



Field Notes

News and updates from
The Coonamessett Farm Foundation

Issue No. 4 September, 2019

Greetings,

As Summer 2019 winds down, CFF researchers are gearing up for an eventful and productive fall.

Our HabCam team is fast at work synthesizing the data from three at-sea research trips from Georges Bank to North Carolina. Their data, reporting and analysis provide valuable insights to fishers, regulators, conservationists and stakeholders in the \$500 million Atlantic sea scallop industry.

Likewise, members of our sea turtle research, bycatch and climate change teams are preparing reports, participating in seminars, and contributing to peer reviewed publications in support of sustainable fishing practices. Our newest areas of focus include using machine learning to improve precision in scallop biomass estimates and the interactions between fishing and safety in off-shore wind development areas.

Back at the Farm, we continue to examine and fine-tune compost methods that will yield beneficial soil amendments and marketable farm products.

We hope this issue of **Field Notes** sheds light on our most important focus areas and stimulates your interest in supporting sustainable fishing, farming, aquaculture and renewable energy in our region. Stay tuned for more Fall research developments.

Sincerely,

A handwritten signature in black ink, appearing to read 'F. Almeida', is positioned above the printed name.

Frank Almeida
President, Board of Directors



Visit our new website

NEW CFF STUDY INVESTIGATES "GRAY MEATS" IN SEA SCALLOPS

A new CFF study examining the possible causes of changes in meat color in Atlantic sea scallops was recently published in *The Journal of Shellfish Research*.

The Atlantic sea scallop fishery is one of the most valuable fisheries in North America, and understanding the factors that impact scallop meats is essential for the continued health of the fishery.

The study, "Investigating the Impact of Multiple Factors on Gray Meats in Atlantic Sea Scallops (*Placopecten magellanicus*),"



by [Liese A. Siemann](#), [Luisa M. Garcia](#), [Carl J. Huntsberger](#), [Ronald J. Smolowitz](#) investigated the potential causes for the presence of gray meats. Over the course of three years, CFF researchers conducted seasonal scallop dredge surveys across Georges Bank, collecting data on scallop meat quality, abundance, mortality, reproductive cycles, and environmental data. Models were developed to explore factors that stress scallops, like spawning and aging. The team also reviewed the potential impacts of an apicomplexan parasite linked to a mass mortality event that contributed to the collapse of the Icelandic scallop fishery and played a role in sea scallop mortalities on western Georges Bank.

"Our model results indicate that stress following spawning plays a role in gray meat prevalence," says Dr. Siemann. "Age and reproductive stage were significant factors during more recent years, with scallops more likely to have discolored meats when they were older, and after spawning. We are continuing to see low levels (less than 1%) of gray meats across eastern Georges Bank, with similar relationships to age and reproductive stage," she says.

Overall, the study suggests that gray meats may be a symptom of poor conditions caused by multiple factors rather than a single cause. The team recommended improved screening tests and continued monitoring of scallop health through targeted disease surveys.

[Read the full study.](#)

ON BOARD WITH CFF's HABCAM TEAM



CFF's HabCam research team, in collaboration with Arnie's Fisheries, Inc. / FV *Kathy Marie*, recently completed three RSA sea scallop HabCam surveys. The surveys were conducted in an area of eastern Georges Bank approximately 150 nautical miles southeast of Cape Cod, south of Nantucket Island, and in the Mid-Atlantic east of the mouth of Delaware Bay. The ambitious program collected more than 6.5 million images and covered over 1,500 miles of survey track in 2019.

The intensive survey data collected provides insight on the growth and survival of scallops in certain areas and will also be used by fishery resource managers to determine areas where fishing is permitted or not (i.e., open or closed). The opening and closing of certain areas to fishing (known as rotational area management) has been a central management strategy that has contributed to the recent resurgence and success of the Atlantic sea scallop fishery. Fishers can also use the survey data to help in defining factors that will ensure their success. This is the third year that CFF has managed and successfully executed RSA-funded HabCam surveys.

HabCam, short for "Habitat Mapping Camera" is a large, underwater camera that collects high-resolution images of the seafloor, as well as simultaneously collecting oceanographic data (e.g., temperature and salinity). HabCam v3 is towed from the fishing vessel *Kathy Marie* and collects six images per second. The images and data collected by HabCam not only help to inform researchers of the abundance and health of sea scallops, and paint a picture of the ecological interactions taking place on the seafloor (e.g., predators, overlap with other fish and invertebrate species, etc). CFF's HabCam research, which currently focuses primarily on the scallop fishery, is funded by the NOAA Research Set-Aside (RSA) program.

Jason Clermont, who leads CFF's HabCam team, said, "We see some amazing things out there. While we are primarily focused

on surveying the sea scallop resource, the data contained in the images we collect could keep researchers busy for a long time. And getting an intensive look at a particular area is critical as we may see things that the larger-scale broad surveys miss. Working collaboratively with the crew of the FV *Kathy Marie*, particularly Captain Paul Rosonina is also a great experience for us, as their knowledge of the seafloor beyond the nautical charts never ceases to amaze me".



CFF's HabCam team aboard the FV *Kathy Marie*. Video by: Pierce McDonnell

FOOD, FRIENDS & CONVERSATION-- INSIDE CFF CIRCLE



What could be better than an evening of fresh caught seafood and savory dishes made with ingredients from the local Fall harvest? Enjoying it all among friends, of course!

CFF Circle, our new donor/membership benefit, brings together our most engaged supporters to enjoy a gourmet, locally sourced meal around friends and conversation. It's our way of recognizing--and learning from--the supporters who are passionate about sustainable fishing, farming and aquaculture. Not to mention, it's a fun way to help advance CFF's mission.

CFF Circle members will enjoy:

- Invitations to *CFF Circle Restaurant Night at The Buffalo Jump*
- Invitations to future talks, film screenings, and other gatherings
- CFF's weekly email News Roundup of articles and videos covering fishing, farming, aquaculture and renewable energy developments
- Recognition on CFF website and in future annual reports.

A **donation** over \$500 automatically includes you in the CFF Circle. Donations of *any size* are always appreciated. For more information, please contact: rcarey@cfarm.org or call 508-356-3601.

MORE WAYS TO GIVE TO CFF: AMAZON SMILE

Did you know that you can contribute to Coonamessett Farm Foundation every time you shop on Amazon? Designate Coonamessett Farm Foundation as your charity of choice and the Amazon Smile Foundation will donate 0.5% of the purchase price of eligible products to CFF. Click the image to the right and start shopping or add us to your bookmarks.



For more information about CFF's work, please refer to our [2018 Annual Report](#)

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