

# Connecticut State University Outer Island Education Program Report

Submitted by:

Vincent T. Breslin

Environment, Geography and Marine Sciences

Southern Connecticut State University

March 2025

## **Connecticut State University Outer Island Summer Programs**

### **Outer Island Interns**

Interns are hired each summer to staff Outer Island and to assist visiting groups with educational programming during their visit to the island. The interns also conduct research activities, including water quality monitoring, and participate in maintenance activities on the island facilities. Below are brief bios for the Summer 2024 Outer Island Interns:



**Kaitlin Cole**

My name is Kaitlin Cole. I am a biology major at Central Connecticut State University, graduating in May 2024. My studies at CCSU have focused on ecology, biodiversity, and evolution. My fascination with the natural world began when I was a child; The home I grew up in was surrounded by 5 acres of forest, carved with flowing streams and a small pond, all of which I used for my own personal exploration. I remember looking for frogs, turtles, worms, and any other curiosity I could find while enjoying the serenity and sense of adventure I felt in the woods. Jane Goodall, Steve Irwin, and David Attenborough were some of my childhood heroes, and still are today.

Outside of school, I enjoy hiking, painting, reading, watching documentaries, and exploring unfamiliar places. In January 2024, I traveled to Belize for a study abroad trip, where we observed the biodiversity of the Belize Barrier Reef and learned about the marine and jungle ecosystems that comprise the region. The trip was truly life changing and eye opening; Seeing the beauty and interconnectedness of the wilderness up close solidified to me how important it is to protect it, while making it clear that wildlife biology is the correct career path for me.

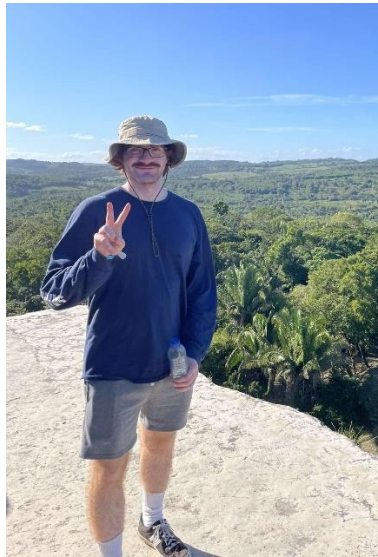
I am thrilled to have the opportunity to work on Outer Island at the Stewart B. McKinney Wildlife Refuge this summer! I am eager to do my part in protecting and preserving the coastal wildlife and beautiful habitat of Long Island Sound. This will be my first hands on experience outside of school using wildlife techniques, so I am very excited to learn and experience new things, while also teaching others! I hope to see you out there this spring and summer!



**Meg Magalik**

My name is Meg Magalik, I'm a junior at Central Connecticut State University studying Biology. I have always had a very deep interest in the natural world and our environment since I

was a child, and much of it has to do with growing up on Long Island sound. I am hoping to become a scientific educator in the future- one of my passions is sharing that love for science with others and am looking forward to assisting with educational programs here on Outer Island! Some of my passions include wildlife photography, hiking, fishkeeping, and drawing. I'm excited to work with you all this summer!



**Aidan Surian**

My name is Aidan Surian. I am a senior at Central Connecticut State University, graduating in May 2025. I currently study biology with a focus on environmental science, but in the future, during a master's program, I hope to study marine ecology. My passion for science started at a young age, but it bloomed after reading *Into the Wild* by Jon Krakauer. After learning about an individual's deep connection with nature, I felt it calling out to me as well. So, during my free time, I enjoy hiking, rock climbing, running, and swimming.

During my time at CCSU, I have fallen in love with our oceans, especially after my study abroad course in Belize, where I got to snorkel in a great barrier reef ecosystem! Once I heard about the

opportunity to work on Outer Island at the Steward B. McKinney Wildlife Refuge, I knew it was the right place for me to work this summer. I am ecstatic to be researching while also getting to meet everyone on the island and provide my assistance in any way that I can! Hope to see you all this summer!



### **Rheannon Smyth**

My name is Rheannon and I am in my senior year of studies in ecology, biodiversity, and evolutionary biology at Central Connecticut State University. I am a dedicated and passionate environmental enthusiast with a strong background in sustainability initiatives, community engagement, and academic pursuits in ecology, biodiversity, and evolutionary biology. I am excited about my role at the Stewart B. McKinney Wildlife Refuge on Outer Island this summer and am happy to contribute skills and expertise to advance environmental conservation and sustainable practices here.

I have long been fascinated by the natural world and science-based approaches to its conservation. Since beginning research under Dr. Jarrett, I have performed marine field surveys in two locations around the Caribbean Sea. Additionally, we are investigating genetic

distinctiveness among/between local populations of Caprellid (skeleton shrimp) including samples collected around Outer Island. We are comparing variation of invasive and native species in hopes of determining points of introduction and/or spread of these species.

### **Lilly Tisdale**

Lilly Tisdale is an Environmental Systems and Sustainability Studies major with a Marine Studies concentration at SCSU. Lilly assisted the Friends of Outer Island with middle school student group visits to Outer Island in May-June 2024. Lilly assisted with organizing and implementing educational programming on the island.

### **Ferry Tickets**

As in past years, Thimble Island Ferry tickets were purchased during the summer 2024 for use by the interns and visitors to Outer Island. Tickets were purchased on four occasions: 5/1 (14 books; \$1,960), 6/27 (1 book; 140), 7/2 (14 books; \$1,960), and 8/27 (4 books; \$756).

### **Schedule of Visitors**

The island interns supervised group visitors on Outer Island from May 20<sup>th</sup> until the island seasonal closing on September 20<sup>th</sup>, 2024. Those visitors included fifteen different groups that scheduled 25 separate visits during the summer 2024 with an estimated 558 visitors participating in education programs (see attached schedule). Both the number of scheduled groups and the total number of scheduled group visitors to Outer Island in summer 2024 were higher compared to recent years. Many of the scheduled groups were repeat visitors. The number of groups and visitors is increasing following the visitor restrictions imposed during 2020-2021.

## Outer Island Visitor Schedule 2024

CSU Escort	Date	Time	Attendance	Organization	Contact	Email
FOI	20-May	9:00a-1:00p		West Haven High School	Carissa Anastasio	
Interns	21-May	9:00a-1:00p	15	Unquowa School	Josh Bartosiewicz	joshua.bartosiewicz@unoquowa.org
USFWS	22-May	9:00a-1:00p		Hill Central School	Shaun Roche	shaun_roche@fws.gov
Interns	23-May	9:00a-1:00p	15	Cold Spring School	Melinda Alcosser	malcosser@coldspringschool.org
USFWS	24-May	9:00a-12:30p		Hill Central School	Shaun Roche	shaun_roche@fws.gov
USFWS	28-May	9:00a-12:00p	25	King-Robinson School	Shaun Roche	shaun_roche@fws.gov
USFWS	29-May	9:00a-12:30p	25	Worthington Hooker School	Shaun Roche	shaun_roche@fws.gov
USFWS	30-May	9:15a-12:30p	25	Worthington Hooker School	Shaun Roche	shaun_roche@fws.gov
USFWS	31-May	9:00a-12:00p	25	King-Robinson School	Shaun Roche	shaun_roche@fws.gov
USFWS	3-Jun	9:00a-12:45p	25	Conte West Hills School	Shaun Roche	shaun_roche@fws.gov
USFWS	4-Jun	9:00a-12:45p	25	Conte West Hills School	Shaun Roche	shaun_roche@fws.gov
USFWS	5-Jun	9:00a-12:45p	25	Conte West Hills School	Shaun Roche	shaun_roche@fws.gov
USFWS	6-Jun	9:00a-1:00p	25	Ashford School	Shaun Roche	shaun_roche@fws.gov
Interns	7-Jun	9:00a-1:00p	25	Bristol Eastern High School	Lexie Fulton	lexiefulton@bristolk12.org
USFWS	10-Jun	9:00a-1:00p	25	Ashford School	Shaun Roche	shaun_roche@fws.gov
USFWS	11-Jun	9:00a-1:00p	25	Ashford School	Shaun Roche	shaun_roche@fws.gov

Interns	12-Jun	10:00a-1:00p	40	Brass City Charter School	Becca Caravello	<a href="mailto:bcaravello@brasscitycharter.org">bcaravello@brasscitycharter.org</a>
Interns	13-Jun	8:00a-12:00p	16	Saint Martin de Porres Academy	Allison Rivera	<a href="mailto:president@saintmartinacademy.org">president@saintmartinacademy.org</a>
Interns	14-Jun	8:00a-12:00p	19	Saint Martin de Porres Academy	Allison Rivera	<a href="mailto:president@saintmartinacademy.org">president@saintmartinacademy.org</a>
FOI	25-Jun	9:00a-1:00p	10	Group of veterans	James Lockhart	
FOI	26-Jun	9:00a-11:30a	24	Festival of Arts and Ideas	Denise Santisteban	<a href="mailto:denises@artidea.org">denises@artidea.org</a>
FOI	26-Jun	5:00p-6:45p	12	Friends of Outer Island- Board Meeting	Ginny Baltay	<a href="mailto:virginia.baltay@gmail.com">virginia.baltay@gmail.com</a>
FOI	27-Jun	9:00a-11:30a		(RAIN DATE) Festival of Arts and Ideas		
Interns	17-Jul	9:30a-5:00p	15	Harris Lab at Yale	Theophilus Human	
Interns	18-Jul	10:00a-12:00p	18	Branford Paddle Sports	Eileen	<a href="mailto:eileen@branforddiverpaddlesports.com">eileen@branforddiverpaddlesports.com</a>
Interns	29-Jul	10:00a-3:00p	22	Solar Youth Summer Camp	Gammy Moses	<a href="mailto:gamalielmoses1@gmail.com">gamalielmoses1@gmail.com</a>
Interns	30-Jul	10:00a-3:00p	22	Solar Youth Summer Camp	Gammy Moses	<a href="mailto:gamalielmoses1@gmail.com">gamalielmoses1@gmail.com</a>
SCSU	16-Aug	11:15a-4:00p	25	SCSU LSAMP Group Event	Terri Bennett	<a href="mailto:bennett1@southernct.edu">bennett1@southernct.edu</a>



## **Research Activities**

### **Water Quality Monitoring**

Water quality parameters were monitored by the CSU interns during the summer 2024 from May 22<sup>nd</sup> to September 26<sup>th</sup>. Water quality monitoring occurred each day at 10:00 am from the end of the floating dock. Water quality parameters monitored included: water temperature, salinity, conductivity, specific conductance, dissolved oxygen, Secchi disk depth, turbidity, and pH. All measurements were made on water samples collected from a depth of one meter.

Salinity measurements showed little variability, with a range of only 25.0 ppt (5/22) to 28.2 ppt (8/7), while conductivity showed a slightly larger range from 30.92 mS (5/24) to 42.31 mS (8/3) (Figure 1a). Both parameters showed similar variability compared to previous years. The water temperature gradually increased from the spring to the end of the summer. The water temperature ranged from 14.0°C (5/24) to a high of 25.2°C (8/11). Variations in water temperature over the summer correlated well with changes in measured air temperature (Figure 2). Dissolved oxygen concentrations were highest initially (10.69 mg/L) on 6/9 and showed a decrease over the summer months correlating with increasing temperatures reaching a low of 5.69 mg/L on 7/23 (Figure 1b).

Water clarity, as measured by a Secchi disk, varied from 0.48 m (6/14) to 1.9 m (9/11) during the monitoring period (Figure 3a). pH ranged from a low of 7.52 (8/7) to a high of 8.06 (6/7) (Figure 3b). Like other parameters this season, water clarity/turbidity and pH showed similar variations with previous years.

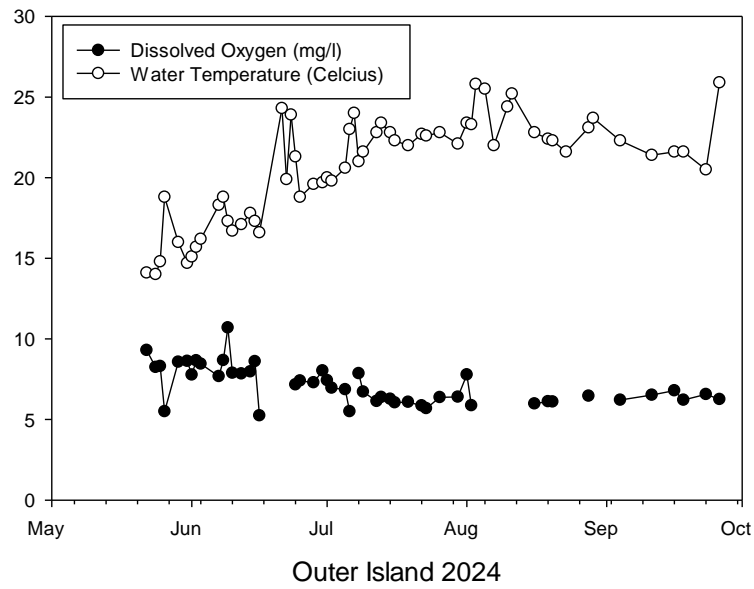
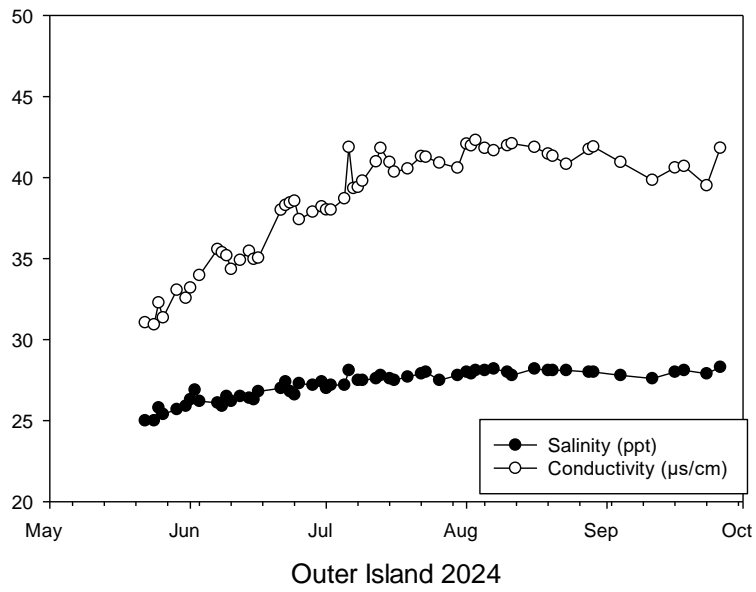


Figure 1. Outer Island 2024 water quality monitoring results: (a) salinity and conductivity and (b) temperature and dissolved oxygen.

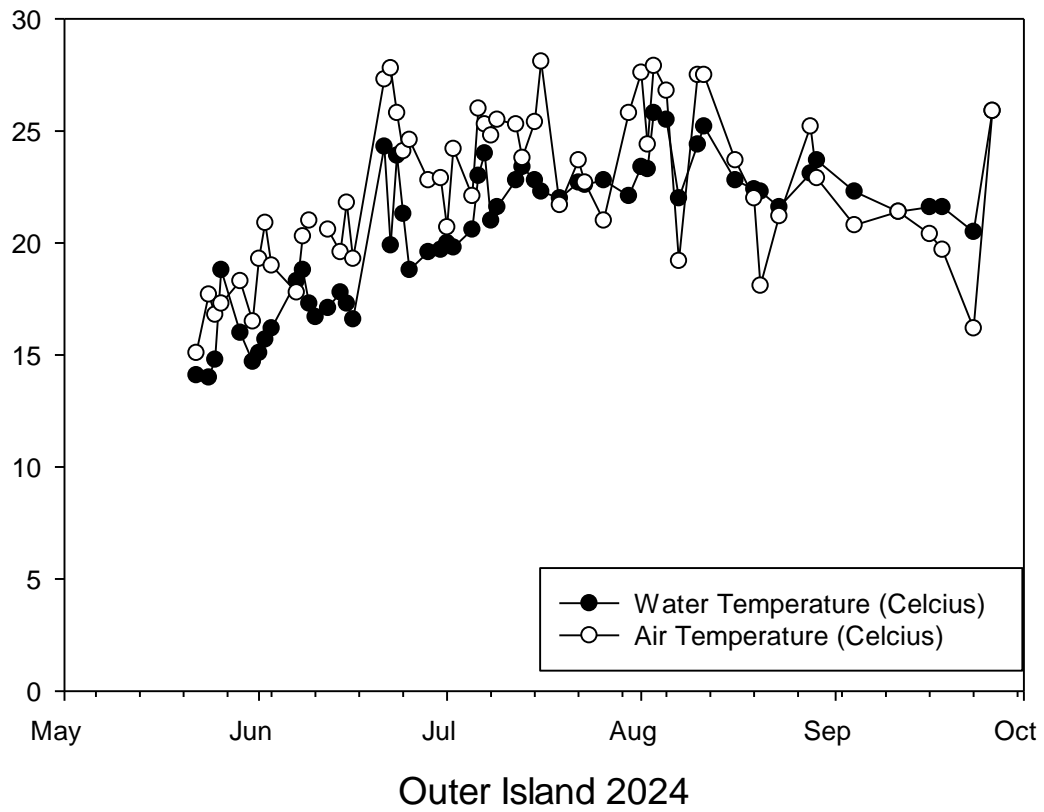


Figure 2. Outer Island 2024 water quality monitoring results: water and air temperature.

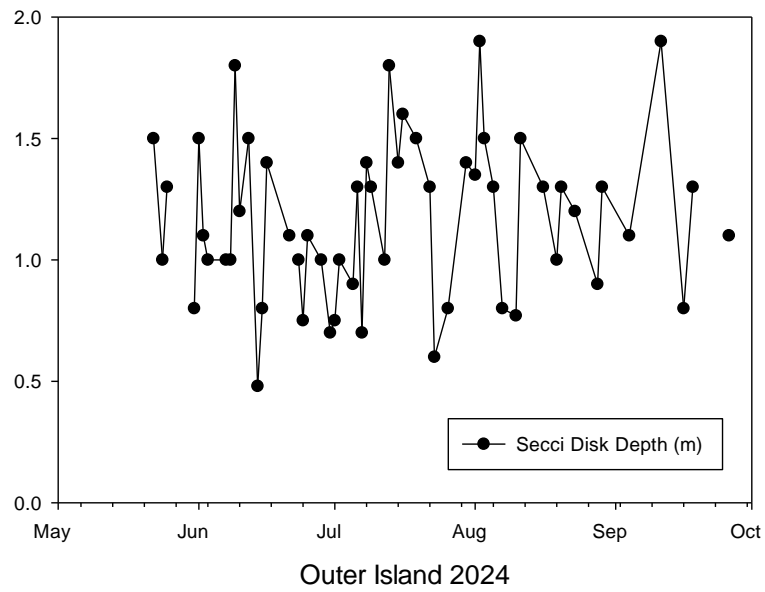
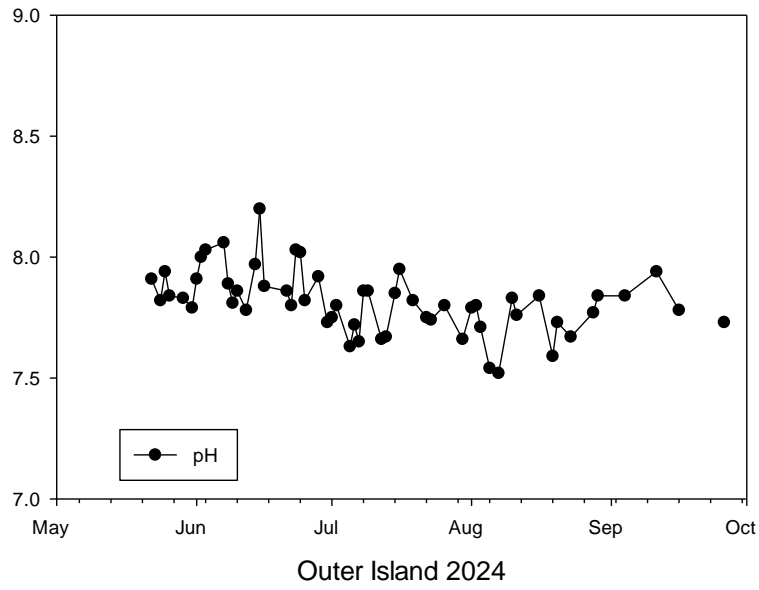


Figure 3. Outer Island 2024 water quality monitoring results: (a) pH and (b) secchi disk depth.

## Outer Island Website Update

We continue to upgrade and revise the Outer Island website ([www.outerisland.org](http://www.outerisland.org)) to create a more informative, user friendly interface for Outer Island information and educational programming. The website hosts two web cameras on both the landing page and the weather conditions pages of the website. In fall 2023, Earth Networks installed an Axis HD camera package and a Davis Weather Station. Both installations represent a significant upgrade in the facilities and the weather data and web camera images can be accessed at (<http://outerisland.org/index.php?id=current-weather-conditions>). Both pieces of equipment have been performing well with no reported issues/few outages.

Paul Johnson, (extended PSA) the Outer Island website coordinator, continues to post new content. The visitor calendar continues to be updated frequently and continues to be a resource for scheduling educational and civic group programs. Recent updates to the website have been completed, or are scheduled to be completed including:

- Narrative changes to the homepage
- Changes to the Visit Outer Island page
- Intern bios (2024)
- Water quality data (2024) and
- Annual reports (2024)
- Attendance reports (2024).

## AT&T Wireless Account

The AT&T wireless account used in support of the Outer Island WeatherBug station and video cameras now supports two wireless lines transmitting data and images. The two lines support the cameras and WeatherBug weather data. AT&T broadband access fees for the wireless for the 12 months service period from April 2024 to March 2025 totaled \$1,240.

## Outer Island Children's Library

Nine new environmental/marine themed books were purchased (\$483.35) for the Outer Island library (see photo and attached bibliography for titles) in support of educational programs. Several of the children's books feature diversity and inclusion themes (characters/language). The island now has a diverse collection of marine reference books and children's books for public use.



### Newly Purchased Children's Books (New Titles Bold)

- Befort, O. (2019). *Backpack explorer: Beach Walk*, Storey Publishing. ISBN: 9781612129020, Pages 1-48.
- Burgess, T. W., Southwick, W. H., & Sutton, G. M. (2005). *The Burgess seashore book for children*. Dover Publications. ISBN: 978-0486442532, Pages 1-288.
- Butterfield, Moira. (2022). *Look What I Found at the Beach*. Candlewick Press. ISBN: 978-1536223972. 32 pp.
- Byrd, Jesse & Messner, Andressa. (2023). *Marina: A Story About Plastic and the Planet*. Paw Prints. ISBN: 978-1223186658. 40 pp.
- Davies, Becky. (2020). *Little Turtle and the Changing Sea: A Story of Survival in our Polluted Oceans*. Tiger Tales. ISBN: 978-1680101997. 32 pp.
- Diesen, D., & Hanna, D. (2019). *The pout-pout fish cleans up the ocean* (First edition). Farrar Straus Giroux. ISBN: 978-0374309343, Pages 1-32.
- French, Jess. (2019). What A Waste: Trash, Recycling, and Protecting Our Planet. ISBN: 978-1465481412. 72 pp.**
- French, Jess. (2021). *La Vida Secreta de los Océanos*. DK Children. ISBN: 978-0744048650. 80 pp.
- Garrow, L. illus, & Tibbitts, C. K. (1999). *Seashells, Crabs & Sea Stars*. NorthWord. ISBN: 978-1559716758, Pages 1-48.
- Hammerson, Geoffrey. (2022). Connecticut Wildlife: Biodiversity, Natural History, and Conservation. ISBN: 979-8829988227. 475 pp.**
- Hawthorne, Lara. (2020). *Alba and the Ocean Cleanup: A Story About Saving Our Oceans*. Picture Press; Illustrated edition. ISBN: 978-1536210446. 32 pp.
- Hood, Susan. (2021). The Last Straw: Kids vs. Plastics. ISBN: 978-0062981394. 48 pp.**
- Lattimer, James, Tedesco, Mark and Swanson, Lawrence. (2013) Long Island Sound: Prospects for an Urban Sea. ISBN: 978-1461461258. 583 pp.**
- Lord, Michelle & Blattman, Julia (2020). *The Mess That We Made*. Flashlight Press. ISBN: 978-1947277144. 32 pp.
- Martin, Claudia. (2020). Children's Encyclopedia of Ocean Life: A Deep Dive into Our World's Oceans. ISBN: 978-1789506013. 128 pp.**

Murray, L., (2019) *Beneath the Waves*, Big Picture Press, ISBN 978-1-5362-1040-8, pages 1-60.

Muñoz Ryan, P., (2003), *Hello Ocean / Hola Mar*, Charlesbridge Publishing, ISBN 978-1-57091-372-3, pages 1-32.

Pfister, M., (1992) *The Rainbow Fish / Il Pesce Arcobaleno*, NordSud Verlag AG, ISBN 978-0-7358-4370-7, pages 1-29.

**Plass, Maya. (2020). *Oceanology: The Secrets of the Sea Revealed*. ISBN: 978-0744020502. 416 pp.**

**Proctor, Noble. (2005). *A Field Guide to North Atlantic Wildlife: Marine Mammals, Seabirds, Fish and Other Sea Life*. ISBN: 978-0300106589. 256 pp.**

Rosa-Mendoza, G., (2021) *Who Lives in the Sea? / ¿Quién vive en el mar?*, *Chosen Spot Publishing*, ISBN 978-1-945296-09-3, pages 1-17.

Scales, H., (2022) *What a Shell Can Tell*, Phaidon Press, ISBN 978-1-83866-431-2, pages 1-47.

**Shumway, Scott. (2008). *Naturalists Guide to the Atlantic Seashore: Beach Ecology from the Gulf of Maine to Cape Hatteras*. ISBN: 978-0762742370. 240 pp.**

Sibley, D. (2020). *What it's like to be a bird: What birds are doing, and why -- from flying to nesting, eating to singing*. Alfred A. Knopf. ISBN: 978-0307957894, Pages 1-240.

**Simmons, Ernest. (2005). *Earth Sky + Water Folding Guide- Birds of the New England Coast*. ISBN: 978-1893770546. 12 pp.**

Stahl, B. (2019). *Save the ocean*. Bethany Stahl. ISBN: 978-1732395138 Pages unknown.

Trinick, L., White, T., (2021) *Oceanarium*, *Big Picture Press*, ISBN 978-1-78741-631-4, Pages 1-96.

**Van Patten, Margaret. (2006). *Seaweeds of Long Island Sound*. ISBN: 978-1878301093. 104 pp.**

Weiss S., (2018) *Ocean: Secrets of the Deep*, *White Star s.r.l*, ISBN 978-1-9999680-7-6, Pages 1-71

Wright, A., & Peck, M. H. (1992). *At home in the tide pool*. Charlesbridge. ISBN: 978-0881064834, Pages 1-32.



SCSU Outer Island Funds Accounting 2024-2025											
Category										Funds	Funds
										Awarded	Disbursed
<b>Personnel</b>											
	Honorarium	(Outer Island website maintenance)								\$2,400	\$2,900.00
		(60 hours @ \$40/hour)									
	Tuition (Intern 3 credits)									\$2,000	\$0.00
	Stipend (Lilly Tisdale)									\$0	\$1,100.00
<b>Supplies</b>											
	Water Quality Supplies									\$5,000	\$468.00
	Field supplies(weather meters, water samplers)										\$1,208.00
	Art Workshop Supplies										\$0.00
	Educational Supplies and Books										\$483.35
	Friends of Outer Island Equipment request									\$1,100	\$254.55
	Binoculars, spotting scope, throw net, pH paper										\$222.02
	Thimble Islands Ferry Tickets to Outer Island									\$3,600	\$1,900.00 1-May
											\$140.00 27-Jun
											\$1,900.00 2-Jul
											\$756.00 27-Aug
<b>Travel (in State)</b>											
	Annual AT&T Broadband Access fees	(April 2024-March 2025)								\$1,500	\$1,240.88
<b>Total Funds Requested 2024-2025</b>											
									\$15,600	\$12,572.80	