



SCCF MEMBER UPDATE

“Sanibel” the Swallow-tailed Kite

By Audrey Albrecht, Shorebird Coordinator and Biologist

Each year in late February and early March, south-west Florida visitors and residents anxiously await the return of our beloved swallow-tailed kites. These beautiful black and white birds soar over marshes and wooded wetland areas gracefully hunting for insects and small invertebrates such as anoles. Swallow-tailed kites are rarely mistaken for any other hawk or falcon, with their unique silhouette and distinctly forked tail. They spend most of their time in the air soaring, rarely flapping their wings or landing. Sanibel is home to several nesting pairs of kites each year, though they are very good at camouflaging their nests to avoid detection. The kites typically begin gathering in large communal roosts in July before beginning their amazing migrations to South America.

One of the greatest threats to the swallow-tailed kite population in Florida is habitat destruction. In South Florida where their preferred nesting trees are lacking (tall cypress or slash pine trees), they often end up nesting in less sturdy Australian Pines, where heavy winds can cause nests to fail. As with most migratory birds they face a myriad of threats throughout their range. Their lengthy



migrations can be difficult, and according to researchers, 87% of adult mortality is associated with migration.

In May of this year, researchers from the Avian Research Conservation Institute (ARCI) traveled to Sanibel to capture and tag an adult swallow-tailed kite as a part of their long-term research on these birds. ARCI has been studying swallow-tailed kite ecology and behavior since 1988. Their ultimate goal is to be able to inform management and conservation planning for the U.S. population of kites. An adult male was successfully trapped on SCCF land and fitted with a satellite transmitter.

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Photos courtesy local volunteers Janet & Aaron Kirk. Tracking map can be found at arcinst.org.

Sea Turtle Night-time Tagging Project

By Kelly Sloan, Sea Turtle Coordinator and Biologist

The Sea Turtle Program's tagging project was launched in 2016 to learn more about the turtles that use our beach to lay their eggs. A typical night for our team involves patrolling the beach from sunset to sunrise in search of nesting females. When a turtle is encountered she is scanned for existing tags, tagged if none are found, and measured with calipers and a measuring tape.

Since the project's inception in 2016, our team has documented 1,178 encounters with turtles on the beach at night, representing 587 unique individuals. Having this information allows us to ask questions such as: What is the spatial distribution of nests for an individual female? What will nesting look like in the future, taking into account possible changes to our nesting beach? When a sea turtle comes onto the beach and doesn't lay eggs (a "non-nesting attempt"), where and when does the turtle come back to lay her eggs? How many nests and eggs does a single female lay in one season, and how much does hatch success vary among her nests?

Of the 587 individuals we've seen, 236 have been encountered more than once. An interesting fact about sea turtles is that they don't nest every year – each individual lays approximately 3-6 nests over the course of the season and then spends a year or two foraging to replenish her



energy reserves before returning to the nesting beach. The number of years between nesting events is termed the "remigration interval." The 2019 season, which marks the fourth year of the tagging project, was the first year we were able to take a good look at these data. Our average remigration interval is 2.2 years, with 36 of our resighted turtles nesting every other year, 13 turtles nesting every third year, and two turtles nesting in 2016, 2018, and 2019.

To calculate an accurate remigration interval we will also correct for tag loss rates, capture probability, and survival on our beaches. We ultimately hope to estimate the number of turtles that use Sanibel as nesting grounds.

Highlights of the 2019 tagging season include:

- A new record of 353 documented turtle encounters from May 1-July 31
- Six green sea turtles were seen on Sanibel this season (Dellora, Andrea, Kate, Holly, Jane, and Melanie), totaling 18 observed nests.
- The average loggerhead carapace size was 94.5 cm (slightly over 3 feet), with our largest loggerhead measuring in at 115cm (almost 4 feet long!).



Above: Sea Turtle Hall of Fame — Most Encountered Turtle (LLZ525/EEJ998). She was first tagged by Florida Atlantic University on Sanibel on July 13, 2013; she has been seen by our team in 2016 (10 times) and again in 2019 (7 times). She measured 110 cm in 2013 and 115 cm in 2019. The average distance in between nests: 3.58 km (2.2 miles), and the average number of days between nests: 8 days. NOTE: Green teardrops represent nests; red represents non-nesting attempts.

Kite -- Continued from Page 1

A combined effort from SCCF, CROW, and San-Cap Audubon made this work possible. San-Cap Audubon is funding the tracking data for this bird in honor of the late Jim Griffith, their chapter's longstanding president and a committed conservationist and birder well-respected within the local environmental community.

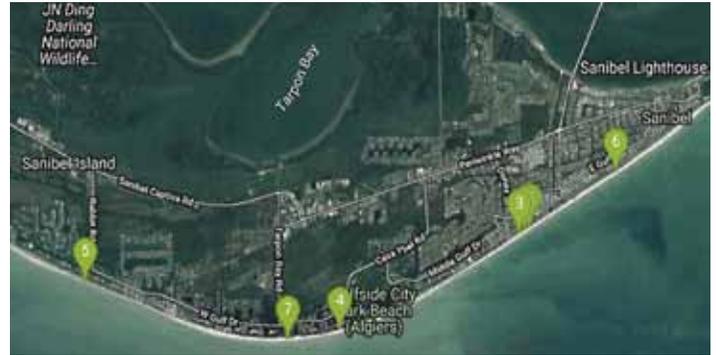
SCCF is proud to have aided in this important research, and we can all look forward to following this bird's migrations for years to come. For more information about ARCI and "Sanibel" the swallow-tailed kite, please check out their website at www.arcinst.org



Sea Turtle Night-time Tagging Project cont'd

- Staff interacted with 1,126 beachgoers at night to educate them about the impacts of flashlights on sea turtles.

Most Hatchlings Produced: LLZ553/LLZ552. She was observed laying 7 nests in 2016 and 2017, and these nests produced a total of 539 hatchlings! Her nests were laid an average of 3.4 km (2.1 miles) apart, although there was a cluster near Donax that were only 0.08 km apart (0.05 miles).



Natural Resource Policy Update

By Rae Ann Wessel, Natural Resource Policy Director

SCCF was honored to host U.S. Army Corps of Engineers Colonel Kelly, LTC Reynolds and her incoming replacement LTC Polk on August 20th on a daylong tour and series of meetings with west coast stakeholders. Starting with a boat tour of the middle and upper estuary on the R/V Norma Campbell, they were able to see the geography and natural tributaries of the Caloosahatchee and the changes that influence water flow and deliveries to better understand the impact of water management decisions. We visited a RECON sensor site, along with a number of physical features of the upper estuary ending at the W.P. Franklin Lock & Dam.

On Sanibel, the City, SCCF and Ding Darling staff and Wildlife Society volunteers had a chance to discuss our unique geography and issues. Meetings with the County, local Cities and non-

profit groups rounded out the day.

All three attended the Save Our Water Forum the next day, providing a great opportunity to further network with concerned residents, with a fresh perspective and knowledge of our river.

Save Our Waters Forum

A sold out crowd of over 600 attended the third and largest Save Our Water Forum in August. The newly formed Alliance of Chambers urged the *News-Press* and *Naples Daily News* to offer a third forum on this issue of broad community interest and sweetened the pot by offering to co-host.

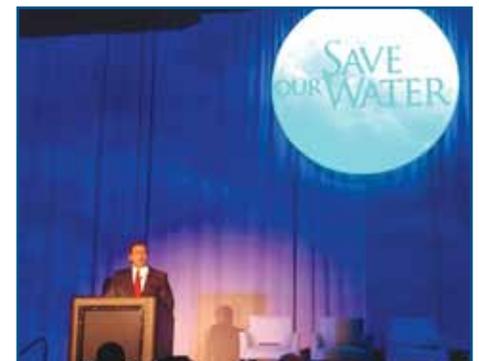
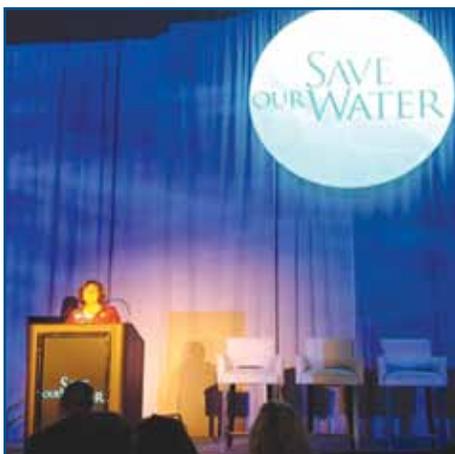
This best yet forum effectively brought together the science, policy and solutions into a half-day event. Featured speakers included the Governor, Secretary of DEP, Executive Director of the SFWMD, a SFWMD Governing Board member and Legislative leaders. Presentations and panel discussions opened with some basic science about the biology and nature of algal blooms, addressed the past and upcoming legislative sessions, public health issues, the role of agriculture, water policy opportunities, greater Everglades restoration projects, emerging technologies and innovative approaches to algae treatment and what each of us can do to reduce our impact on local waterways.

Takeaways from the event include the need for clearly designated agency responsibility for posting warning notices when blooms occur, the need for state legislation to address sources of pollution, elevating the method of monitoring and improving agricultural water quality and improved oversight and enforcement.

Our gratitude to the Alliance of Chambers, *News Press* and *Naples Daily News* for inviting SCCF Policy Director Rae Ann Wessel to present and for their dedication to making this powerful community forum possible.

San Cap Chamber Power Hour

The Sanibel-Captiva Chamber has been a leader in engaging businesses in water quality issues. The Chamber Board of Directors, working with the



Governor DeSantis (above) and Rae Ann Wessel (left) were among the Save Our Waters Forum speakers.

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Wildlife & Habitat Management: 2019 Fire Season

By Chris Lechowicz, Director of Wildlife & Habitat Management/Herpetologist

SCCF was able to lead two controlled burns with the Sanibel Prescribed Fire Program this past season. Both of these burns were conducted on Sanibel Gardens (June 19 and July 25, 2019), a large preserve with intermixed parcels owned by SCCF and the City of Sanibel. The total acreage burned was 30 acres. Two units were burned on each day of burning. The purpose was to reduce woody vegetation in order to restore open Spartina marshes for native wildlife. Another purpose is for public safety as unburned debris (fuel) builds up and creates a higher probability of wildfires. Several agencies assisted with these burns including the City of Sanibel, Sanibel Fire, Florida Forest Service, and the U. S. Fish & Wildlife Service.

Victor Young was able to complete his requirements, with the first burn, to become a certified burn boss (Prescribed Fire Manager). So now Chris Lechowicz and Victor Young can pull permits for controlled burns. Our burn season usually begins after Easter (March or April) and ends with the onset of the summer rains that flood the fire lines and low areas. The possibility of a fall burn

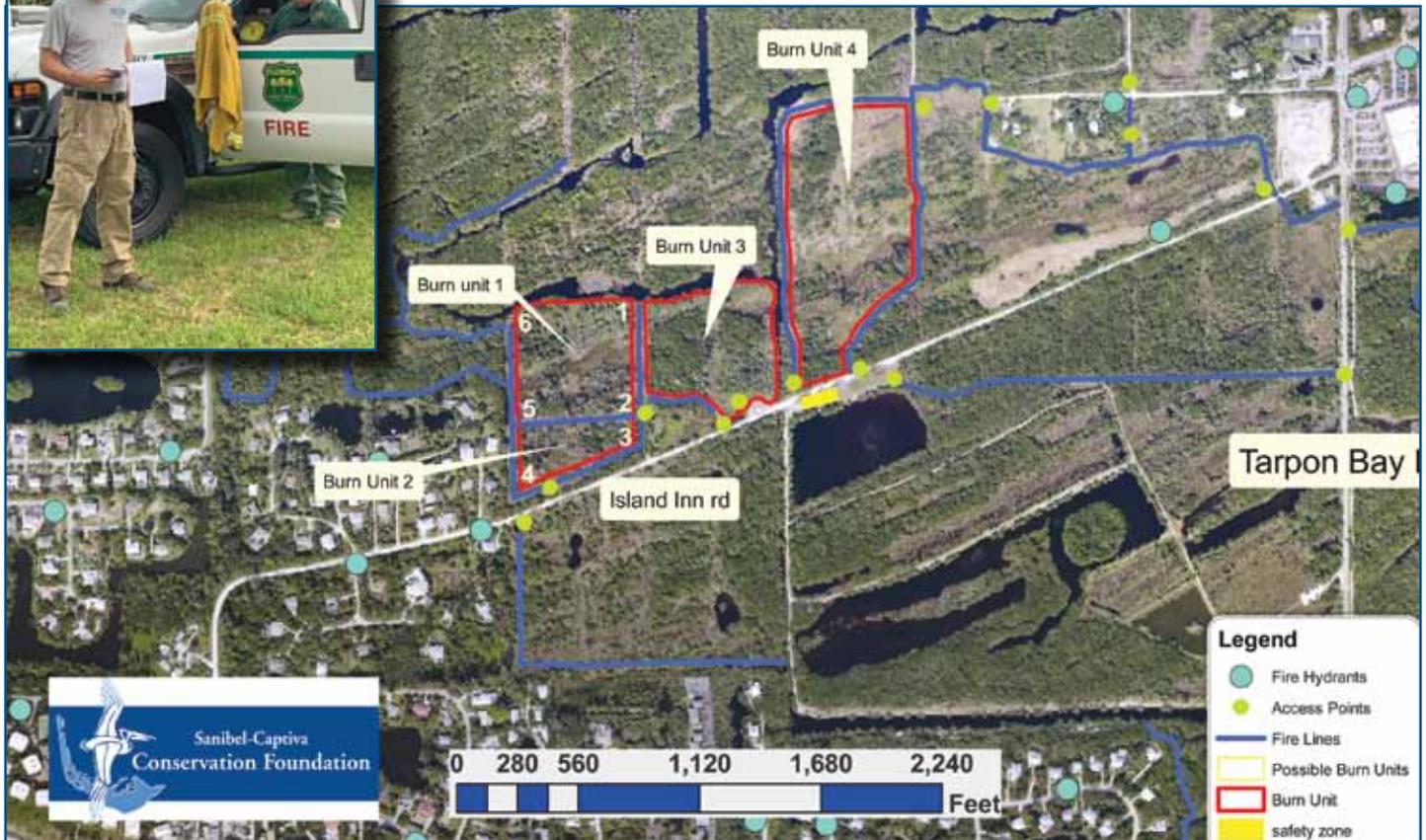


is not out of the question if the right conditions present themselves. This would require an early end of the rainy season that allows the vegetation and firelines enough time to dry out and optimal weather.

Correct weather conditions are mandatory to receive a burn authorization number from Florida Forest Service on the day of the burn. Attributes such as temperature, relative



Above: Gil Junglus, SCCF Habitat Management Intern, lights off a line with a drip torch on the June 19, 2019 Sanibel Gardens Burn. Left: Victor Young, SCCF Land Conservation Steward, briefs the fire crew and gives out assignments on his check off burn at Sanibel Gardens on June 19, 2019.





Wines *in the* Wild

... is set for Friday, November 15th

Please join us for this Fall “welcome back to the islands” with good friends, good wines and good food at the Bailey Homestead Preserve.

6:30 - 9:00 p.m.
\$125 per person

Look for an invitation and upcoming emails with more information.

Presenting Sponsor



Diamond Sponsors – Linda and Wayne Boyd, Lucy and Paul Roth
Platinum Sponsor – Kay and John Morse

We are very grateful to our many Gold and Silver Sponsors.
To request sponsorship information, please email wines@scf.org

Wine Tasting Partner – Bailey’s General Store 

Food Tasting Partners – Catering by Leslie Adams, Cielo, Malia Island Fusion Cuisine, Norman Love Confections, Sanibel Catering Company, Sweet Melissa’s Café



Fire Season -- Continued from left



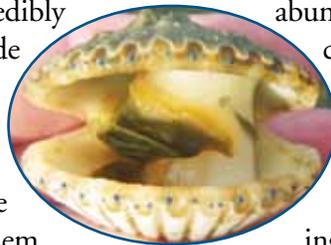
Greg Suszek (USFWS) and Dana Dettmar (City of Sanibel) on the Refuge swamp buggy (aka Slimer) patrol the firelines and communicate with the other fire vehicles as Prescribed Fire Manager Victor Young gives out more instructions.

humidity, wind direction and speed, dispersion, mixing height, fine fuel moisture, precipitation percentage, and the approximate time of the sea breeze wind change must all be within certain parameters to conduct a prescribed fire. Since Sanibel has a multitude of urban interfaces (wild lands surrounded by houses or businesses), multiple agencies have to be involved with the right equipment and staffing to safely conduct prescribed fires. Sanibel is a fire adapted island that requires periodic burning to keep the habitat and ecosystems healthy for wildlife and unnatural fuel build-up that could lead to intense wild fires.

Decline in Pine Island Sound Bay Scallop Population

By Leah Reidenbach, M.S., Research Associate, Marine Lab

Bay scallops (*Argopecten irradians*) are incredibly beautiful and interesting shellfish that provide important ecosystem services such as filtering water, which increases light for seagrass, and providing food for other animals including the endangered smalltooth sawfish. They are sensitive to environmental changes, making them important indicators for changes in water quality and seagrass habitat health.



Every year since 2010 (barring years with red tide or Hurricane Irma) SCCF has organized a citizen science volunteer event, The Pine Island Sound Scallop Search, in cooperation with Florida Sea Grant and the Florida Wildlife Research Institute (FWRI) in order to help monitor the

abundance of bay scallops in Pine Island Sound. By completing the surveys every year we can determine how scallop populations fluctuate over a large area, eventually developing a long-term data set on scallop abundance. Systematic surveys are conducted each May by FWRI using professional scientific staff to determine catch limits in Gulf counties.

This year, we had 58 snorkelers on 10 vessels who *Bay scallops have 30 – 40 bright blue eyes that line the mantle (edge) of their shells allowing them to detect light and movement from predators. The shell is round and ribbed with a pair of flat “ears” near the hinge. The top shell is a dark grey color while the lower shell is lighter to white.*

Policy -- Continued from Page 3

Government Affairs Committee, established a set of priorities for the coming legislative session that were the focal point of the presentations at the sold-out event in August. The priorities are:

- Support the long-term reauthorization and increased funding of Visit Florida.
- Support developing policy to effectively deal with storm water and wastewater pollution sources.
- Support sustained funding to accomplish the EAA (Everglades Agricultural Area) projects and objective of sending clean water South as quickly as possible and implementation of critical infrastructure projects North and South of Lake Okeechobee.

Dana Young, President & CEO of Visit Florida was invited to speak to the Chamber priority of supporting the long-term reauthorization and increased funding of Visit Florida. She shared insights and statistics about the impact of the agency, citing a return on investment (ROI) of \$2.15 for every dollar invested in promoting Florida. She indicated that visitors contribute \$85 billion dollars per year which translates to a tax savings of \$1,500 per Florida resident.

SCCFs Policy Director, Rae Ann Wessel addressed the chamber's water quality priorities, encouraging members to create a Stop Pollution Revolution by advocating for policies and legislation to 1) prevent pollution at its source, 2) protect and restore our water resources, and 3) protect public health. Targets for this year's session include bringing back and passing a septic inspection and maintenance bill, prioritizing advanced wastewater treatment, regulate biosolids and revive the Statewide storm water bill. Working broadly across industries including

the League of Mayors and Cities, we are looking for legislative champions to sponsor and carry these bills.

An unexpected bonus was Representative Byron Daniels, (R- District 80) representing Hendry and part of Collier Counties, who was in the audience and volunteered to take a few questions.

November Water Quality Program

Plan to join us on Tuesday, November 12 (time to be determined) for a water program and film at the Bailey Homestead on Sanibel. The program will focus on a joint petition submitted to DEP asking them to set cyanobacteria standards to address public health. Three groups, SCCF, The Center for Biological Diversity and Calusa Waterkeeper will discuss the challenge we filed and show a film by Calusa Waterkeeper to support urgent action.

Oxbow & Riverlore Cruises

These popular cruises resume the day after Thanksgiving, with a 1 pm cruise on Friday, November 29. Trips fill up fast so advance reservations & ticket purchase are required. Reserve your seat online at: www.sccf.org under Programs, select Oxbow Cruise. Cost is \$ 45 per person.

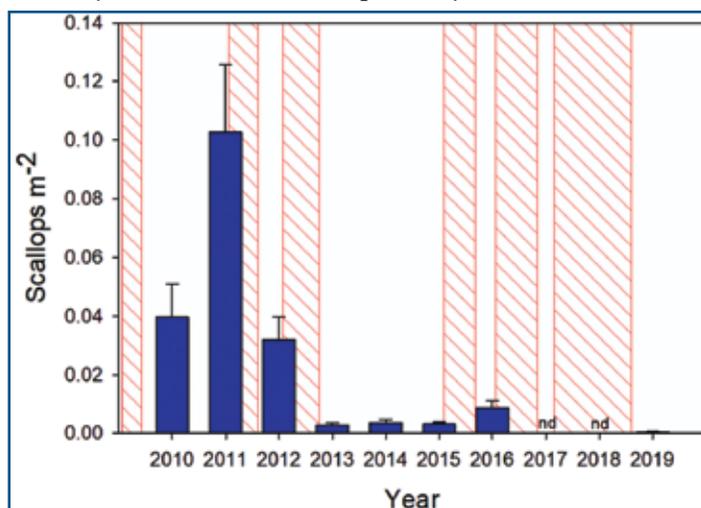
This is the 24th year that Rae Ann Wessel, a river researcher, long-time river advocate, historian and SCCFs Natural Resource Policy Director, has been guiding these 2.5 hour cruises that depart from the WP Franklin Lock Recreation Area in Olga. The boat is a stable and spacious 41 passenger pontoon boat. All seats have a great view for photographs and wildlife viewing. Season schedule at sccf.org.

Scallops -- Continued from left

volunteered with us on Saturday, August 20, 2019. Each vessel was assigned a grid where four 50-meter transects were deployed. Two snorkelers searched for scallops across a one-meter length on either side of the transect for a total search area of 400 m² per grid. This year we searched a total area of 4,000 m² and only found one scallop for an average 0.00025 scallops per m². In previous years, we have seen abundances in the range of 0.003 – 0.103 per m² (below). To put these values into perspective, a healthy population of scallops should have at least 0.1 scallops per m² or in other words, 10 scallops per transect.

Bay scallops have a unique lifecycle and their reproductive traits require them to be abundant for reproductive success. Scallops live for approximately 12 – 18 months and reproduce only once in their lifetime. They are broadcast spawners, meaning they release their gametes (eggs and sperm) into the water column and that high scallop density is important for increasing the chance of fertilization. If there is a severe water quality issue, such as the protracted toxic red tide event in 2017/2018, there will be a decline in larval settlement, leading to a reduced population the following year. When scallop populations are low, it can be nearly impossible for them to recover if there is not a nearby source of larval recruits to restock the local population.

Bay scallops were once abundant in the Gulf Coast of Florida, supporting a fishery that landed 10 to 120 thousand pounds of scallop meat in the 1950s. By the 1960s the fishery was depleted in Pine Island Sound as well as in the neighboring populations of Tampa Bay and Sarasota Bay. In 1994, the scallop fishery was closed in Pine



The red hashed bars show the approximate time periods when the red tide forming alga *Karenia brevis* was greater than 10,000 cell/L indicating a toxic algal bloom. "nd" indicates no data due to Hurricane Irma (2017) and red tide (2018) preventing the event from taking place.



Above: SCCF Marine Lab Director Dr. Eric Milbrandt trained the volunteers before the start of the search. Bottom: We had 58 snorkelers on 10 vessels who volunteered with us on Saturday, August 20, 2019

Island Sound, but overharvesting is not the only threat to dwindling scallop populations. Habitat loss and poor water quality can also have adverse effects. In addition to toxic algal blooms, scallops can be negatively affected by low salinity which is altered by increased surface runoff from filling in wetlands, development of drainage ditches in upland areas, and releasing freshwater from Lake Okeechobee. At all stages of their life cycles, scallops depend on healthy seagrass ecosystems and salinity levels above 15 – 20 psu.

SCCF's Marine Lab has participated in scallop work since 2003, which has included various forms of restoration efforts including releasing larvae into Pine Island Sound in 2004 which resulted in a 100-fold increase in scallop abundance. However, populations declined again after a red tide event in 2006. Larval releases in 2008 – 2009 once again helped to increase scallop recruitment in 2009. Additionally, in 2009 adult scallops were placed in cages (spawner sanctuaries) throughout Pine Island Sound. All of these restoration efforts led to an increase in scallop abundance during the volunteer scallop search event to 0.103 scallops per m² in 2011, but red tide blooms and poor water quality have reduced scallop populations to what we have today. The Marine Lab wants to recommence scallop restoration efforts and is currently working on proposals to secure the support needed for this project. This will be done with the hope that recent efforts to make positive changes to improve our water quality will prevent the decimation of scallop populations in the future.





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October 2019 Member Update



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SCCF's 2019 Christmas Card

Inside greeting:

*From Our Home to Yours...
Happy Holidays!*

Cards are \$15 for 10 cards and they will be available for purchase in the shop at the Native Landscapes & Garden Center.

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