



Winter 2019 Edition

It's time to "chill out" and catch up with New Jersey Sea Grant Consortium! We hope that everyone enjoyed a wonderful holiday season, but now let's get ready to "spring forward." Check out some highlights from this edition of the *COASTodian*:

- NJSGC revamped its rip current awareness program, and we're currently looking for more student participation. Learn how to get your local school or library involved.
- The 16th annual Ocean Fun Days takes place May 18-19th, so be sure to join our official [Facebook event page](#) for special highlights and updates.
- Former NJSGC fellow Dr. Christopher Free was recently featured in a *New York Times* article... continue reading to find out why!
- Interested in a job where you get to explore Sandy Hook while teaching children about marine science? NJSGC's hiring part-time field instructors, with no experience necessary!

Plus so much more! And as always, be sure to check out what's new and get involved by tagging us on [Facebook](#), [Instagram](#), and [Twitter](#).



<https://www.nps.gov/gate/barracks-building-22-restored.htm>

NJSGC "THROWBACK" PHOTO

**~ Barracks building 22 restored ~
Executive Director Claire Antonucci
cuts the ribbon for New Jersey Sea
Grant Consortium's grand opening
at Fort Hancock in Sandy Hook, NJ
on July 12th, 2010.**

From left: Dr. Howard Parish (NJSGC Board of Trustees), Pete McCarthy (Unit Coordinator; NPS), Sean T. Kean (former State Senator; 2008-2012), Claire Antonucci (NJSGC Executive Director), Guy Hembling (Charles B. Hembling and Son, construction firm), Deborah Quinn (NJSGC Office Manager) Credit: Marsha Samuel (former NJSGC Communications Specialist)

NJSGC Programs Update

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The Year-Round “Coastal Experience”



NJSGC’s field trip program is available for bookings throughout the year, including summer break. We have a variety of marine and coastal science offerings to choose from, all aligning with NJSLs and NGSS.

Please visit our [website](#) for more information and to complete an [online reservation request](#). For help with selecting a program that best suits your group’s needs, contact our Education Associate [Melanie Tarling](#) at 732-872-1300 x13.

Educational Fun Under the Sun

NJSGC’s marine science summer day camp is back for another exciting season! Please note that five different sessions are now available for 2019:

- July 8-12 (4th-6th grades)
- July 15-18 (3rd-4th grades)
- July 22-26 (7th-8th grades)
- July 29-August 2 (5th-6th grades)
- August 5-9 (7th-9th grades)

For more information on weekly themes and how to register, please visit our [website](#) or contact NJSGC’s Special Programs Coordinator [Rosemary Higgins](#) at 732-872-1300 x19.



Welcome to Scouts USA!

Weekend and after-school scheduling is available at NJSGC for both individual badge programs and group field trips throughout the year. We offer several different programs specifically designed for girl and boy scouts of all ages. Something new for Cubs in 2019 is “Wolf Adventure – Paws on the Path,” which focuses on good hiking principles, safety, and etiquette.

Please visit our [website](#) for more information on pricing and reservations, or contact NJSGC’s Scouts Program Coordinator [Jody Sackett](#) at 732-872-1300 x20.



Swim Safe with NJSGC in 2019

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NJSGC's *Ocean Hazards and Beach Safety* program aims to remind young swimmers about the dangers and risks of rip currents prior to the busy summer season. This FREE program is offered to schools and libraries throughout Monmouth and Ocean Counties. Here's a brief breakdown of what to expect:

- Appropriate for grades 1-5.
- Runs approximately 45 minutes to an hour and can be repeated up to 3 times throughout the school day.
- Limited to 60 students per session.
- Interactive “Sharks vs. Rip Currents” trivia game presented by NJSGC's Coastal Ecosystems Extension Agent from Stevens Institute of Technology, Dr. Amy Williams.
- Readings from Mr. Don Walsh, author of the popular children's book “Teach the Beach.”
- Supports specific Next Generation Science Standards and New Jersey Student Learning Standards in English Language Arts.



Programs are booked on a first come, first serve basis. Starting in March, Dr. Williams and Mr. Walsh are available during regular school hours on **Wednesdays** and **Thursdays**. Other days are open to discussion pending availability. To express interest and inquire about the availability of specific dates, please contact our Communications Specialist [Danica Bellini](#). If your facility is able to schedule a program, you will then be sent a complete list of guidelines.



And always remember – “When in doubt, don’t go out!”

Spotlight & Random Notes

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Ocean Fun Days

In partnership with New Jersey Natural Gas, NJSGC will host the 16th annual Ocean Fun Days at Island Beach State Park (May 18th) and Sandy Hook (May 19th). Be sure to follow NJSGC on social media for exclusive exhibitor spotlights! More information can also be found on our [website](#).



Underwater Exploration

NJSGC continues its partnership with the Central Jersey Club of the National Association of Negro Business and Professional Women's Club ([CJC-NANBPWC](#)). Over the past few months, several students had the opportunity to attend “[Underwater Exploration](#)” programs hosted at the Neptune Aquatic Center in Neptune City, NJ to learn more about ROVs (remotely operated underwater vehicles). Participants then got to test and control their creations in the water!

A “Closer Look” at NJSGC Research

With NJSGC-funded support, Dr. Ximing Guo (Rutgers University, Haskin Shellfish Research Laboratory) continues working with his team on the National Strategic Investment (NSI) project entitled “Enhancing Bivalve Aquaculture through Species Improvement and Diversification.” The goal is to enhance bivalve aquaculture through the development of oyster stocks and alternative species for high- salinity environments. Pictured here is PhD candidate Michael Acquafredda observing farmed Atlantic surfclams. Please refer to our updated research [summary page](#) for more information.



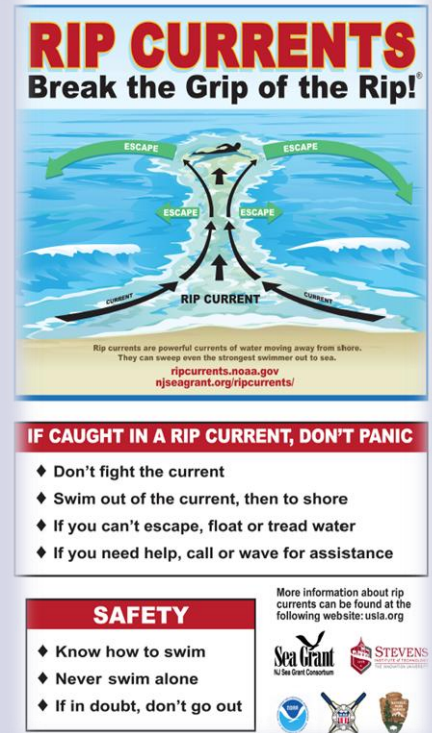
Spotlight & Random Notes (cont)

Rip Current Awareness Material Available

Above fun and relaxation, safety should always come first at the Jersey Shore. The state's 2018 season recorded one fatality due to rip currents, one from high surf, and another unknown. But starting in 2019, the goal is for that total to remain at zero.

NJSGC continues producing and distributing thousands of signs – now available in both English and Spanish – that warn swimmers about the dangers of rip currents, and what to do if caught in one. These are posted at high-traffic beach access and bathing points in essentially every shore community along the coast. Safety brochures are also now available upon request for municipalities at no charge. Please keep an eye out for these important safety materials at municipal buildings, beach badge check-points, and other strategic tourist points located from Sandy Hook all the way down to Cape May.

Officials interested in obtaining rip current awareness materials please visit our [website](#) or call 732-872-1300 x10.



NJSGC's Knauss Fellow Heads to Washington, DC



NJSGC continues following Omanjana Goswami's journey as a member of the 2019 [John A. Knauss Fellowship Program](#). Originally from India and now a PhD student and Graduate Teaching Assistant at Rutgers University-Newark, Ms. Goswami will move to Washington, DC this spring and work alongside a legislative cohort from Hawaii, where she hopes to continue research on how Earth Sciences apply directly to problems in nature and how those problems can be addressed.

[The RU-N Report](#) recently published a video story about Goswami's experience and her ongoing dedication as a Rutgers student-turned-Knauss Fellow. Watch the clip [here](#)!

Spotlight & Random Notes (cont)

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Welcome New Advisory Board Members!

NJSGC stays well-connected to coastal issues throughout the state thanks to our [Stakeholder Advisory Board](#) – a group of professionals able to bring new initiatives, projects, and funding opportunities to the organization. We're excited to announce our newest members for 2019:



Joseph M. Barris, Assistant Planning Director – Monmouth County Division of Planning
Matthew R. Gregg, owner – Forty North Oyster Farms
Dr. Stanton Hales, Jr., Program Director – Barnegat Bay Partnership
Jeff Kaelin, Director of Sustainability and Government Relations – Lund's Fisheries, Inc
Dr. Joshua Moody, Restoration Programs Manager – Partnership for the Delaware Estuary
Lori A. Pepenella, Chief Executive Officer – Southern Ocean County Chamber of Commerce
Dr. Steven J. Tuorto, Director of Science and Stewardship – The Watershed Institute



Research Competition Update

NJSGC is currently seeking research projects to be funded for the program's 2020-2022 Omnibus Research Program. According to Sea Grant Program Associate Diana Burich, 40 pre-proposals were recently received, each including one principal investigator (PI) and potentially one or more co-principal investigators (Co-PIs). Of those 40 submitted, 17 are new PIs applying through NJSGC. Several institutions are represented, including Drexel University, Monmouth

University, Montclair State University, New Jersey Institute of Technology, Princeton University, Rowan University, Rutgers University, Stevens Institute of Technology, Stockton University, and The College of New Jersey.

This year, NJSGC's Technical Review Panel (TRP) includes 11 experts specialized in various fields. View the full list of panelists [here](#). They will evaluate proposals during the summer alongside a team of Stakeholder Advisory Board members, extension staff, and external peers.

Full proposals are due by June 17th, 2019. Awards are determined in September, with NSGO finalization and a public announcement made in October.

Internships, Grants & Funding

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Undergraduate Summer Research Mini-Grant

In 2019, NJSGC anticipates funding one (1) \$2,000 mini-grant for summer research to an undergraduate enrolled at an accredited New Jersey college or university. Research should be conducted between May-September with final reporting due for the funded project by end of February 2020. Projects must be student led with support from a faculty member and follow the research priorities of NJSGC's most [recent request for proposals](#) (RFPs).

View the full RFP [here](#). Deadline for submissions is March 28th, 2019.

Marine Laboratory and Field Work Opportunity

This 10-week undergraduate internship focuses on the study of bivalve aquaculture and aims to:

- Develop superior eastern oyster stocks for high-salinity environments.
- Improve growth of bay scallops to enable within-year harvest.
- Develop surfclams with fast growth and heat tolerance to enable early harvest.
- Transfer project results to NJ and regional shellfish farmers.

Visit the NJSGC [website](#) for more information. Interested applicants, please send relevant materials to [Michael Acquafredda](#).

Aquaculture Funding Opportunities Now Available for FY 2019

The National Sea Grant Office recently announced three new aquaculture-focused efforts:

- Advanced Aquaculture Collaborative Programs (letters of intent due April 15th, 2019 and full proposals due May 15th, 2019).
- Exploring New Aquaculture Opportunities (letters of intent due March 26th, 2019 and full proposals due April 24th, 2019)
- Social, Behavioral, and Economic Research Needs in Aquaculture (letters of intent due April 2nd, 2019 and full proposals due May 1st, 2019).

For complete application information, including links to the FFO's, please visit the National Sea Grant [website](#).

Sea Grant Funding Goes a Long Way

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NJSGC would like to congratulate former National Marine Fisheries Service (NMFS)/Sea Grant “Population and Ecosystem Dynamics” fellow Dr. Christopher Free on recently having part of his PhD dissertation published in the acclaimed peer-reviewed academic journal, [Science magazine](#). A brief abstract from Dr. Free’s “Impacts of Historical Warming on Marine Fisheries Production” states:

Climate change is altering habitats for marine fishes and invertebrates, but the net effect of these changes on potential food production is unknown. We used temperature-dependent population models to measure the influence of warming on the productivity of 235 populations of 124 species in 38 eco-regions. Some populations responded significantly positively and others responded significantly negatively to warming, with the direction and magnitude of the response explained by eco-region, taxonomy, life history, and exploitation history. Hindcasts indicate that the maximum sustainable yield of the evaluated populations decreased by 4.1% from 1930 to 2010, with five eco-regions experiencing losses of 15 to 35%. Outcomes of fisheries management – including long-term food provisioning – will be improved by accounting for changing productivity in a warmer ocean.

Dr. Free’s work was also featured in a [New York Times](#) article entitled “The World is Losing Fish to Eat as Oceans Warm, Study Finds.”

According to Trevor Branch, an associate professor at the University of Washington’s School of Aquatic and Fishery Sciences (not involved in the study), “This is going to be one of those groundbreaking studies that gets cited over and over again... Most of what I’ve seen before in terms of climate-change impacts have been speculative, in terms of, ‘We think this is what’s going to happen in the future.’ This one’s different.”

Dr. Free also worked in collaboration with James Thorson, an Operations Research Analyst with NOAA Fisheries. Please view the [full PDF](#) on our website.

Speaking for all of New Jersey, we’re so proud of you Chris! Formerly of Rutgers University, Dr. Free’s now a postdoctoral researcher with the [Sustainable Fisheries Group](#) at UC Santa Barbara.



Other Happenings & Opportunities

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Part-Time Field Instructors Needed for Summer 2019!

NJSGC's Education Department hires part-time seasonal field instructors for their K-12 marine science education program.

Following a paid training period, you will lead school groups on hands-on, interactive explorations of Sandy Hook's salt marsh and barrier beach environments. Experience is not necessary; however, a background in marine science or education is helpful.

Interested candidates should email a resume to our Special Programs Coordinator [Rosemary Higgins](#).



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For those wanting to get out on the water this summer, be prepared! The US Coast Guard Auxiliary Association offers several *safe boating courses* for New Jersey certification throughout the season, which is required for anyone operating a powerboat or PWC. NJSGC's very own field instructor Chuck Parker also teaches some of the available classes. Get more signup information [here](#).

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The 2019 *Teach at the Beach* conference sponsored by the New Jersey Marine Education Association takes place on May 10th at the Long Beach Island Foundation of the Arts and Sciences from 8:00 a.m. – 4:00 p.m. Please visit the [registration page](#) for more information.

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Sponsored by NJSGC and Rutgers University, the *Shellfish Growers' Forum* will be held March 26th at the Rutgers Fisheries Cooperative Center from 3:00 – 4:00 p.m. The featured speaker Dr. Ximing Guo will discuss his Sea Grant-funded research project, "Enhancing Bivalve Aquaculture through Species Improvement and Diversification." Please contact our Shellfish Aquaculture Program Coordinator [Lisa Calvo](#) for more information.