-day period, she would be accepted.

To save East Liverpool School District the cost of the trip, she was told that if they were not with me, because of the 23-day period, she would be accepted.

Part of the application process included providing information on when she would be available to go aboard. She also had to offer explanations of how she would use the material she possessed. She had to develop lesson plans and agree to present a talk of study at a workshop, or write an article. Parkes will be presenting a workshop to the teachers of the county.

When Parkes' application was accepted, she said she was surprised for two reasons: one, because of the 23-day period, she would be accepted. She was told that if they were not with me, because of the 23-day period, she would be accepted.

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Parkes checked with Robert McCaffery, assistant superintendent, to see if it could be absorbed through Eisenhower funds because it was a science-related event. McCaffery learned the only real difficulty there was no one to do the district for the substitute.

Because she would be in the classroom with her students for such a short while after the initial start of school, Parkes began making classroom preparations in the summer for the next school year.

Students were introduced to the idea on the first day of class. She discussed the trip with them and immediately began working on charting and graphing techniques with them. The classroom was filled with books and video references about the sea so that the students would feel they were part of the experience.

However, it was through Lac-Craft Principal Richard Wilky's efforts that this important factor was best accomplished. Wilky worked on the school committee to fund each of the students allowing Parkes to take the material she possessed. She had to develop lesson plans and agree to present a talk of study at a workshop, or write an article.

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plans in science, math, social studies or language arts. Parkes also included detailed descriptions of the classrooms of night at sea and the feelings of excitement and isolation after being tossed about on choppy waves by gales.

She described for them that while indulging in her East Liverpool habits of turning over classroom materials during the plane and days from which she was eating and drinking were made at Seering China in nearby Wileville.

At a class recorder on the ship, Parkes also was able to provide the names and number of fish and shark species caught during the trip, and other vital information.

In each classroom maintained back to her class, Parkes would also ask a question that would bring questions they had in the classroom or crew members.

For example, Parkes said in doing research about sealife, the students found several references to dangers due to the high mercury content found in the fish.

They had not and the chief scientist about the danger, he learned his knowledge and experience. It was to prevent of the mercury content found in the fish.

Teacher Kerry Johnson spent much of his summer aboard a ship maintaining weather buoys in the Pacific. Johnson, 41, rides in a cable boat to the buoys.



By CLARE BLANCHARD
Review Staff Writer

WEST LONG BEACH — William Johnson, 41, is a physics teacher at West Long Beach High School in West Long Beach who will spend his summer at sea with his own oceanography class and double his to teach others.

Blanchard, an earth science teacher at Shore Regional High School in West Long Beach for 29 years, took the trip this summer. He will be with his own oceanography class and double his to teach others.

The Western teacher spent 19 days at the 11th World Aquatics in Honolulu, Hawaii, in August aboard the National Oceanic and Atmospheric Administration's ship, the Townsend Cromwell. He and the other crew members conducted biological surveys and made medical checks of the ocean floor.

At the Shore Teachers in Annapolis, Md., Blanchard attended the Henry Project with 22 other teachers from across the country. The project is named after Mary L. Mathews Franklin, a 19th century female scientist and the father of physical oceanography. The project is designed to introduce science and math to the students of oceanography.

The teachers on the boat worked with the scientists conducting the survey, using computers and video to help them understand the data.

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Blanchard, an earth science teacher at Shore Regional High School in West Long Beach for 29 years, took the trip this summer. He will be with his own oceanography class and double his to teach others.

Science teacher gets his sea legs
A Shore Regional earth sciences instructor spent much of his summer taking part in two oceanography programs, one of them on a ship off the coast of Alaska

By CLARE BLANCHARD
Review Staff Writer

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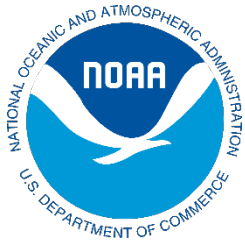
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William Blanchard, an earth science teacher at Shore Regional High School in West Long Beach, looks over scientific charts from his recent Alaskan trip.

Scanned newspaper articles about TAS '96 Marilyn Parkes, TAS '96 Kerry Johnson, and TAS '97 William Blanchard



Highlighting History



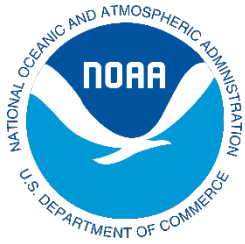
#ThrowbackThursday social media campaign

Sample post:

“Gumby” suit comparison also selected as a winner of NOAA Education’s internal photo contest and featured in their “Favorite Photos of 2020” story: <https://www.noaa.gov/education/photos-images/our-favorite-noaa-education-photos-from-2020>

Scanned photo of TAS '93 Virginia Figura (left) in a survival suit aboard NOAA Ship *Miller Freeman*





Highlighting History



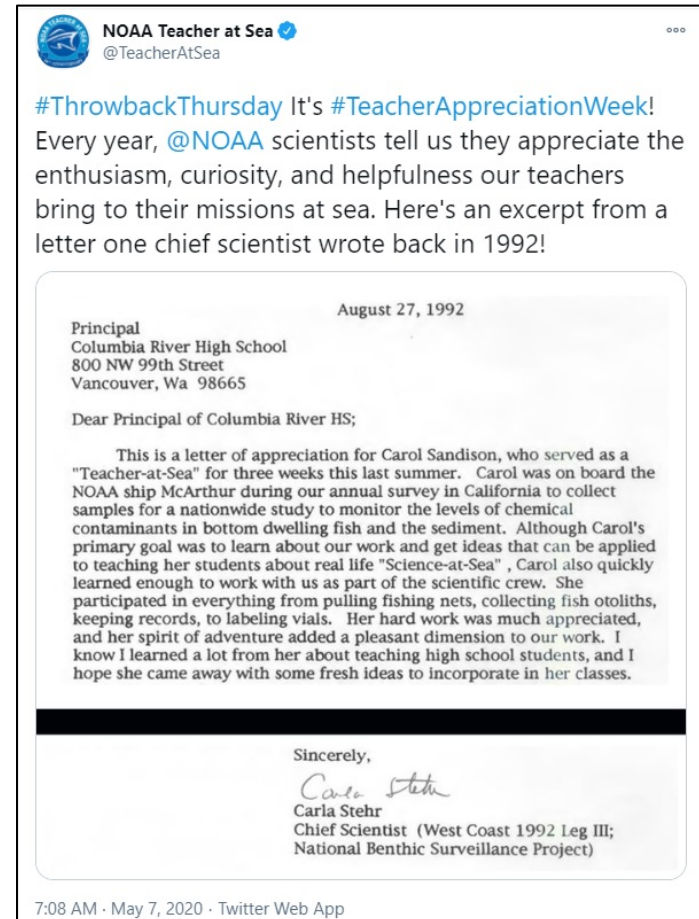
#ThrowbackThursday social media campaign

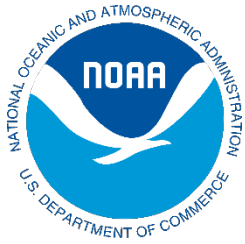
Sample post:

May 4-8, 2020:
Teacher Appreciation Week

Excerpt from letter from Chief Scientist
Carla Stehr about TAS '92 Carol Sandison:

*“Her hard work was much appreciated, and
her spirit of adventure added a pleasant
dimension to our work.”*





Supporting our Alumni as they Navigate Uncharted Waters



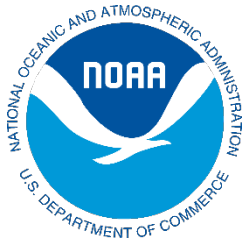
- Created a private TAS Alumni Association Facebook group
- Hosted webinars and networking opportunities
- Supported funding for remote teaching supplies

Need Supplies for Your Remote Classroom?

This [form](#) is for you to request supplies you need to help you through the end of the 2020 school year and to support you and your students as you adapt to your institution's response to COVID-19. Approved supplies will be purchased by TASAA directly and mailed to you. Email Britta Culbertson at britta@marinesanctuary.org with any questions.



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Supporting our Alumni as they Navigate Uncharted Waters



“NOAA Teacher at Sea is one of the few organizations that **provides a collegial network and continues supporting alumni in a variety of ways** after the sea-based portion of the program. It is an honor and pleasure being part of the TASA family!”

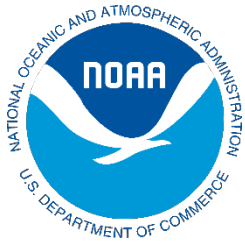
- TAS '13 Beverly Owens



“TASAA took a huge weight off of my shoulders by providing these materials! Now, I have the material lab I need for chromatography, evaporites, borax crystals, bouncy balls, paper circuits, oxidation, and pH testing. As well as a tablet that I can use to make illustrated study guides for students and use in remote learning videos.”



**National
Marine Sanctuary
Foundation**



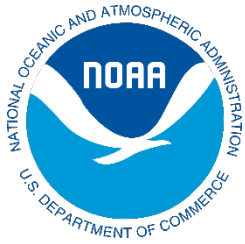
Supporting our Alumni as they Navigate Uncharted Waters



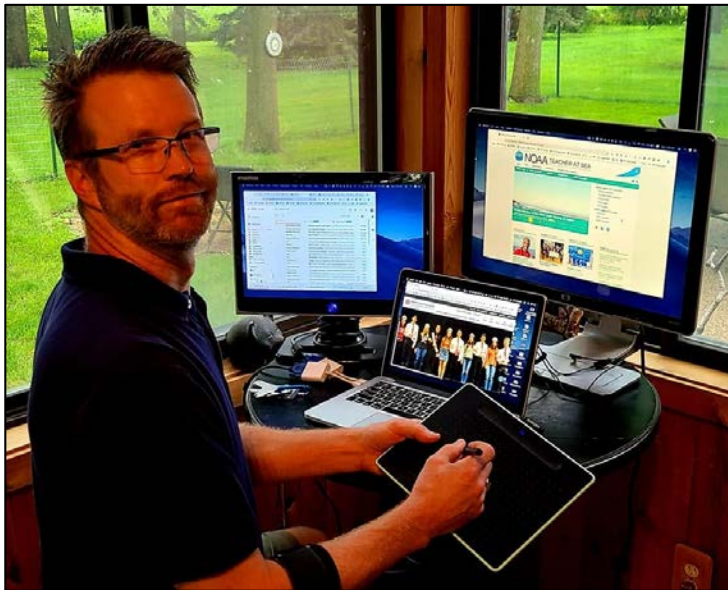
“Thank you so much for the headset, webcam, green screen and writing tablet. I appreciate your support in helping me make engaging online lessons for my students at the School of Innovation in Springfield, Ohio.” – TAS ‘18 Lee Teevan



National
Marine Sanctuary
Foundation



Supporting our Alumni as they Navigate Uncharted Waters



“A big thanks to the TAS Alumni team for new tools!! This pen-tablet will be **great for interacting with students** working on physics problems in **hybrid and distance learning!**”

– TAS '18 Eric Koser



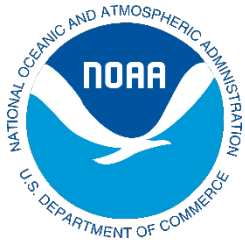
Thank you,
NOAA TASAA!

This new tablet tool will be great for digitally interacting with students in our new hybrid/distance world!
Eric, TAS 2018

Assuring learning excellence and readiness for a changing world
EXCELLENCE • RESPECT • RESPONSIBILITY • ADAPTABILITY • COLLABORATION • ENGAGEMENT • INTEGRITY



National
Marine Sanctuary
Foundation




TAS Alumni Webinar & Citizen Science Project



May 13, 2020

Join us on May 13th at 2 PM PT/5 PM ET for
A Sense of Place: Using Citizen Science to Promote Student Wellness and Literacy
a webinar with TASA Trevor Hance

As we celebrate 30 years of Teacher at Sea, we've been using the tagline "30 Years of New Frontiers". The changes brought by COVID-19 have presented all of us with a new frontier in almost every aspect of our daily lives. Like you, the Teacher at Sea program has been discovering how to chart a path through these unfamiliar waters, too.



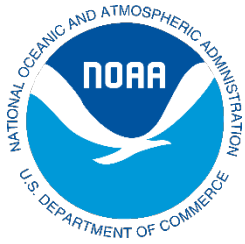
As alumni have requested support via webinars, we decided to begin by reaching out to our own community of experts--you, the alumni--to get started. With your help, we are going to host our FIRST webinar, Wednesday, May 13th at 2 PM PT/5 PM ET!



National Marine Sanctuary Foundation

Inaugural TAS Alumni Webinar:
In May, TAS '15 Trevor Hance gave a webinar to other TAS alumni on using citizen science apps such as iNaturalist to engage students in science and encourage them to get out in nature.

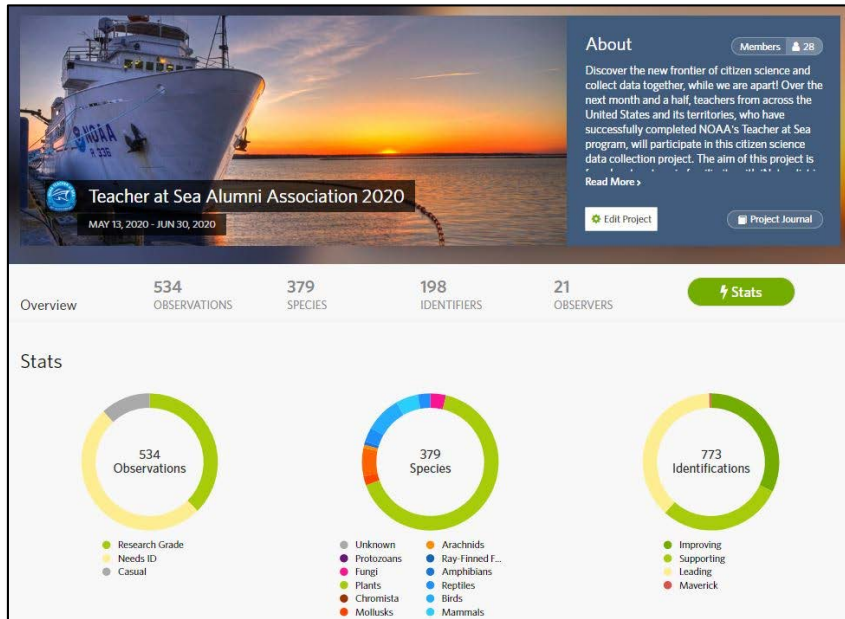




TAS Alumni Webinar & Citizen Science Project

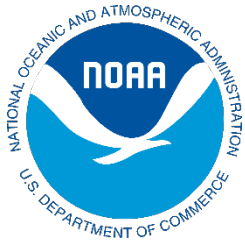


May-August 2020



The webinar kicked off a **TAS Alumni iNaturalist campaign** (“project.”) Through the project, 21 TAS alumni recorded 534 observations of 379 different species.





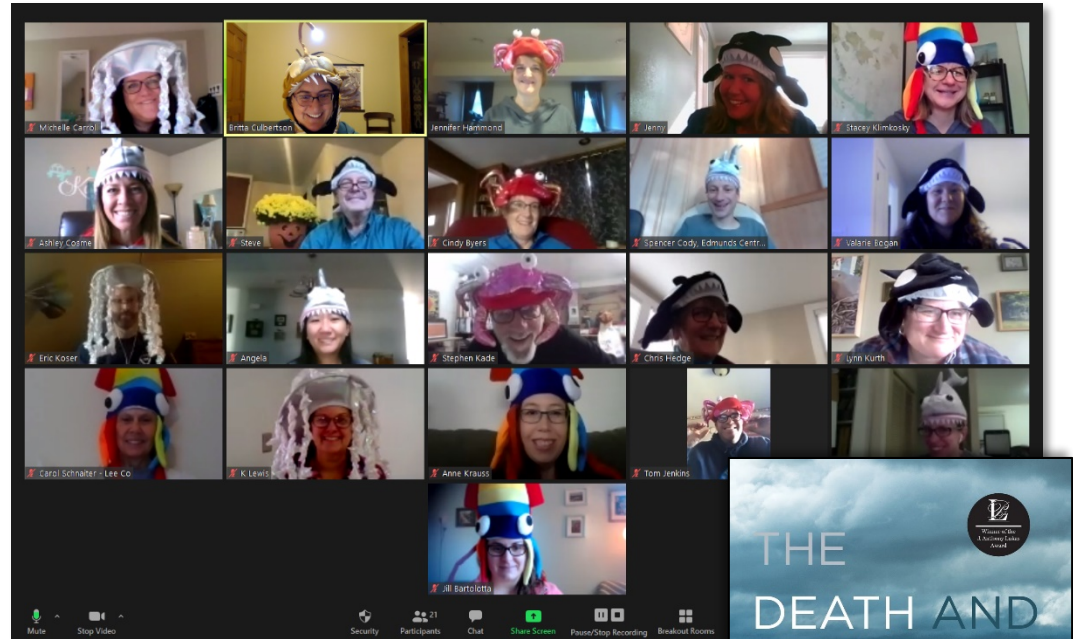
Great Lakes / Great Plains Teacher at Sea Alumni Meeting



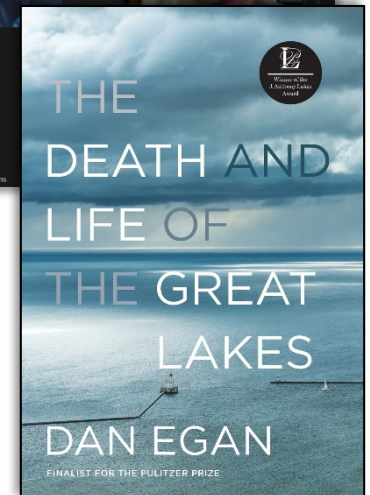
October 31, 2020

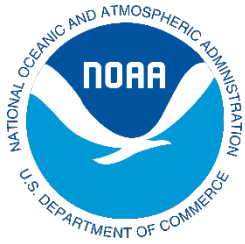
- **Attendees: 15 TAS alumni** from 8 Great Lakes states plus South Dakota (Great Plains!)
- **Agenda:** Introductions, small group discussions, virtual science museum scavenger hunt

Since it was Halloween, participants were sorted into small groups by marine-theme hats



- **Next step:** 2021 Book Club discussion of *The Death and Life of the Great Lakes* by Dan Egan





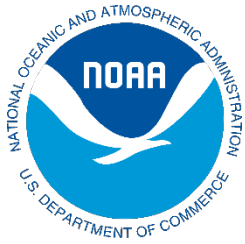
Alumni Perspectives #30YearsofNewFrontiers



“It was one of the most rewarding experiences I’ve had as a teacher, because I took a chance on myself... and it was completely different than the narrative I had in my head.”

- TAS '17 Sian Proctor

Quote from TAS video [“30 Years of New Frontiers: Facing Your Fears”](#)



Alumni Perspectives #30YearsofNewFrontiers



“This is an opportunity to test yourself and to show yourself what you can do. You will come back feeling invigorated, with a head full of ideas, and with a new empathy for your students for being thrust into new situations and asked to make sense of them. **Teacher at Sea is a safe and very worthwhile opportunity to challenge yourself to growth.**”

- TAS '06/'16 **Barney Peterson**



Quote from TAS Video [“30 Years of New Frontiers: Facing Your Fears”](#)



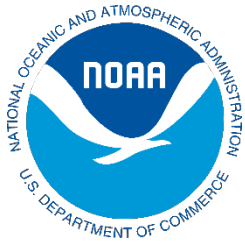
Alumni Perspectives #30YearsofNewFrontiers



“It’s amazing how much everyone has done with either data that they collected or personal connections with scientists that they made while they were on board their ships. Talking with them and finding ways to then bring it all together and mesh it into new lessons is amazing.”

- TAS '08 **Tiffany Risch**

Quote from TAS Video [“30 Years of New Frontiers: The Journey is Just the Beginning”](#)



Scientist Perspectives

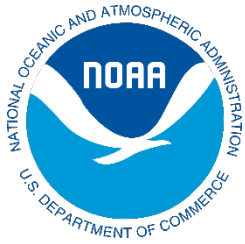


“[Hosting a Teacher at Sea] is another way to **see what you do through someone else’s eyes** and remind yourself how lucky we are sometimes to do the work we do.”
- Fisheries Biologist **Kristin Hannan**



Biologist Kristin Hannan examines a crab with TAS '14/'16 Spencer Cody and his students during their field trip to NOAA's Pascagoula Laboratory in 2019.

Quote from TAS Video [“30 Years of New Frontiers: Why Send Teachers to Sea?”](#)



Scientist Perspectives

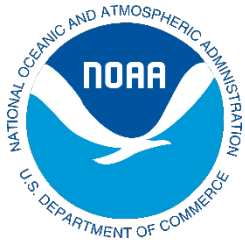


Biologist Lisa Jones demonstrates a shark dissection for TAS '06/'16 Barney Peterson's class in Everett, WA.

“Having the Teacher at Sea participants come out with us, and spending this kind of intense time with them, has **helped me hone my skills at outreach**. I get to talk to real teachers that spend most of their time in the classroom. They’ve really helped us tighten up our outreach efforts.”

- Fisheries Biologist **Lisa Jones**

Quote from TAS Video [“30 Years of New Frontiers: Why Send Teachers to Sea?”](#)



Looking Forward to the Future



- Hosting a virtual Mid-Atlantic Alumni Meeting in February 2021
- Supporting Alumni Association projects
- Monitoring COVID-19 shipboard safety protocols
- Analyzing TAS operations and logistics to sail teachers in 2022

