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# Shellstockers Review

*Newsletter of the North Carolina Shellfish Growers Association*

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## *What's the Buzz . . .*

### **It's all about Virginia:**

The Virginia Institute of Marine Science's Sea Grant Extension study tracked sales of aquaculture-grown oysters for 2005 through 2007. Here's what it found:

**2005:** 843,842 oysters

**2006:** 3,145,282 oysters

**2007:** 4,800,900 oysters

The average price all three years was 30 cents apiece.

Virginia's growing hardshell clam industry produced 211 million clams in 2007. Of those, 90 percent were shipped to out-of-state buyers.

A survey conducted by the Virginia Institute of Marine Sciences Sea Grant Extension Program reports that hardshell clam aquaculture growers increased their plantings in 2007 by 77 million clams.

Associated Press 06-06-08

**Note from the President:** : I'm sitting at my desk on Sunday the 29<sup>th</sup> of June thinking that there may be – this year – a couple of bills that may make a difference to the shellfish industry. We have waited long enough, and before I put this newsletter to press, I'll await the results of the bargaining that's now going on in the state General Assembly.

They're meeting today to continue work on a compromise budget, and I'm hoping there will be a resolution to bring this to an end. In reality, that's probably too much to hope for.

Monday, June 30 – No resolution. At stake is the transfer of \$600,000 annually from the NC Aquariums to the Division of Marine Fisheries for building oyster reefs and remote setting oyster shells for those reefs. This money is important because it could give hatcheries in the state a shot in the arm and consequently spill over to the oyster culture industry with lower prices for local larvae. The big prize for that funding, though, is in the water. With a few years of reef building, water quality and habitat will be the big winners. And as you well know we can't grow our shellfish without good water.

The largest chunk of funding, and one I'm worried about, is a \$4.3 million allocation to the University of North Carolina at Wilmington to build a research hatchery. I think this research hatchery is the key to entire program. With it we can develop a line of clams, oysters, and scallops that will be able to deal with the many stresses of our ecosystem. The idea isn't new. Virginia has worked at such a program for many years and has come up with strains of oysters that adapt well to the conditions there. We need to do the same, but we cannot do it without the research hatchery and follow-on funding.

Tuesday, July 1 – Still no resolution. This is a very difficult and frustrating process. Here's part of a note I received today from one of our legislators: "*The budget process has stopped and we may go home without making any adjustments to the budget unless something happens soon!*"

A couple of months ago, I was presented with a compromise hatchery plan that would have given the Division of Marine Fisheries funding for a production hatchery at Cedar Island and money to run a remote setting facility, buy barges, and plant cultch on reefs. At that time the research hatchery was off the table. After a lot of planning and work by many people in the process, the plan has come around to what is proposed today.

It's a lot of money in capital expenditures, and those are the ones that get negotiated away first, especially at the end of the legislative process when

they just need to cut something to make everything fit. Looks like we'll wait another day.

Wednesday, July 3 – No resolution

Thursday, July 4 – Holiday

Friday, July 5 – As I understand it, the deal is ready to be cut, but (holiday weekend) it will probably be Monday before anything is decided.

Monday, July 7 – News reports said we might expect a resolution today, but if it comes, it will be late. So far no word. Regardless of the outcome of this round of legislation, we already know that private shellfish culture could make an even larger impact on the environment than all the government programs put together. The stakeholder's committee in Maryland came up with that conclusion as did a study group in Virginia, and that's after dumping countless millions into programs to restore Chesapeake Bay.

Florida is growing and marketing hundreds of millions of shellfish annually with private culture as are Virginia, New Jersey, New York, Connecticut, Massachusetts, and other Northeast states. What will it take to put North Carolina into the fold of shellfish culture on a large scale?

Tuesday, July 8 – I received a note from Sen. Basnight's office today. The budget contains \$2 million in recurring funds for the Division of Marine Fisheries to administer an Oyster Sanctuary Program. That includes money for six positions, equipment, operations, and materials. It also contains \$4.3 million for construction of a research hatchery at the Center for Marine Science at UNCW in Wilmington.

A few details need to be worked out yet, and the Governor has to sign this into bill, but it looks like a good day for our side.

**Commercial Landings Down; Dockside Value Up in 2007:** The amount of seafood commercial fishermen brought to the docks in North Carolina dropped for the fifth straight year in 2007, but the dockside value of the catch increased from 2006 figures.

Commercial fishermen landed 62.9 million pounds of fish and shellfish in 2007, an 8.5 percent drop from 2006, according to harvest data collected by the N.C. Trip Ticket Program.

The total dockside value of the 2007 harvest was estimated at \$82.3 million, which was \$12.2 million more than in 2006.

"It could indicate that higher fuel prices are forcing fishermen to target the high-dollar catches," said Louis Daniel, director of the N.C. Division of Marine Fisheries.

"In some instances, the declines that we have seen from 2006 to 2007 may be closely related to coastwide quotas and other regulations," Daniel said. NCDMF 04-23-08

**New Regulations for Oysters Caught in Warm Waters:** In an effort to reduce the number of people who get sick after eating oysters, the FDA has set new guidelines for how they can be harvested from warm waters. The regulations center on oysters that are pulled from waters that are warmer than 81 degrees.

The old rules allowed the oysters to remain unrefrigerated for up to eight hours. The new rules reduce that time to five hours, meaning that most oyster boats will have to find a way to refrigerate the oysters while out on the water. WWLTV.com 06-29-08

*Louisiana's oyster industry has adopted a policy that requires raw oysters taken from waters hotter than 81 degrees Fahrenheit to be refrigerated within five hours or be labeled "For cooking or post-harvest processing only."*

**Ga. Oyster Harvesting Off-Limits Until October:** Georgia's waters are off-limits for oyster harvesting until Sept. 30 by order of the state Department of Natural Resources Commissioner.

The order is in response to coastal water temperatures reaching at least 81 degrees. That's the threshold established by the National Shellfish Sanitation Program for determining risk of *Vibrio parahaemolyticus*, a bacterium that lives in brackish seawater and causes gastrointestinal illness in humans, according to the U.S. Centers for Disease Control and Prevention. *The Atlanta Journal-Constitution* 06/24/08

**Record Fine:** A record fine has been handed down to a man who harvested and sold unsafe oysters on the New South Wales mid-north coast.

Terry Allan Harding, from Port Macquarie, was fined \$42,000 for taking the oysters from the Hastings River while it was closed for harvest due to rain in February and March last year.

More than 700 dozen oysters were seized at the Sydney Fish Markets. They were found to contain high levels of E. coli bacteria and some contained salmonella.

New South Wales Primary Industries Minister Ian Macdonald says he is shocked by the case. "These are quite dangerous to human health and can lead to severe illness and in some cases death," he said. Australian Broadcasting Company News June 6, '08

**Delaware Bay Oyster Project Successful:** The Delaware Bay Oyster Restoration Project has "planted" more than 1.4 million bushels of clam and oyster shell on the bay floor to give oyster larvae a place to attach. The result, according to the nonprofit consortium: a 10 percent increase in oysters in those areas.

Because of the value of the new oyster harvest, the project calculates that for every dollar of congressional appropriations that have gone into the effort, about \$40 was added to the state economies of Delaware and New Jersey. So the \$4.3 million federal investment has resulted in a \$168 million benefit. *Philadelphia Inquirer* 04/16/08

**Microbe Killing Oyster Larvae:** A microbe that thrives in warm ocean water is threatening the Pacific Northwest oyster supply, having already killed billions of young larvae.

The bacterium, *Vibrio tubiashii*, is related to another species that causes paralytic shellfish poisoning. This one doesn't affect people when they consume infected oysters, but instead kills shellfish in their larval stage before they latch onto rocks to grow.

A surge of the microbe last summer shut down Whiskey Creek Hatchery in Netarts Bay, Ore., one of the largest shellfish hatcheries on the West Coast that supplies larvae to about 70 oyster growers.

The microbe also is the likely culprit in the disappearance of recent generations of wild oysters from Willapa Bay in southern Washington.

"We're in a state of panic," said Robin Downey, executive director of the Pacific Coast Shellfish Growers Association in Olympia, Wash., told the Oregonian. "There is no other word for it."

Scientists are devising filters that can strain the lethal bacterium out of water flowing through hatcheries.

"It's going to have some major effects on the industry in the next year or so," said Bill Taylor of Taylor Shellfish Farms in Shelton, Wash., which hatches and grows oysters in Washington's Hood Canal. "There's not going to be enough marketable oysters to sell." *SeaFood Business* 06-10-08

*Dave McCallum, coordinator of research and development for the Canadian British Columbia Shellfish Growers Association, said some oyster growers in the province haven't had their seed supply replenished since the bacterium began to take its toll.*

**Red Tide Not a Threat:** The warm weather of spring brings with it the promise of cookouts and clam bakes and visions of enjoying some of the best fresh local shellfish in the world. But with increasing frequency, it seems, spring also brings warnings of red tides. Invariably the media breathlessly reports each occurrence of these annoying plankton blooms as if our shores were being invaded by terrorists. The public reacts by shunning shellfish, and the market for seafood evaporates.

The fact is that all of the shellfish in the marketplace is safe. No one is getting sick. The reports of these blooms are proof that our monitoring systems and safeguards are working. Each state regularly samples its harvest areas to ensure that our shellfish are wholesome and free of contaminants.

So the next time you read a report about a spreading bloom of noxious algae causing closures of harvest areas, don't shy away from shellfish, but rather take it as confirmation that our monitoring systems are working. Shellfish are delicious and nutritious, low in fat and high in essential minerals! The shellfish you buy in a

*Ed Note: Many of the Shellfish waters from New Brunswick, Canada through New Jersey have been closed this summer because of Red Tide.*

restaurant or market is guarded by an extensive network of state and federal monitoring programs. So fire up the barby, dig out the clambake pit and get ready for another season of great shellfish. Bob Rheault, Ph.D., President, East Coast Shellfish Growers Association

**Pearl-like Coating from Oysters Could Protect Aircraft:** Scientists from the University of Dayton Research Institute have manipulated the process of shell and pearl formation in oysters to demonstrate a method for depositing pearl-like coatings onto various metal surfaces.

This biomimetic research could lead to new lightweight, durable coatings able to protect aircraft from impact and corrosion.

Biological ceramic coatings are naturally derived and do not involve the high-temperature, high-pressure environment required by existing methods for ceramic deposition.

Clemson University's Dr. Andrew Mount discovered that oysters use blood cells to deposit crystals that form shell and pearl, which negated scientists' long-held belief that oysters create their shells by precipitating calcium carbonate from seawater

Mr. Hansen and his wife, Karolyn, also a UDRI senior research scientist, maintain live oysters in their lab and use them to demonstrate ceramic deposition inside and outside of the organism. The Hansens insert small pieces of metal into the oysters, which triggers the formation of pearl. They also take blood cells out of the oysters, which when placed on metal behave as if they are growing a shell on the surface.

Mr. Hansen recently reported having successfully deposited multilayer coatings on four different metal surfaces -- two aircraft aluminum alloys and two biomedical alloys.

Air Force program manager Maj. Jennifer Gresham said she hopes this research will lead to a better understanding of how biological systems can formulate ceramic coatings and films. Such knowledge could allow for the development of synthetic processes to deposit ceramic films and coatings without the necessity for high-temperature and high-pressure conditions. Air Force Office of Scientific Research Public Affairs 04-14-08

**Rhode Island Shellfish Harvest on Rise:** The Rhode Island aquaculture industry continues to experience strong growth as its farm gate value increased by 18 percent to \$1.6 million last year, according to a recent report from the state Coastal Resources Management Council. The farm gate value is the net value of the product when it leaves the farm, after marketing costs.

The value of aquaculture products passed the \$1 million mark in 2006, and 2007's growth marks the 10th double-digit increase in values during the past 12 years.

Total acreage under cultivation rose to 123 acres from 99 acres, a jump of 24 percent. Gross revenues reached \$4.3 million and aquaculture farms created a handful of new full-time jobs. A total of 14 full-time, year-round jobs and 28 part-time, seasonal employees work in the industry. Employment increases in the summer; last year, farms hired two full-time seasonal and 17 part-time seasonal workers during the summer months.

The value of Rhode Island aquaculture per acre is \$12,862 – a decrease from 2006's figure of \$13,621, but it was "still a large increase from \$8,757 in 2006 and from the \$8,185 per acre value for 2004," according to the report. *South County Independent* 06/29/08

**King Sized Oysters:** Coffin Bay King Oysters, produced at the Coffin Bay Oyster Farm in Australia, have up to 10 times extra meat than normal-sized oysters and are set to become the latest delicacy.

The king oysters, which sold for \$100 each at a recent auction in McLaren Vale, are being compared by their owner with the wine industry's flagship Penfold's Grange. *The Advertiser, Adelaide Now*, Adelaide, South Australia 06-06-08

**World's Largest Oyster:** Eureka, Ca. -- After two years of searching, a local man plucked out of Humboldt Bay what he believes to be the world's largest oyster. Richard Mesce, a retired navy pilot, asked James Gast, a retired Humboldt State University oceanography professor, to take the first official measurement to start the application process to qualify for the Guinness World Records.

Measuring 13 inches long and about 6 inches wide, the oyster is longer than the current recorded largest oyster, which measured in at 12 inches and 5.5 inches wide.

"It was a challenge," Mesce said. "It took a long time to find it." Mesce has been searching for an oyster of this magnitude since he accidentally came across a 10-inch oyster in the same area near the Samoa Bridge in 2006.

"I figured if there was that one, that surely there had to be an even larger one to break the record by Chesapeake Bay," Mesce said.

He estimates he spent more than 100 hours over the last two years looking for the oyster by kayak, utilizing tide tables and also reading up on oysters. *The Times-Standard* 05/17/2008



### **Canadian Shellfish Program Presents Risk:**

Canada's shellfish industry is so fraught with problems that the health of consumers is being put at risk, according to a recent report by the Canadian Food Inspection Agency.

The report examines the Canadian Shellfish Sanitation Program, the roots of which go back to 1925 when contaminated oysters led to an outbreak of typhoid fever in the United States, killing 150 people

Canada has suffered several shellfish health scares in the last two decades, including a 1987 crisis in Prince Edward Island that left three people dead after they ate mussels containing domoic acid. In 2004 there were 79 recorded incidents of norovirus poisoning in British Columbia caused by eating toxic oysters. No one died.

In Atlantic Canada, Quebec, and British Columbia, the primary species are clams, quahogs, geoducks, oysters, scallops and mussels, with a market value of about \$200-million annually. More than a quarter — or about \$60-million worth — are from the aquaculture industry. -- *Canadian Press* 02/17/08

**Biker Gangs in Seafood Poaching Rings:** An Australian Institute of Criminology Report says organized groups - including biker gangs - were targeting national parks, and illegal fishing was sometimes perpetrated under the guise of indigenous hunting.

The thieves were "reputed to be well organized, with half a dozen groups working on the coast in specific areas," the report warned. Aquaculture farms were also victims of the thieves, whose main targets were oysters, eels and deep-sea species such as tuna.

Oyster theft was so well organized that thieves were using lifting equipment on vehicles to steal whole racks from farms, the report said.

There was an extensive illicit Australian market for these species including clubs, restaurants, hotels and fish and chip shops, the report said. *Ninemsn* - Sydney, New South Wales, Australia 05-26-08

***Oysters, eels and prawns are among seafood species being targeted by organized crime gangs to feed an extensive illicit Australian market, a study has warned.***

**£17m Marina Development on Hold:** A £17m (\$34 million) Marina Development is in the balance after a judge ruled against the proposal. Opponents of the 400 berth, 10 hectare marina at Gallows Point near Beaumaris, Wales claimed it would damage the surrounding mussel beds, which are the largest in the UK.

Anglesey Council and the Crown Estate Commissioners, legal owners of the foreshore and seabed included in the fishery, argued that, subject to obtaining the necessary planning consents, they had the legal right to go ahead.

The fishery was created in 1962 by a 60 year order, and giving his ruling at London's High Court, Mr. Justice Davis said that the 1962 Order was lawful and the planned construction would be unlawful.

James Wilson, who with his brother Andrew leases land from seabed co-owners Anglesey Council said: "We're very happy, obviously - it obviously removes something we consider to be a huge threat to our industry."

The brothers have been working on the fishery since taking over from their father in 1991, and the beds

produce between 6,000 - 10,000 tonnes of shellfish each year - or 50 - 75 per cent of the total amount of shellfish on the UK market. *North Whales Chronicle* 08 May 2008

**Oyster Thieves Net \$15,000:** A Port Macquarie oyster farmer had \$15,000 of oysters and equipment stolen from a lease in Limeburners Creek at the weekend. Gavin Pix, from Holiday Coast Oysters, fears the row of 300 oyster baskets taken from his lease could have been earmarked for sale to farmers in other rivers.

The juvenile oysters were found intact late on Monday about 5km upstream from Mr. Pix's lease. "I find it very difficult to believe they made it that far up the river just drifting," he said.

"There's a lot of bends and twists in the river. I'm hoping they weren't towed up there and put there for retrieval later."

Mr. Pix said it would have taken a mammoth effort to move the oyster baskets. "You don't lose 300 baskets just like that," he said. "Even in a flood you don't lose that many, you might lose one or two. I was suspicious straight away."

Mr. Pix said the rows were secured by four anchor lines attached to half-ton concrete blocks. *Port Macquaire News*. New South Whales, Australia 04-15-08

**Britain Creates Twice-a-Week Retail Seafood Logo:** The United Kingdom's Sea Fish Industry Authority (Seafish) has created a new retail seafood label to encourage Brits to eat fish twice a week, according to *Specialty Food Magazine*.

The label was created by the Seafood Fortnight steering group, where key industry representatives have been working together to maximize the impact of the message.

"We spent a lot of time developing the best layout and style for the labels and are confident we've come up with something to suit businesses of all sizes," said Ian Frostick, retail sales director from Lyons Seafoods, one of Britain's largest seafood processors and a member of the steering group. "The two-a-week logo is already being recognized by consumers and these labels will give maximum stand out, ensuring people are reminded of the importance of eating two portions of seafood a week." *SeaFood Business* 06-09-08

**Shellfish Boom Nets Record Year for Fishing Industry:** The total value of landings by Scotland's fishing fleet reached a record £380 million (\$760 million) last year – 4 per cent up on 2006 – it was revealed yesterday.

But a report from the Scottish Government has also revealed varying fortunes for the three main sectors of the industry.

The value of shellfish landings increased by 16 percent to £163 million (\$326 million), while the volume rose 13 per cent to 67,000 tonnes. [NEWS.scotsman.com](http://NEWS.scotsman.com) 06-11-08

## **MAY ALL YOUR CLAMS BE SOLD; MAY ALL YOUR OYSTERS BE BIG**

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