

EAST COAST SHELLFISH GROWERS ASSOCIATION



The East Coast Shellfish Growers Association represents over 1,000 shellfish farmers from Maine to Florida. These proud stewards of the marine environment produce sustainable, farmed shellfish while providing thousands of jobs in rural coastal towns.

The ECSGA informs policy makers and regulators to protect a way of life.

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The Mouth of the Bay

Hope Springs Eternal: Jones Act and EU Trade on the Cusp



Executive Director
Bob Rheault

As the weather warms and growers begin to gear up for another growing season, I am making plans to herd a troop of growers through the halls of Congress, where they'll meet their elected representatives and tell them about the issues of concern to our industry. We have great stories to share with them—of expanding production, job opportunities and sustainable seafood production.

This year I have high hopes that our Jones Act carve-out will gain traction, potentially bringing relief to any grower who is either double-paying to insure their workers or is fearful of the specter of an unlimited liability lawsuit. (More on page 10) We will also be asking our congressional appropriators to support funding for genetics research so we can continue to develop improved lines of disease-resistant, fast-growing oysters.

We had hoped that trade with the EU would have opened up by this time, but various forces conspired to push that opening back. The milk lobby raised concerns about process; the U.S. trade representative raised concerns about a trade imbalance in processed

shellfish products; and the government was shut down for 35 days.

Current estimates suggest that trans-Atlantic trade could start some time this summer, unless new challenges come up. We expect that the FDA will list the new rule in the Federal Register in April or May, describing how firms in Massachusetts and Washington State can apply to get on a list of approved exporters.

Once the EU accepts that list, and reciprocates with a list of approved exporters, then product can start to move. Each batch of shellfish will require a Seafood Inspection Service Health Certificate (\$90 fee). The question of how soon other states can join the fun remains unanswered.

In this issue we share some highlights of several reports showing positive trends for our community. Oyster production continues to show strong growth. Despite regional and seasonal price pressure, we continue to mark steady growth in price for both clams and oysters. I look forward to seeing the results of the USDA's Census of Aquaculture this fall.

Importantly, we are also making plans to attend the biennial Interstate Shellfish Sanitation Conference (ISSC) meeting in San Diego, October 5–10, 2019. If you have a regulation that is driving you nuts, now is your chance to try and get it fixed. Proposals to change the Model Ordinance language must be submitted by early May, so don't delay.

Talk to me soon so we can start the process well before the deadline.

Putting a Dent In Biofouling

by Sandra E. Shumway, University of Connecticut,
Alex Walsh, SmartPaint, Falmouth, Mass.,
Stephan Bullard, University of Hartford, (Conn.)

Biofouling, ubiquitous in the marine environment, continues to plague aquaculture operations globally, costing the industry millions of dollars a year. Biofouling also negatively impacts the growth, condition and survival of cultured organisms.

During the past three years, several potential non-toxic release coatings were tested for preventing biofouling in a series of trials at aquaculture sites around the world. The goal was to develop a low-cost, environmentally friendly, water-based and bio-based biofouling release coating with a six- to eight-month efficacy that would reduce biofouling by 80–90 per cent by weight. Various coatings were also tested for possible anti-predator qualities.

Further, we sought to improve best management practices, reduce costs by reducing fouling, and evaluate the feasibility of a promising new technology. Test materials included experimental coatings as well as commercially available coatings purported to thwart biofouling that were suitable for aquaculture.

Experimental coatings included silicone-based release coatings, fluorinated epoxy release coatings, and photoactive release coatings. These coatings were ap-



ELIZABETH VON BRAND

Test panels submerged on an experimental site in Chile for 5.5 months in 2014-15 showing tunicate growth. Rack of panels on the left was coated with experimental anti-fouling compounds, while rack on the right was uncoated.

plied to PVC test panels and aquaculture gear, including bags, cages, nets and trays. Deployments ranged from months to a year. This allowed us to assess coating adhesion and rates of dissolution and wear.

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Putting a Dent in Biofouling



CARTER NEWELL

Flip bags at an oyster farm in Lamoine, Me., were in the water from June to August 2016. Bags in top photo were not flipped; bag on left was coated, bag on right was uncoated. Bags in bottom photo were flipped; bag on left was coated, bag on right was uncoated.

Although we focused our efforts on shellfish farms due to their easy access for carrying out the experiments, some testing was carried out on major salmon farms. Nevertheless, the experimental results apply to fish, shellfish and algal aquaculture globally.

The aquaculture industry has been very receptive to this research. Once preliminary results became known, several growers contacted us regarding availability of materials and indicated their willingness, indeed eagerness, to become engaged in the testing protocols. While the original grant proposals called for testing in three U.S. states, additional testing was undertaken at 23 additional sites encompassing the U.S., Canada, China, Chile, Australia, New Zealand, Norway, Brazil and Hong Kong.

Several optimized test coatings were virtually biofouling-free after six months of exposure at several test sites. Over the course of the experiments, we made improvements to biofouling resistance and release through chemical modifications to the polymers used to formulate the coatings.

Not surprisingly, we encountered geographical differences in the performance of coatings and in the biofouling species encountered and repelled. Coatings are extraordinarily efficient at preventing the settlement of tunicates (both colonial tunicates and solitary tunicates commonly known as sea squirts), but inefficient at repelling barnacle settlement.

One commercial company has used one of the coatings for anchors, and a commercial aquaculture farm in Maryland coated oyster bags. A company in Massachusetts is using one of the coatings for their floating upweller system (FLUPSY). A pearl farm in Australia has done



DAN WARD

Hanging trays submerged for three months at Ward Aquafarms in North Falmouth, Mass., shown in October 2016 after hauling gear for the season. Trays on left were coated with Netminder® trays on right were uncoated.

farm-scale testing and found they could reduce their biofouling control effort by one-third: an annual savings approaching AU\$1 million.

Some of the more significant results

- ❑ No toxicity was noted when salmon smolt (juveniles about to make the transition to seawater) and scallop larvae were exposed to experimental coating materials;
- ❑ Oysters and scallops grew significantly larger in treated bags and trays over a three-month grow-out period than they did in untreated bags;
- ❑ Treated gear required less maintenance and could be reused without cleaning; and
- ❑ To date, the most promising product is NETMINDER®, a photoactive release coating that can provide significant cost savings to producers. Further studies are underway, and there is some hope of incorporating an anti-predator component in the coatings.

This work was generously funded by grants from the Northeast Regional Aquaculture Center (NRAC) #2014-38500-22228 and Saltonstall-Kennedy (NOAA) NA15NMF4270258.

It would not have been possible without the assistance of shellfish growers and colleagues world-wide. Too numerous to list here, we are grateful to all of them for their continued support and interest. The photographs presented here represent a small fraction of the results.

For more information or to obtain full copies of the reports, contact:

Sandy Shumway,
sandra.shumway@uconn.edu or
 Alex Walsh,
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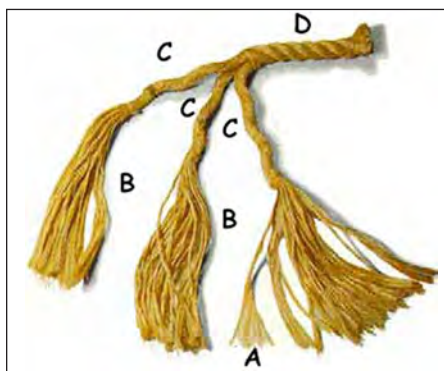
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Twisted Rope, The Second Oldest Tool

A very brief grower's guide

by Bob Ketcham, Ketcham Supply,
New Bedford, Mass.

To be successful every grower—from the seasoned old hands to the folks who have just had their leases approved—will need to possess not only a basic understanding of the properties of rope, but also competence in rope-crafting skills using various cordages. Archaeologists estimate that our hominid ancestors may have first



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Rope is a length of fibers, twisted or braided together to improve strength. A: Fibers B: Yarns C: Strands D: Rope

used rope as far back as 2.5 million years ago, and some modern apes even have very basic knotting and rope-working abilities. So, like the club, use of cordage may pre-date modern humans.

Today the ropes used in aquaculture are nearly all synthetic fibers, some with very different properties that could make handling or mixing them improperly anything from unprofitable to downright lethal.

The big—three modern fibers

Polypropylene/polyethylene (floating ropes): Straight polypro is being supplanted by the newer technology of the copolymer fibers, a blend of the two types extruded so as to add about 30 percent to the strength, comparable to nylon and polyester. The copolymer float ropes (trade names like PolySteel, UltraLine, DanSteel, Steel-TEC, etc.) are about 30–50 percent less costly than nylon and polyester fibers, which both sink. Compared to straight polypro, the blends have far superior abrasion and UV-resistance properties. A simple way to tell them apart: the individual fiber strands of polypro have a larger diameter, say equivalent to 15– to 30-pound-test monofilament fishing line, while the copolymer is finer than a human hair.

Polyester (DuPont's Dacron®): This high-strength, low-stretch fiber has the highest specific gravity (relative density compared to water) of the three and is often twisted into a combination rope with the above fibers, making for a low-stretch, economical sinking rope. These “combo” ropes have been used for decades by fishermen, farmers and arborists, becoming the standard for commercial ropes.

Nylon: Slightly stronger than the others, it has the unique property of being very elastic, capable of stretching 30 percent or more in a twisted configuration. This makes for an ideal anchor or mooring rode, especially in heavy weather when the elastic qualities will absorb some of the shock load-

ing and take strain off the ground tackle and deck hardware. Many vessels inadvertently lose some or all of this advantage when the skipper chooses a too-heavy nylon anchor rode. Charles Chapman's *Piloting Seamanship and Small Boat Handling* may be the best guide for choosing wisely.

Unfortunately, nylon's ability to stretch and store energy can lead to fatal outcomes. People have been killed when towing with twisted nylon and the anchor point gave way on the towed vessel; the stored energy in the rope caused it to contract, yanking the hardware forward and fatally striking the helmsman of the towing vessel. Nylon makes a poor combo rope with the two above fibers because it will stretch away from the load. Combo ropes need

to be made of yarns of similar elongation characteristics.

Knots can weaken your lines by up to 50 percent, as can using a pulley wheel that is less than four times the diameter of the specific piece of cordage being used. In the too-tight radius of the undersized pulley, or when the rope is turned to form a knot, the load is not distributed evenly, forcing the fibers on the outside of the radius to take most of the load while those on the inside bear little to nothing.

This inequitable radius loading is what causes knots to weaken your lines. Short splicing is generally the strongest practical method for joining two lengths of rope. The short splice can also make an eye to go over a dock piling, or attach

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Products for Marking & Identifying Shellfish Aquaculture Lines & Gear



Flag Markers

Flag markers are available in 3 flag sizes: 1-5/8" x 1", 1-7/8" x 1-1/8", and 2" x 3" and lengths of 3", 6", 9" and 18". They are available in 5 UV resistant colors for easy identification and may be hot stamped with company names, phone numbers or serial numbers. These are rated for 120 lb. tensile strength.

Weather Resistant Zip Ties

Zip Ties are UV weather resistant and offer easy, fast and economical installation for gear, color coding or to seal bags. Sizes range from 4"-60" in length and are 18 lb. to 250 lb. tensile strength.

Stainless Steel Cable Ties

Stainless Steel cable ties endure extreme temperatures and severe environmental conditions. They are available in 200 and 350 lb. tensile strengths as well as sizes from 5" to 60".

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Multi-purpose cable ties are available in 18, 40, 50, 120 and 175 lb. tensile strengths, as well as a wide range of lengths. They are also available in a wide range of colors for marking and identification purposes.

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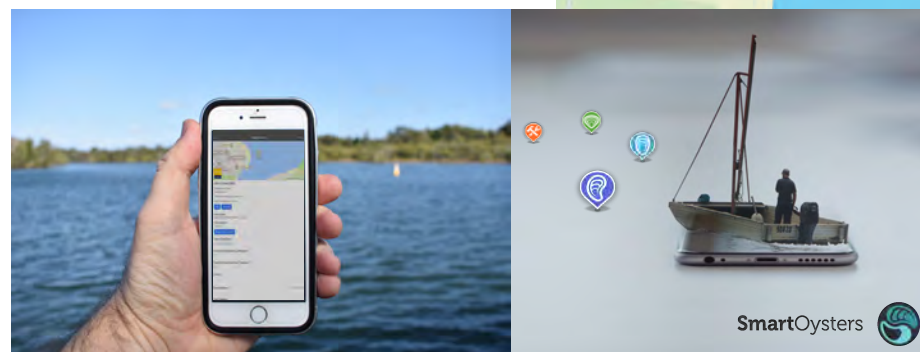
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Hoopers Island Unveils Laser-Guided Oyster Processing System

Pearlception 2.0 grades, sorts and packs millions of oysters annually

Hoopers Island Oyster Co.—a full-service aquaculture equipment manufacturer, seed hatchery and oyster grower—unveiled Pearlception 2.0, the first high-speed, laser-guided oyster processing system designed and built in the U.S. The second-generation model was developed in collaboration with Backbone Mechanical Design (Backbone) with Lead Engineer Richard Jiranek, and manufactured at the Hoopers Island Cambridge, Md., headquarters under the direction of Senior Fabrication Manager John Tall.

Pearlception 2.0 automates oyster sorting previously done by hand. Using a touch-screen to drive the “OysterLogic” system, operators can specify speed, grading size (length/width or length/volume) and number of oysters per box. The system is capable of processing up to 1 million bushels of oysters annually.



HOOPERS ISLAND

Pearlception 2.0's oyster hopper, conveyor with integrated flights, cross feed and singulator lead as seen from above.

“As oyster aquaculture has become a recognized source of delicious, sustainable seafood worldwide, Hoopers has focused our considerable experience on creating equipment and systems to strengthen oyster farming’s infrastructure,” said Managing Partner Ricky Fitzhugh.

“Using real time data and predictive modeling, Pearlception 2.0 is the first ‘smart system’ processor designed to grade, sort and package up to 20,000 oysters an hour, allowing farmers to increase the quality and quantity of seafood sent to market,” he added.

Pearlception 2.0's automated handling process eliminates chipping and waste caused by hand-sorting. A vibrating, self-loading up-feed quickly moves oysters on a conveying elevator with staggered flights. The cross-feed then delivers oysters to a singulator tube where they

are turned on two points and accelerated onto the conveyor for precise laser grading. Six air nozzles then move the oysters quickly and gently to one of six pre-set stations for boxing or bagging.

The system is accurate and easy for oyster farmers to operate, according to Tall. “We designed a large touch-screen monitor and intuitive interface with seven distinct screens to configure, operate and manage processing,” he said. “The laser scanner precisely grades oysters and is capable of storing up to 20 oyster configurations with three grades each.”

Pearlception's prototype was developed by Backbone, a Baltimore-based engineering company renowned for equipment design and production. Fitzhugh selected Backbone based on its reputation for successfully integrating ergonomic requirements, safety standards, and lean manufacturing concepts in high-volume automotive production environments.



HOOPERS ISLAND

Air jets move the oysters into one of six pre-set sorting stations for boxing or bagging.

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Shellfish Aquaculture in Federal Waters

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Cat Cove Marine Lab,
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Salem, Mass.

Workshop focusing on siting, permitting and harvesting regulations for shellfish farms in federal waters. Day two will be a trip to the NEMAC Mussel Farm site 8 miles off the coast of Rockport, Mass.

Limited stipends available to fishermen and others interested in attending.

For details and application contact
tmaney@salemstate.edu

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Twisted Rope

lines to your cages with about 85-percent retained rope strength. A bowline retains about 70-percent rope strength, and a square knot only around half the strength. If you need to join two lengths permanently and can't splice them, learn the double fisherman's knot.

Although bridling the corners of lobster traps and aquaculture gear with a sling for hoisting is common practice, this could cause problems if done improperly. When using slings or bridles on aquaculture cages there is an angularity factor that can result in extreme rope-loading forces that could cause failure, injury at sea or the crushing of your gear. When lifting a load of, say, 2,000 pounds



with a single rope, the load is 2,000 pounds; using two evenly spaced vertical ropes reduces the load by half, to 1,000 pounds each.

However, if you switch to a long bridle, instead of the two ropes being at right angles to the lift, they are now tilted to an inside angle of each leg being 60° up to the center of the bridle. The load on each leg with the angularity factor is increased to 1,154 pounds. Flatten the bridle angle to 30° and the load per leg is increased to 2,000 pounds. Continue to flatten the bridle to 10° and each leg is loaded to 5,759 pounds, putting an inward crushing force of more than 11.5 times the weight of the vertical load on your gear.

At Ketcham's we have had irate customers bring us traps crushed by extremely flat bridles complaining of "weak" steel; in the end it became a lesson in physics and leverage. Don't be penny wise and pound foolish trying to save a few cents in rope costs with overly short bridles. In the rigging business a good rule of thumb says that an inside angle any flatter than 30° is dangerous and should be avoided.

Bob Ketcham is a retired ECSGA director who founded and ran Ketcham Supply in New Bedford, Mass., from 1975 through 2016. The chandlery division of the business became, and still is, a principal supplier of cordage, in all sizes, to the commercial marine industry.

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Pearlception 2.0 Processing System

"The design process started with defining customer requirements. Using our background designing automotive machinery, we transformed the requirements into performance criteria for oyster handling, oyster grading, hygiene, safety, quality, durability, throughput, maintenance and cost," said Jiranek. "Pearlception 2.0 has satisfied our performance criteria, passed rigorous testing, and it is ready for market."

The East Coast Shellfish Growers Association anticipates that the demand for high-speed, resilient equipment to support oyster farming will continue to grow.

"Over the past five years, aquaculture has enjoyed impressive growth in oyster production, and as firms grow in scale it will be important to be able to mechanize some of the more menial tasks like sorting and counting," said ECSGA Executive Director Robert Rheault. "The development of innovative tools like Pearlception is critical to the maturation of our industry."

Also key to aquaculture's technological growth and capabilities is the need for rapid, responsive service to the mostly rural areas where farmers operate.

"As an oyster farm, we understand growers' needs, the desire for more innovative equipment and the importance of customer service," said Chris Wyer, Hoopers' senior manager for equipment and sales. "Whether a farmer needs trouble-shooting, programming or technical support, we can respond immediately and have an equipment specialist on site within 24 hours at most locations in the United States."



HOOPERS ISLAND

After emerging from the singulator, oysters are graded and sorted by highly accurate laser sensors.



HOOPERS ISLAND

Oysters move up a conveyor with integrated flights, down a cross-feed and into the singulator tube.

For information on Pearlception 2.0 or to arrange a demonstration, contact Chris Wyer at 410-397-3664 or cwyer@hoopersisland.com.



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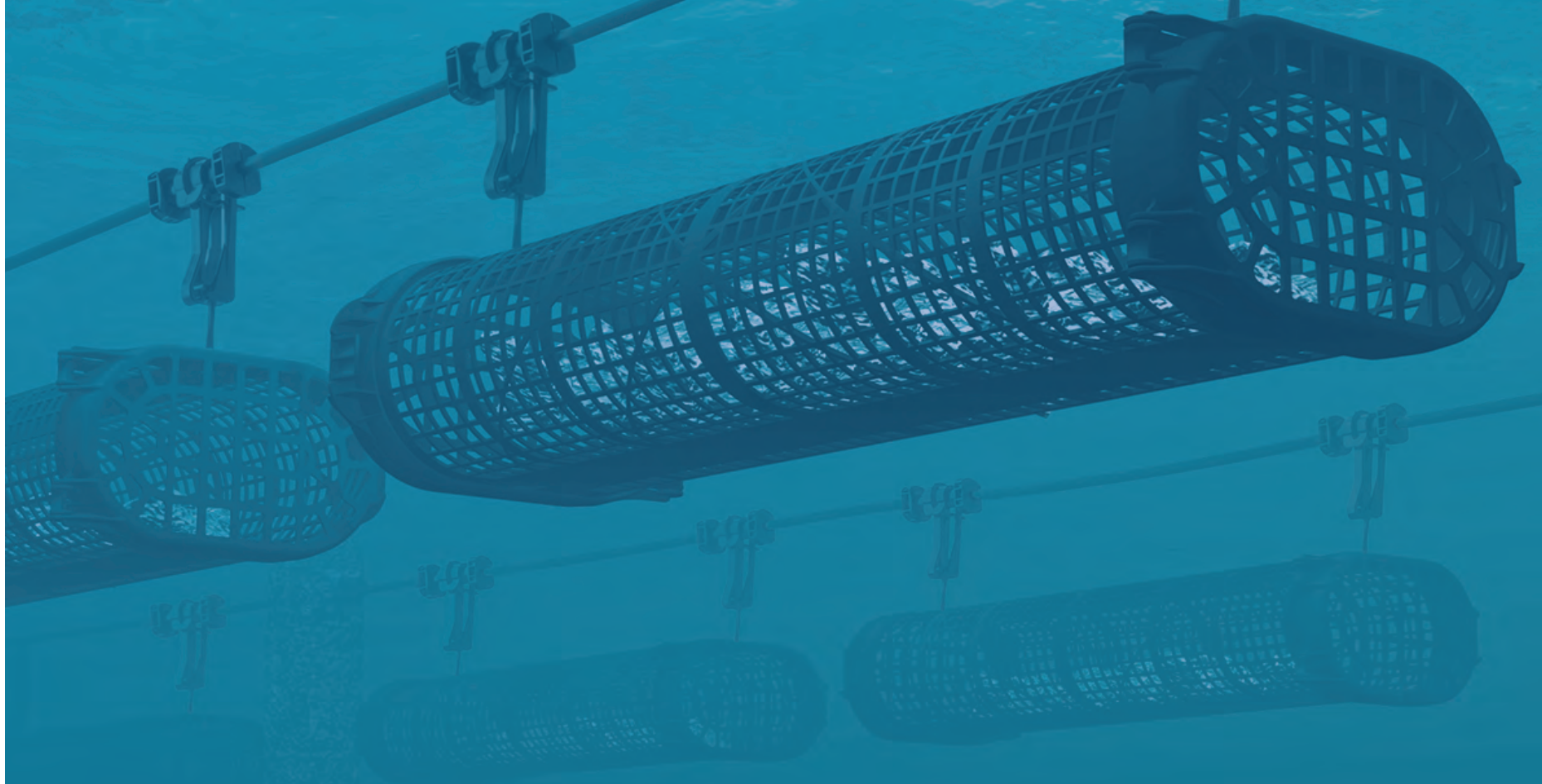
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NOAA Milford Lab Recommits to Microalgal Starter Culture Services



GEORGE SENNEFELDER/NOAA FISHERIES
Lisa Guy, the new curator of the Milford
Microalgal Culture Collection.

The NOAA Fisheries Lab in Milford, Conn., recently hired a highly qualified permanent curator to maintain the microalgal culture collection, renewing its long-term commitment to providing microalgal cultures to industry, along with training on their use. The lab will continue this service to the shellfish aquaculture industry following the retirement of Jennifer Alix, who maintained the culture for 25 years.

Algologist and Culture Curator Lisa Guy joined the Milford Lab in September 2018 after 10 years with the Horn Point Oyster Hatchery in Cambridge, Md., where she served as

head algologist for the last four years. Her role directly supports the shellfish aquaculture industry and research community: in 2018 alone, Milford sent out more than 375 starter cultures.

The Milford Microalgal Culture Collection is both a resource to support shellfish research and an extension service. The lab provides starter cultures in vials with growing instructions to shellfish hatcheries and the commercial aquaculture community throughout the United States. The lab's extension activities also include convening the Milford Microalgal Culture Workshop, which trains participants to manage stock and production cultures, scale up cultures for feeding in the hatchery, and decide how much of each type of algae to produce to feed broodstock, larvae, and post-set shellfish. The workshop is free of charge, but participants are responsible for their own travel. It has been on hiatus since Alix's retirement, but will resume in the near future.

Guy said, "I'm excited for the opportunity to work closely with the aquaculture industry through providing quality starter cultures. I'm looking forward to learning from and engaging with the Northeast shellfish community."



KRISTEN JABANOSKI/NOAA FISHERIES
The Milford Microalgal Culture Collection.

The Milford Microalgal Culture Collection, like the lab itself, has a rich history. The collection was first established by Dr. Robert R.L. Guillard in the mid-1950s, and built by Dr. Ravenna Ukeles from the 1960s through the 1980s. Over 230 algal strains are archived in the collection currently; all are perpetuated by periodic, serial subculture in enriched seawater, artificial seawater, and semi-solid media. The collection includes representatives from most of the major microalgal classes and essentially all strains used in aquaculture world-wide.

For more information, visit
www.nefsc.noaa.gov/nefsc/Milford

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From 1984 to
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bivalve production
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four-fold** from 3.8
million tons to 14.1
million tons

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time period, the
proportion of
**bivalve production
originating from
aquaculture nearly
doubled**, from
50.6% to 90.2%

Food and Agriculture
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[Using media analysis to
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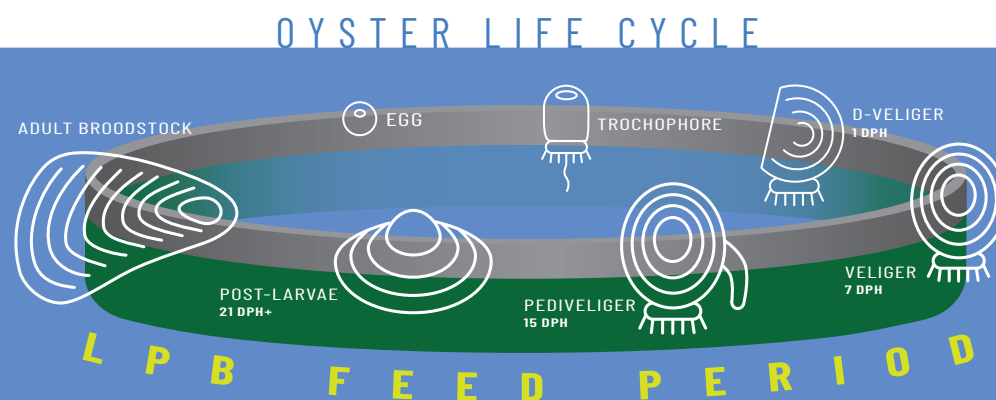
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Opinion: Sustainability Certification

by Bob Rheault, Private Citizen

Ed. Note: Opinions presented below are those of the author and possibly not widely shared by the ECSGA board, members, or anyone else for that matter.

In early March I attended the World Aquaculture Society's (WAS) triennial meeting in New Orleans. (Every three years WAS, the National Shellfisheries Association, the Fish Culture Section of the American Fisheries Society and the National Aquaculture Association meet together). This year's conference enjoyed record attendance and posted a record number of trade-show exhibitors, which is a great reflection on the growth of our industry, both globally and in the U.S.

I was somewhat surprised by the choice of the conference plenary speaker: Peter Cook from the University of Western Australia, who is a current member and past chairman of the Supervisory Board of the Aquaculture Stewardship Council (ASC). Most producer groups that I talk to are not very fond of sustainability certification programs, and personally, I have never been a big fan.

In case you are not familiar with sustainability certification, here's an overview. According to SeafoodSource's newly released [Seafood Certification Guide](#), "129 certifications, eco-labels, and assessment schemes" related to seafood currently exist. They generate income by certifying that producers adhere to a set of standards, mostly related to environmental impacts, such as drug, chemical or antibiotic use; fish-

oil use; and farm-effluent or waste impacts. Most certifications also include standards addressing labor issues, such as minimum wage, child labor, worker safety and training. Fisheries certification systems address issues such as regulations, enforcement, stock assessments, by-catch and overfishing.

In general these standards follow broad guidelines established by the UN Food and Agriculture Organization (FAO). Most entail independent, third-party inspections and allow qualifying producers to use a logo that brands their product as sustainable. Producers also need to adopt chain-of-custody traceability mechanisms to ensure that product substitution is not an issue. Invariably these third-party inspections charge producers significant fees, either as a one-time cost or a proportion of sales.

In principle, I support the idea of incentivizing sustainable production practices by assuring consumers that a fishery or aquaculture producer is environmentally sustainable. The theory is that consumers should reward these producers by paying a higher price, and that certified producers will gain access to certain environmentally conscious buyers. In an ideal world, adherence to standards can reduce operating costs and enhance a firm's social license to farm.

Several years ago I volunteered to serve on the team that established global standards for sustainable bivalve farming for the World Wildlife Fund, (standards that later became the basis for

ASC certification). I wanted a seat at the table to make sure that any standards they developed were rational, attainable and affordable. I felt confident that most shellfish farms should easily qualify as sustainable producers, and my belief was confirmed by an international team that included a dozen scientists, growers and environmentalists.

Our team looked at ways that shellfish farms might create environmental problems, and we developed standards to ensure that growers would work to minimize their ecological footprint.

Compared to the teams looking at farmed salmon, *Pangasius* (Asian catfish), tilapia and shrimp (or wild fisheries) we had an easy task. You

really have to look hard to find significant environmental impacts associated with shellfish farming.

Nevertheless, I have many issues with sustainability certification—not with ASC specifically, but certification in general. First of all, in 25 years of selling shellfish I never once had a customer ask me if my product was sustainably farmed. About 15 years ago, a survey of American consumers found that only a tiny fraction even knew what "sustainable seafood" meant. The concept has certainly gained more traction in recent years, and there is little doubt that sustainability is more highly valued in Europe, but even an ASC survey of global seafood consumers showed that people care far more about price and taste than sustainability.

My main problem with certification is that the various certifiers refuse to harmonize around one set of standards.

You might need one certification to sell to Darden's or Walmart, but a different one to sell to Whole Foods. Each of these certifications carries hefty fees, and the inspections can take days of precious time away from important farming duties. I understand that some of the certifying organizations are currently working on bringing standards into harmony, and I'm hopeful this will lead to a welcome consolidation.

I personally believe the whole process is being driven not by consumers, but by aggressive, strong-arm tactics that coerce the big seafood buyers to demand certification from their suppliers in order to avoid boycotts and bad press.

Peter Cook acknowledged that producers will rarely be able to recover the cost of certification by charging a higher price. He also acknowledged that small producers are often unable to afford certification, and that pro-

— Continued on page 9



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— Continued from page 8
Certification Standards

ducers from developing countries may never qualify because of inadequate regulation, enforcement or governance. Some certifiers have attempted to compensate for these systemic problems by relaxing standards for developing countries. To me this seems to defeat the whole purpose of standards and tilts the playing field. It should be noted that ASC has steadfastly resisted the pressure to relax their standards for developing countries.

Cook acknowledged that the primary benefit of certification for producers is gaining access to certain markets. One of the questions I have is, *Will the certifiers pay to defend their brand?*

If Greenpeace or some other NGO were to someday make

the charge that a certain certifying group's standards are too lax, will that certifier pay for a media campaign to counter the charge, or will producers still effectively be subjected to boycotts instigated by an NGO?

Cook also claimed that certification would lead to improved social license to farm. I have to wonder though, whether the homeowners in the waterfront mansions who are suing to block shellfish farm applications in their view-scapes are concerned about whether or not those farms are environmentally friendly. If they really cared about the environment they would stop dumping fertilizer on their lawns.

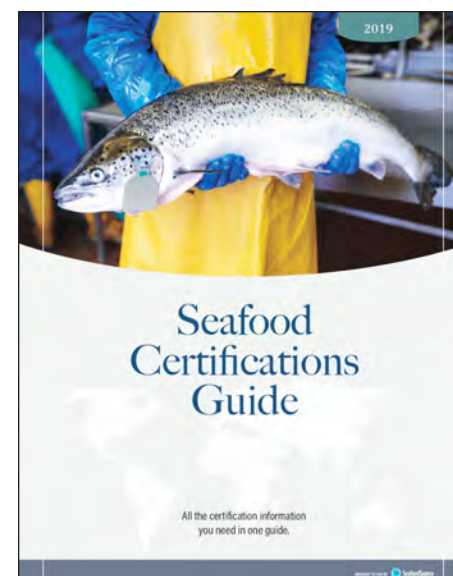
I have always said that farmed shellfish is sustainable, but from a marketing standpoint I maintain that you will get better traction

with consumers by using terms like, "fresh, delicious, locally farmed and nutritious" than you will with "sustainably certified."

Obviously, some producers disagree with my calculus. ASC alone has certified 139 shellfish farms and has another 76 in the process of assessment. If you count fish and shrimp farms, the number climbs to 816 certified producers globally. I welcome efforts to make fisheries and aquaculture more sustainable, and I will celebrate the day when one certification works for all the big buyers. I hope that consumers will come around and reward certified producers financially for their efforts to improve their practices.

When that happens, sign me up!

Note: Again, this is just the opinion of the author and does not



reflect that of the ECSGA board or membership. We welcome rebuttals and will print the best one in our next newsletter. The rest will be posted online.

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Explaining the Jones Act in Two Minutes or Less

by Robert Rheault,
ECSCA Executive Director

A few weeks ago I accepted the challenge of explaining our Jones Act carve-out bill in two or three minutes. It is complicated and wonky, but here goes nothing.

The Merchant Marine Act of 1920 (widely known as the Jones Act) was enacted in an effort to preserve our domestic shipbuilding industry for times of war. Most of the act deals with “cabotage provisions,” setting the proportion of U.S. steel that must be in a U.S.-flagged vessel and establishing that only U.S.-flagged ships

can carry goods between U.S. ports without triggering tariffs. A small part of the bill was written to protect sailors on the high seas to make sure they were taken care of if they were injured on the job. If you are going from state to state or country to country you can’t exactly be covered on a state workers compensation plan, so this new insurance plan was created.

Under the Jones Act an injured seaman can sue his employer for “maintenance and cure.” Employers can purchase insurance, typically a Jones Act endorsement for each employee that gets tacked on to the Property and Indemnity

policy for each vessel. Depending on the state, these endorsements can cost anywhere from \$2,000 to 3,000 a year, providing insurance for the first \$500,000 to \$1 million of a court settlement. Unfortunately, if an employee is seriously injured, a lawsuit might run to several million dollars, and this would bankrupt most small farms. (Our last survey of members revealed that 80 percent of shellfish farms have fewer than 10 employees).

What’s worse, in many states shellfish growers are forced to pay into state workers compensation plans, so many growers are paying twice for their employees’ coverage. Invariably, if an employee gets hurt and goes to the hospital for stitches, the nurse asks if it was a work-related injury and state workers compensation takes care of everything.

We believe that since aquaculture workers are farmers who never leave state waters and always work in the same spot every day, often from small skiffs in shallow waters, we would be better off covered under a state workers compensation plan. Our bill, the Shellfish Aquaculture Improvement Act, simply clarifies that aquaculture workers are not considered “seamen” under the Jones Act in states where state workers compensation is available. This is the exact same exemption



COREY ARNOLD/INSTAGRAM

The Jones Act was designed to insure seamen working on the high seas, like this fishermen on a crab boat in the Bering Sea—a far cry from shellfish farmers working in skiffs in shallow, inshore waters.

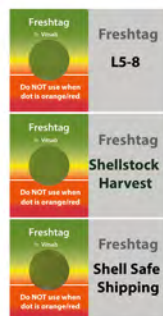
language that Congress used to exempt aquaculture workers from the Longshore and Harbor Workers Compensation Act in 1986.

We have obtained the endorsement of the Seafarers International Union and the American Maritime Partnership because both organizations realize that in an industry dominated by small firms, the best way to ensure that workers get the maintenance and cure they deserve is to cover them with state workers compensation. It’s obvious that a bankrupt firm can’t cure anyone.

Our bill is short and non-controversial. We have not yet found anyone who opposes our efforts. The bill has bi-partisan sponsorship and I am confident that if we can educate enough lawmakers about this issue we can get this done in the 116th Congress.

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NOAA Releases 2016 Aquaculture Production Data

NOAA recently released its [annual report](#) on fisheries and aquaculture landings from 2016 (the most recent year for which data are available). The report highlights slow annual growth of around 1 percent in most categories, but **oyster production continues to shine!**

Looking at U.S. aquaculture over the five-year period from 2011 to 2016, several trends are noteworthy. The value of farmed oyster landings almost doubled, from \$98 million to \$192 million, confirming the trend I have been observing in East Coast production. Oyster production, as measured by total meat weight, increased 37 percent. Price per pound increased 70 percent, reflecting both an increase in price per piece, and more pieces per pound. This mirrors a growing national trend towards a consumer preference for smaller oysters.

Clam production has actually declined a bit over the same five-year period, from 10.3 million pounds to 9.7 million pounds of meats, but the price per pound has been growing nicely from around \$10 to

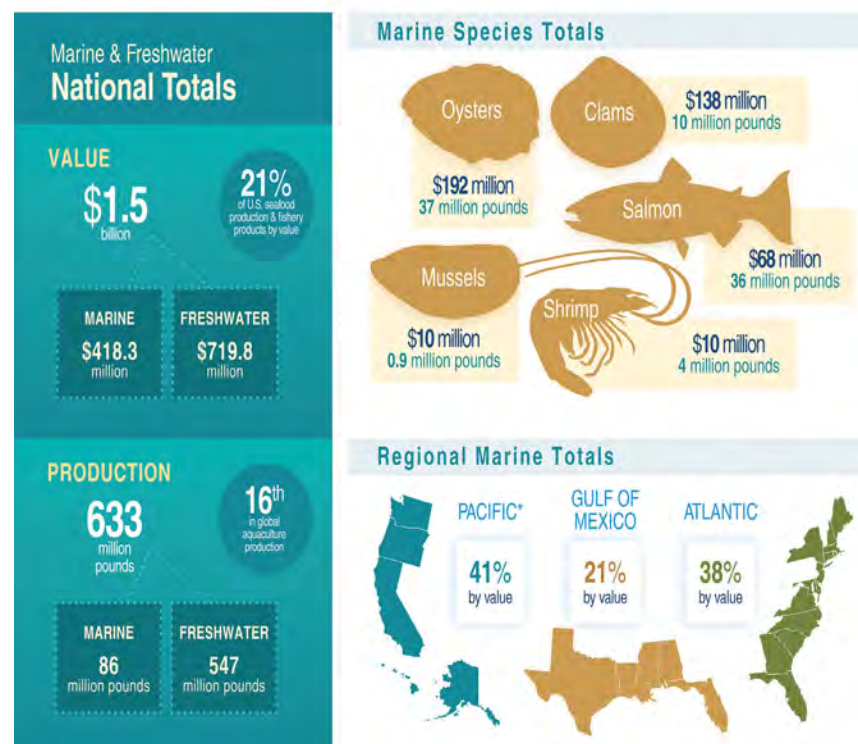
\$14 per pound—an increase of 40 percent. Clam producers tell me that the clam market has been improving steadily for several years; welcome news after the price collapse that clam farmers suffered around 15 years ago. They also have been telling me that a brutal cold snap a few years ago sharply curtailed East Coast supply, but demand has remained steady so growers are selling everything they can produce.

Anecdotally we have indications that wild oyster harvests from Maryland have been strong, but the Gulf Coast has never really brought oyster production back to pre-BP oil spill levels. Connecticut and New York are seeing good wild sets and they should see strong harvests, unless these year classes get hammered by another superstorm.

Meanwhile, wild clam harvests in most New England states have been pretty low. A paper by Clyde MacKenzie documents a 50-percent decline in wild harvests from about 50 years ago. Many clam growers from Massachusetts, New Jersey and even Florida have been switching over to oysters.

Mussel production has remained pretty steady (just under a mil-

2016 Aquaculture Production Highlights



FISHERIES STATISTICS DIVISION, NMFS; CENSUS OF AQUACULTURE, USDA.

lion pounds of meats per year), but again mussels have enjoyed a strong 44-percent price increase.

Note: I have tried to get NOAA to consider changing the way they report shellfish landings because they use some crazy conversions to get from bushels to meat

weight, even though cultured oyster and clam landings are typically reported by the piece. So far I have not gotten much traction. It will be very interesting to see the results of the USDA's Census of Aquaculture when the numbers come out this fall. —RBR



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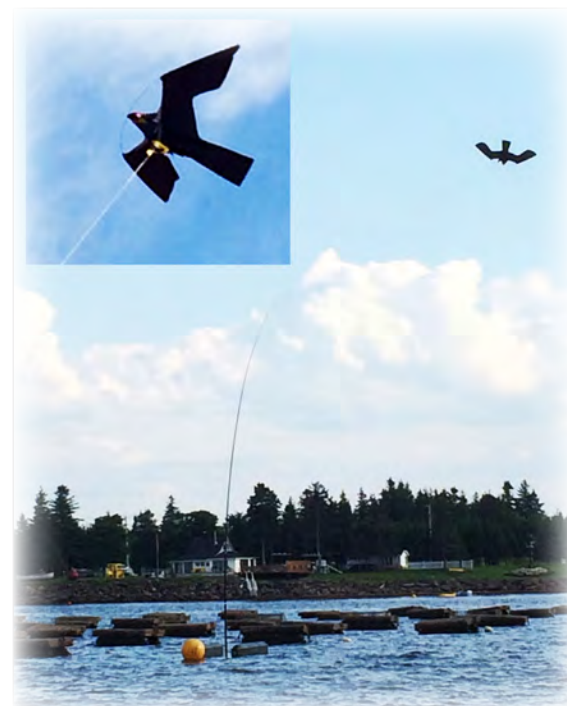
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Atlantic Capes Fisheries of Cape May, N.J., is a fully integrated seafood company with 25+ harvesting vessels, two unloading facilities, three processing plants, and a fleet of delivery trucks.

Among the thousands of buyers and suppliers who traveled from all over the world to the annual, three-day exposition formerly known as The Boston Seafood Show we found more than a few familiar faces.



CONNIE LU/PANGEA SHELLFISH
Boston-based Pangea Shellfish Co.'s impressive display at the show.

ECSGA Membership Categories and Dues

Growers, dealers and equipment suppliers enjoy full voting rights. (If you are both a grower and a dealer simply ask yourself where most of your revenue comes from.) If you don't fall into one of these industry categories please consider joining as a non-voting associate member.

Member Type	Gross Annual Sales	Dues
Grower	\$0 to 50,000	\$100
Grower	\$50,000 to \$100,000	\$200
Grower	\$100,000 to 300,000	\$500
Grower	\$300,000 to 3 million	\$1,000
Grower	Over \$3 million	\$1,500
Shellfish Dealers and Equipment Suppliers		\$250
Restaurant Ally		\$100
Non-voting Associate		\$50

Because ECSGA is a 501(c)(6) non-profit trade organization, a portion of your membership dues may be tax deductible as a business expense; please contact us for details.

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* Rest assured your sales information will be closely guarded and will not be shared!



JENNIFER KORNEGAY

On Feb. 22–23 the 3rd annual Oyster South Symposium, held in Orange Beach, Ala., brought together a record number of attendees. More than 235 producers, gear suppliers, distributors, chefs, food writers, vendors, researchers, students and managers from the Southeast region met to discuss pressing issues and relevant, practical research on oyster aquaculture. Organizers were thrilled with the level of enthusiasm and support of the Southern farm-raised oyster community. Shown above, the Friday night Friends and Farmers reception at Fisher's Dockside Restaurant at the Orange Beach Marina.

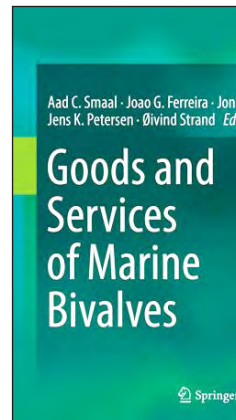
Oyster farming and the culture that accompanies it is the heartbeat of Oyster South, a 501 (c) (3) non-profit whose mission is to cultivate a South that encourages successful farms, healthy waters and the birth of new traditions.

Free Book on Bivalve Ecosystem Services Available for Download

Thanks to the wonders of open-source publishing, it's now possible for anyone to afford this great new book, [Goods and Services of Marine Bivalves](#), edited by noted experts Aad C. Smaal, Joao G. Ferreira, Jon Grant, Jens K. Petersen, and Øivind Strand. Contributors make up a veritable *Who's Who* of shellfish experts from around the world.

A recent survey of our members revealed that their number-one priority was explaining and documenting the many tangible ecosystem goods and services provided by shellfish aquaculture. This team has done a great job of bringing all the recent literature into one place and compiling it into a well organized and readable format that anyone can understand.

Dr. Sandra Shumway said it best in her foreword to the book:



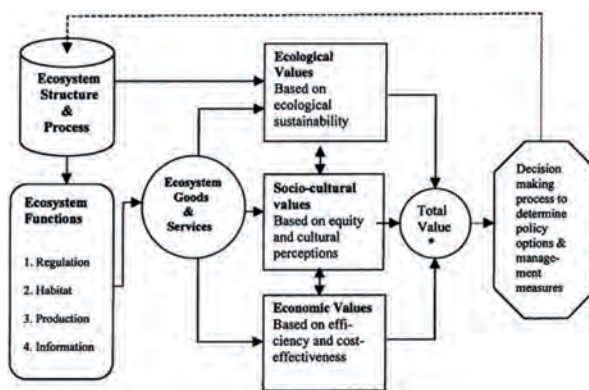
"Bivalves are key to the development, functioning, and sustainability of coastal environments. Molluscs have long been revered for the beauty of their shells, culinary attributes, and as the basis for many successful aquaculture ventures. Long overdue, however, is wider recognition and understanding of their extraordinary abilities to shape, control, and improve their environments. As highly efficient filter feeders, bivalves facilitate benthic–pelagic coupling, influence sediment processes, provide structure, and contribute to habit diversity and biodiversity. While the term 'ecosystem services' is relatively new, the role of molluscs in performing those services has been recognised for centuries. Only in recent decades, however, have these attributes been studied, quantified, modelled, and put forth as integral to ecosystem development, maintenance, and sustainability....

"Integration of the individual efforts of these scientists, their collaborators, and contributors to this volume has moved the importance of mussels, oysters, and other bivalves to new levels of understanding and acceptance.

"As the field moves forward, their efforts will serve as a template for new investigators, as a valuable resource for managers, and as a launch pad for as-yet undefined and integrated studies. It is a dynamic future ahead."

The book is organized into sections based on service type: Provisioning (food, jobs), Regulating (nutrient removal, filtration and habitat), Cultural (community and societal impacts) and Assessment (modeling and measurement). Downloading is easy and fast, and anyone can quickly get lost in the exhaustive list of shellfish-related works.

We have long made the argument that shellfish farming is good for the environment. Now all the science needed to back up that claim can be found in one, free, easy-to-access publication that didn't cause the death of any trees and won't even take up any shelf space. —RBR



Framework for the integrated assessment and valuation of ecosystem functions, goods, and services. (de Groot et al. 2002)



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