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President's Column

President's Update

LaDon Swan, President

On behalf of the Board of Directors of United States Aquaculture Society (USAS), a Chapter of the World Aquaculture Society (WAS), I hope you enjoy the second newsletter for 2004. In January, the USAS will co-host the Aquaculture America 2005 conference in New Orleans. This venue is one of the most popular meeting locations in the United States. Our past Aquaculture America conferences in New Orleans have drawn large crowds; this year should be no exception. I know our Steering Committee Chair, Douglas Drennan with Aquaculture Systems Technologies, and our Program Chair, Rebecca Lochmann with the University of Arkansas at Pine Bluff, have organized an informative and enjoyable conference.

The USAS is taking action to respond directly to the membership survey conducted last. There is support from the Board to develop a process from which the USAS will be able to sponsor the development of various types of aquaculture publications. Dr Wade Watanabe has developed a USAS Publication Request for Proposals. I thank Dr. Watanabe for taking the lead in crafting a USAS strategy to support the development of timely publications to address issues of importance to the U.S. aquaculture industry. Another highlight of this year's Board activities was the formation of two student sub-units as allowed by our by-law change. Amy Nickens, chair of the student sub-unit...
committee, performed superbly. Amy worked directly with students at the University of Arkansas at Pine Bluff and at Southern Illinois University at Carbondale to facilitate their application process. You will see more information on the student sub-units later in this newsletter.

Each year the USAS membership elects officers and board members to carry out the many management duties for the USAS. This is a volunteer position that provides the self-satisfaction of improving the services offered to the U.S. aquaculture industry. Within the next few weeks an election committee will develop a ballot for the USAS membership. I have two requests of the membership regarding the election. First, if you have an interest in serving on the Board or any one of numerous committees, then not hesitate to contact me or other board members. Volunteering makes the job of the elections committee much easier. The second request is simple…..vote. The upcoming election is your chance to help shape the leadership and future direction of the USAS.

The USAS has the opportunity to recognize as many as three individuals at our Aquaculture America 05. The three awards include: the early career awards, the lifetime achievement award, and the distinguished serve awards. There are always more worthy candidates than we have awards. However, the challenge is obtain the nominations from the membership. The process is not as difficult as you might imagine. If you know someone who should receive one of these awards, then visit the USAS Web site for nomination information.

I have been very fortunate to have worked with a USAS Board of Directors who has done their best to represent the interests of our diverse membership. There are others who deserved to be recognized for their service to the USAS. First, Carl Webster (editor) and Michelle Coyle (associate editor) who have done an outstanding job in publishing a high quality and informative semi-annual newsletter editor for longer than I can remember. I know Laura Tiu will continue the tradition when she assumes the role of editor beginning next year. There are three other people who are largely responsible for the quality of information found in the newsletter. Yolanda Brady, Gary Fornshell, and John Ewart, regional editors, deserve a hearty thank you. In closing, I look forward to finishing out my term and my future involvement with the USAS. It has been a very rewarding experience for me. I look forward to seeing you in New Orleans!

**INCOMING EDITOR'S COLUMN**

Who is That New Kid on the Block?

Laura Tiu, New USAS Newsletter Editor

Carl Webster is a hard act to follow but having worked for him for many years, it seems to be my destiny. I credit Carl with the act of introducing me to the U.S. Aquaculture Society (USAS) back when it was the U.S. Chapter of the World Aquaculture Society. His dedication to the Society and the gratification that he took in serving made a lasting impact on me. I now look forward to my first chance to serve by agreeing to be the new Editor of the USAS newsletter.

My name is Laura Tiu. I'm an aquaculture specialist with the Ohio State University’s Ohio Center for Aquaculture Development. I spend most of my time developing aquaculture extension programming, but still conduct research as well. I've been "in" aquaculture for about 20 years, working with prawns in the Philippines, tropical fish in Florida, largemouth bass in Mississippi and a variety of species in Kentucky and yellow perch and freshwater prawn in Ohio.

My goal as newsletter editor is to provide newsworthy information to the USAS members in an effort to further the goals of the society. This will include updates from around the country and insights into the "hot" issues in the industry. I'll also be looking to discover the lighter side of U.S. aquaculture as I search for the funny stories that we each have to tell. I hope that you will find the upcoming issues of the USAS Newsletter interesting and enjoyable. Of course if you have any thoughts, comments, events, stories, etc., please do not hesitate to contact me.

Sincerely, Laura G. Tiu
Outgoing Editor's Column

It's Time For A Change

Carl Webster & Michelle Coyle

For the past 3+ years, Shelly and I have had the privilege of serving as Editor and Associate Editor for the U.S. Aquaculture Society's (a Chapter of the World Aquaculture Society) newsletter. It has been a wonderful experience for both of us. When I began serving as Editor some time ago, the USAS newsletter had been on hiatus for several years. Since I feel strongly that the USAS should always publish a newsletter to inform the membership of news, events, and Chapter happenings, I volunteered to serve as Editor and to revive the newsletter. While formatting a paper newsletter was fairly straightforward, I was not anticipating that the USAS Board would request 3 years ago that it was their (and the membership's) desire to bring the USAS newsletter into the information super-highway and publish an online version (paperless) version. This not only saves the USAS money on printing and postage (and who doesn't want to save money?), but also is more in-step with the ongoing trend of web-based information transfer and exchange. Since I am completely clueless on higher technology (VCRs, computers, microwave ovens), I was very apprehensive. However, thanks to Shelly's expertise in all such matters and her creative flair, we think we have done a decent job in producing an informative, yet aesthetically-pleasing means of communication and sincerely hope that you have enjoyed the newsletter.

One of my Dad's favorite sayings as I was growing up was that all good things must come to an end. And so it is now. After serving as Editors for the newsletter, it is time for Shelly and me to step aside and let someone with new ideas and new energy take over as Editor. Laurie Tiu will serve as the new Editor for the USAS newsletter (see her column) and I know she will be an excellent Editor!! She is a person of boundless energy, dynamic ideas, and is highly creative and innovative. I have known her for many many years and I know she will be SUPER!

I would like to thank the three Regional Editors who have worked with me in producing the newsletter for these past years: Gary Fornshell (West), John Ewart (East), and Yolanda Brady (South). They have all done a tremendous job and deserve all the praise that the Chapter can give them! They were the ones that obtained and gathered the stories for the newsletter and made my job very easy.

I also wish to thank all the people who have served on the USAS Board for offering ideas on how the newsletter could be made better and to improve it for the members. Their input, as well as suggestions from the members, is always welcome.

Lastly, I would like to thank all of you readers of the newsletter for your positive comments on the newsletter and for not yelling at me if there were mistakes! Shelly and I worked hard to make sure that the membership had a newsletter that they could be proud of and I hope that we succeeded, at least to some degree.

And so, Shelly and I ride off into the sunset (at least for now). We hope that you enjoyed our efforts and will enjoy the newsletter even more with Laurie. As for me, I am rooting for my beloved Red Sox to win the World Series. Who knows what will happen, but when it comes to the Red Sox, as in life, anything can happen!
**Upcoming Conferences & Events**

**Northeast Aquaculture Conference & Exposition (NACE)** scheduled for December 2-4, 2004 in Manchester, New Hampshire

In 1998 and 2000, the Maine Aquaculture Innovation Center sponsored the first Northeast Aquaculture Conference and Exposition (NACE). From 1996 to 1999, the Rhode Island Legislative Commission on Aquaculture sponsored an annual aquaculture meeting sharing interests and information on aquaculture. In 2000 and 2001, the event was expanded into the Southern New England Aquaculture Conference. In 2002, the third NACE was born, uniting the region from Maine to New Jersey, in a coordinated effort to promote aquaculture commerce. The NACE Executive Committee invites you to join us and other stakeholders including industry members, researchers, regulators, vendors, educators and extension staff at NACE 2004 to learn about the Northeast region’s aquatic farming industry...“Aquaculture... From the Mountains to the Sea.”

For additional information, visit the conference Web site <http://www.northeastaquaculture.org/>.

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**25th Anniversary Milford Aquaculture Seminar**

The 25th anniversary of the Milford Aquaculture Seminar is scheduled to be held February 28 - March 2, 2005 at a location in Connecticut to be determined. For additional information on the upcoming program agenda contact Walter Blogoslawski NMFS Milford Laboratory, 212 Rogers Avenue Milford CT 06460 (203) 882-6535 (voice) or 6570 (fax) E-mail walter.blogoslawski@noaa.gov and visit the seminar Web site at <http://mi.nefsc.noaa.gov/seminarworkshop.html>.

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**Aquaculture and Commercial Fishery Seminars Scheduled for the East Coast Commercial Fishermen’s Expo and Aquaculture Show**

The Mid-Atlantic Sea Grant programs in cooperation with the Maryland Waterman's Association is developing educational programs in Aquaculture and Commercial Fisheries to be offered during the East Coast Commercial Fishermen’s Expo and Aquaculture Show at the Ocean City Convention Center Ocean City, Maryland January 28-30, 2005. The seminars will be held on Saturday, January 29th and the aquaculture session will feature industry presentations by members of the East Coast Shellfish Growers Association (ECSGA). The ECSGA will also hold their winter meeting in conjunction with the Expo. For additional information about the East Coast Commercial Fishermen’s Expo and Aquaculture Show and seminar programs, contact John W. Ewart, Delaware Aquaculture Resource Center, College of Marine Studies, University of Delaware, 700 Pilottown Road, Lewes, DE 19958 Phone: (302) 645-4060 Fax: (302) 645-4213 E-Mail: <ewart@udel.edu>
US Trout Farmers Association Celebrates 50th Anniversary

The USTFA, the oldest aquaculture trade association in the US, celebrated its 50th anniversary in Twin Falls, Idaho. Established in Denver, Colorado in 1954 the mission of the association was to: 1) to promote and advertise US trout and recreational trout fishing; 2) to protect the interests of US trout farmers; and 3) to disseminate to its members information.

USTFA continues to fulfill that mission today.

One hundred sixty-three participants from across the nation and as far away as Tasmania attended the conference and trade show from September 16th through the 18th. The agenda was filled with fun, nostalgia, and useful information.

Twenty speakers contributed to the program that included a mixture of national updates on current topics, such as the recently signed EPA national rule on aquaculture effluents and the federal effort to develop a National Aquatic Animal Health Plan; and research programs in trout genetics and nutrition. In addition, speakers addressed organic aquaculture crop insurance, biosecurity, non-traditional markets for recreational trout, and verification of recommended practices for trout production. USTFA plans to post the power point presentations on its web site in the near future www.ustfa.org

Of course there was lots of fun! Troutlodge, Inc., held its 60th birthday bash dinner Thursday night that included the Blues Brothers Rock N' Soul Revue. Quite a few trout folks managed to get out on the dance floor to strut their stuff.

Friday night USTFA hosted the Awards Banquet. Rebecca Cooper and Ken Cline, Cline Trout Farms, Inc., received the most prestigious award offered by USTFA, the Clark and Mimi White Award for distinguished lifelong service and dedication to the US Trout industry. An old tradition was revived that night, the Ugly Trout Farmer Award. Bob Blankenship of North Carolina who was once arrested for being ugly in public presided over the ceremony along with Jerry Zinn of Idaho, his apprentice. This year’s Ugly Trout Farmer Award deservingly went to Charley Conklin, II of Big Brown Fish Hatchery, Inc. A Special Award was given to Mary Lee, Executive Administrator of USTFA, for her dedicated service to the industry and USTFA. The conference and trade show concluded Saturday with a tour of the Magic Valley and a fish fry.

Rebecca Cooper & Ken Cline receiving the Clark & Mimi White Award for Distinguished Lifelong Service and Dedication to the US Trout Industry.
Bob Blankenship and Jerry Zinn getting ready to present the Ugly Trout Farmer Award.

BE AFRAID...BE VERY AFRAID!!!!

WINNER!!!!!
UGLY TROUT FARMER AWARD

Mr. Charley Conklin, II

The following sponsors contributed to the success of the 50th Anniversary Celebration: Aqua Health, Ltd.; Clear Springs Foods, Inc.; Fresh-Flo Corporation; Hagerman Fish Culture Experiment Station; Idaho Aquaculture Association; Magic Valley Heli-Arc, Mfg.; Nelson & Sons, Inc.; Rangen, Inc.; The Hartford Livestock Insurance; and Troutlodge, Inc.

National Aquatic Animal Health Task Force – Work Group 4

Work Group 4 (disease program standards for salmonids) of the NAAHTF met in Twin Falls prior to the US Trout Farmers Association to solicit input from stakeholders and interested parties on the elements of a prevention and control program for diseases of national importance for salmonids. The NAAHTF has been charged by the Joint Subcommittee on Aquaculture to develop a national aquatic animal health plan the purpose of which is to provide safe, efficient, and predictable commerce for aquatic animals; protect farmed and wild aquatic animals from the import of foreign animal pests, diseases and their causative agents; meet the United State’s international aquatic animal health legal obligations; and ensure the availability of diagnostic and certification services for private, public, and tribal aquaculture. Work group 4 is one of several work groups convened by the Task Force to provide input on various
topics and elements of a national aquatic animal health plan. The work groups are informal in structure and are not advisory groups. Reports developed from work group meetings will be used to develop draft chapters of the national plan. After approval by the Task Force the draft chapters will be submitted to the Joint Subcommittee on Aquaculture and stakeholders for comment. The finalized chapters will then be adopted by the Task Force as part of the national aquatic animal health plan.

Members of the Task Force present at the meeting were Kevin Amos (NOAA Fisheries), Marilyn Blair (USFWS), and Steve Ellis (USDA/APHIS). Stakeholders present were Ken Cline, Cline Trout Farms; Gary Fornshell, University of Idaho Extension; Scott LaPatra, Clear Springs Foods; Sharon MacLean, NOAA-NRC; Randy MacMillan, Clear Springs Foods; Peter Merrill, AVMA; Jim Parsons, Troutlodge; Gary Van Ree, Pan Fish USA; and Chris Wilson, AFS-FHS.


### Western Regional Aquaculture Center Hires New Director

The WRAC Board of Directors has recommended Dr. Graham Young as the new WRAC Director, who will replace the retiring Dr. Ken Chew on November 1, 2004. All of us in the west owe Ken a huge debt of gratitude for all his dedication, professionalism, and quality leadership over the years.

Mr. Graham Young, currently a faculty member in the Department of Biological Sciences at the University of Idaho, will have a joint appointment between WRAC and the School of Aquatic and Fishery Sciences at the University of Washington. Dr. Young was a faculty member at the University of Otago in Dunedin, New Zealand, prior to joining the UI faculty in 2002. His research interests include endocrine regulation of development and reproduction in fish. He also has an interest in endocrine disruptors in the environment and how these affect the reproductive process.

Raised and educated in England, Dr. Young earned his undergraduate degree and his Ph.D. at the University of Sheffield, which is located in central northern England. After completing his Ph.D., he held postdoctoral positions in Japan and at the University of California, Berkeley.

### A Little Perspective On EPA’s National Effluent Rule For Aquaculture

This ‘national’ rule applies to about 242 facilities out of an estimated 4,000 plus nationwide. Fifty-plus facilities within scope of this rule are in Idaho, which have more stringent permit requirements than the national effluent rule.

It took four years to develop this rule, which will have an annual cost of $1.4 million. It is estimated that it cost EPA $3 million to develop the rule and that the Aquaculture Effluent Task Force provided greater than $550,000 in in-kind support. EPA’s estimated monetized benefit for all this effort is between $66,000 and $99,000.

One of the environmental benefits is an annual reduction of 500,000 pounds of total suspended solids discharged into US waters. This is equal to a 50.8 cubic foot per second flow aquaculture facility discharging 5 mg/l TSS, which is the current compliance limit for Idaho cold water facilities. A 50.8 cfs facility is valued around $1.5 million. Five hundred thousand pounds of TSS per year is also equal to a 0.11 mg/l reduction in TSS discharged by each Idaho fish farm in
UMaine Makes a Concrete Commitment
(source thenews@illsworthamerican.com)
By Aaron Porter

FRANKLIN- The walls are up and the roof is going on at the University of Maine's new 24,000-square-foot aquaculture research facility on Taunton Bay. By all accounts, the expansion is coming just in time. Pieces of the puzzle come together as the walls go up at the University of Maine Center for Cooperative Aquaculture Research in Franklin. Nick Brown, who manages the Center for Cooperative Aquaculture Research, said the demand from industry partners looking for research space is high, and that is what the center is all about.

For the past four years, the facility has been housed in a converted commercial fish farm the university bought from farm creditors in late-1999. Currently, the old shore-based farm is home to research into the commercial potential of halibut, cod, sea worm and seaweed cultivation. "And we don't even have the building yet?" said Jake Ward, executive director of research and economic development for the University of Maine. He said completion of the new building by January or February 2005 is essential because of the 11,000 juvenile halibut just brought in from Canada by new industry partner Maine Halibut Farms Inc. There is space for them in the old farm while they're young, but they will be growing and will need the new space by winter. That new space is more than just room for tanks of fish to grow.

Brown said the new facility offers advantages of a controlled environment and a flexible space designed for research. "What we don't have here is environmental control," he said, looking around the old fish farm structure. "In the new building, we will be able to dial in temperature," he said. The filtering, chilling and heating systems will allow the air and water conditions to be carefully controlled. In addition, he said the building would be more hygienic, designed to allow for easy wash downs and climate control. The spaces available for research allow for at least two distinct and secure areas to house different research projects. Brown said separate entrances amount to better biosecurity as researchers can traipse from one lab directly into another. He summed the new building up as a bit more like a hospital than a farm.

In addition to space for the fish to be grown, the new facility will have a designated space for production of the minute brine shrimp and rotifers used to feed the tiny halibut in the earliest independent stages of life. At the other end of the scale, there will be space to hose and maintain the brood stock of large halibut Brown and his staff have acquired from the wild and nursed into reproductivity over the last few years. Brown stressed the flexibility of the facility. That is essential to a laboratory space that intended to do meet the needs of an industry that as broadly defined and quick to change as aquaculture.

The Franklin site is where an aquaculture idea is put to the test of commercial scale production. For the halibut program, the fish will be grown out and introduced to the market as a proof of the concept. Then the company will strike out on its own, finding a site and building a new facility somewhere else. At that point, the next project will roll into the research space. And it will continue to work that way as new projects from emerging species to innovative aquaculture-technology ideas use the space to take a run at commercial viability. Once they've made it over that hump and are a proven commercial species, most new research that needs to be done will be passed on to the U.S. Department of Agriculture's research lab and hatchery that will be built next door to UMaine's new building as early as next year. That's where work to aid in the production of commercial aquaculture species is to take place.

It looks quite likely that cod will be the next thing the salmon growers pick up, Brown said. The facility hosted 20,000 young cod belonging to Norwegian grower Stolt Seafarm Inc. this spring. Those fish have gone out to saltwater pens, and the more troublesome halibut have taken their place in the tanks. From outside the change in the facility is
inspiring. The once sleepy fish farm is abuzz with activity: Cranes are lifting roof trusses in place, excavators are backfilling around new foundations, workers are wrestling reinforcing bar into shape for the next concrete pouring. Visually, the difference between old and new is the difference between farm and a university. The tin building that has housed the farm and nascent research laboratory looks like an aging warehouse next to the substantial textured concrete of the new building. The price tag for all the improvement was something worked out roughly three years ago. It was pegged at an estimated $2 million. Ward said that has increased to $2.5 million now with $1.2 million coming from the federal Economic Development Agency, $550,000 from the University of Maine, another $500,000 from research and development grant money at the Maine Aquaculture Innovation Center. Ward said the remainder would be made up in smaller grants.

As for industry demand for the facility, Brown seemed genuinely surprised by the thought that it might not be there. After all, he's had about five projects at work in the less than ideal conditions of the old fish farm. Ward confirmed that he's in contact with groups interested in trying out some new technology ideas at the site. He said there is an interest in the development of algae as dietary supplements. In addition, he said there would be additional work with the university on designing systems for efficiency and possible alternative energy uses at the farm. "Mostly what we are hearing is the industry is applauding these efforts in their beginnings," Ward said. "They only want it to happen faster and faster and faster."

As for the permanent staff on site, it's bound to grow as more projects pile up. Excluding the busy construction team, Brown counted up at least a dozen workers who are on the site regularly working on various projects. Including interns and occasional extra workers at the SeaBait worm farm, that number can double. We have to eat lunch in two shifts now, said Brown, grinning in the modest lunchroom of the old fish farm. It's a problem that doesn't seem to bother him. Feeding fish is where his immediate priorities lie.

Connecticut Oyster Industry Still Struggling

(Norwalk-AP, Sept. 6, 2004 8:45 am) _ The Connecticut oyster industry which took a big hit in the 1990s is still struggling to make a comeback. Since 1997, when two parasites devastated Connecticut's oyster beds on Long Island Sound, the new crops have been light. Oyster production hit a high of 894,000 bushels in 1992, a catch worth $45 million. It hit a low of 32,000 bushels in 2002. Figures released Friday by the state Department of Agriculture show the number of bushels last year increased slightly to 36,000. David Carey, director of the department's Bureau of Aquaculture, says production hit bottom in 2002 and is slowly on the way up. Carey says there's been some help. Hatcheries have been created to grow oysters until they are large enough to survive in the wild. For every 100 oysters harvested last year, 70 got their start in a hatchery about three years earlier.

New Scallop Program Largest In Nation

(source: East Hampton Independent News 9/7/04)

By Gary P. Joyce

Suffolk County Executive Steve Levy, along with a host of other elected officials as well as environmentalists and baymen, announced last week the legislative authorization for a scallop reseeding program believed to be the largest such project in the United States.

The initiative passed by the County Legislature last week will be a concerted large-scale effort to attempt to restore the Peconic Estuary’s once famed bay scallop population that was virtually wiped out by the brown tide algae bloom that first appeared in 1985. The bay, prior to the onset of the bloom (which the exact cause of is still undetermined but thought to be linked to pollution) yielded over 500,000 pounds of pectin irradians in 1982. That number had dropped to 53 pounds in 1996, the year after the last bloom.

Last year's scallop crop was so scarce that commercial fishing for the succulent shellfish was halted in several locales, including Southold Town. The shellfish season in New York State waters opens on the first Monday of October and closes March 31. The industry spawned by the shellfish had a long commercial and recreational history on the East End.
"We know this is not guaranteed to succeed", said Levy at a press conference held at the county's Indian Island Park abutting the Peconic River and Flanders Bay, "but you simply cannot let an industry, really a way of life that defines an entire region, die out without making every reasonable effort to restore it. Allowing the Peconic Bay scallop to disappear would be like Maine officials allowing the lobster to disappear."

The four-year long reseeding program will be led by the Cornell Cooperative Extension and Shellfish Specialist Chris Smith, and will include large scale planting of hatchery-raised seedlings in an attempt to re-establish a sustainable adult population. Also involved in the program is Professor Steve Tettelbach, a bay scallop expert and biology and marine sciences professor at Southampton College, and the Cornell Cooperative SPAT program volunteers. Southold Project in Aquaculture Technology is a spawning program based out of Cornell Cedar Beach facility in Southold that has been running a successful spawning program for several years.

The project will call for an initial attempt to maintain a spawning sanctuary in Orient Harbor, then attempt to bring other sites on line. Once grown to a size that insures their survival in the wild, the shellfish will be available for commercial and recreational seeding throughout the area bays. The program will be funded with a $1.8 million appropriation from the Suffolk County Water Quality Protection and Restoration Program.

### Australis Takes Full Control of U.S. Facility
(Source: Financial Review 9/6/04)

Fish farming company, Australis Aquaculture, said today it had begun upgrading its U.S. plant after assuming full control of the facility. The capital works program would upgrade and improve life support systems for the barramundi in the indoor "grow out" tank near New York. The company is targeting the $55 billion U.S. seafood market with its live barramundi. The fish are bred in South Australia, then flown live in plastic bags as 25 mm fingerlings to the grow out facility and the 38,000 restaurants in the north-east US. The initial sales target is 300 tonnes of fish a year. Marketing has now begun and the first public appearance of the fish was on track for October 2 at New York's prestigious James Beard Foundation.

### New Woes for Striped Bass?
Experts Say Survival Rate of Fish in Bay Seems to be Falling

BY LAWRENCE LATANE, III (source: Richmond Times-Dispatch Sep 12, 2004)

The survival rate of striped bass, whose numbers rebounded under strict catch limits in the Chesapeake Bay, appears to be falling. Biologists are wondering whether pollution, disease or starvation are to blame - or whether as a result of overprotection, there are just too many striped bass around for their own good. If the trend continues, the decline would be the first threat striped bass have faced since the 1980s, when a temporary fishing moratorium launched the fish's historic recovery.

Some scientists are beginning to ask whether the recreational-catch limits and commercial-harvest quotas, which helped the striped bass recovery, may be too restrictive. "We've got a rare case of a species coming back to high abundance and are now seeing things that may be problems caused by this high abundance," said Desmond Kahn, a biologist with the Delaware Division of Fish and Wildlife. His examination of data on tagged fish reported by fishermen has bolstered conclusions drawn by another biologist in the late 1990s that striped bass survival rates are dropping in the bay. Recent work done by Wolfgang Vogelbein, a scientist at the Virginia Institute of Marine Science, also supports this conclusion. "There's an increased concern by fisheries managers that we could be looking at some future crash" of the striped bass population, Vogelbein said. Overfishing whittled down their numbers in the 1980s to such a point that fishing for the species was banned throughout its range from Maine to North Carolina.

The Atlantic States Marine Fisheries Commission, composed of all 15 Atlantic seaboard states, including Virginia, engineered the moratorium. It earned accolades from conservationists worldwide when the striped bass population rebounded to record highs. The Atlantic commission declared the striped bass "fully recovered" in 1995. Known in the bay as rockfish, striped bass now support a multi- million-dollar sports fishing industry in Virginia and are regularly
pursued by commercial netters. The state controls the sports and commercial harvests through catch quotas imposed by the Atlantic commission. About 75 percent of the coastal striped bass population is spawned in the bay. Most of the fish live there for several years until they mature. They then join the adult population that generally migrates offshore from North Carolina to Maine's coastal rivers, returning to the bay each year to spawn. The commission's estimates continue to show robust population growth. Striped bass have been reproducing so successfully in the bay, however, that the population may be able to tolerate increases in mortality, Kahn said. Yet biologists are trying to figure out why young striped bass in the bay aren't living as long as they used to.

The bay's resident striped bass enjoyed a survival rate of around 60 percent to 70 percent through the mid-1990s, Kahn said. That rate, however, dropped to 40 percent to 50 percent in 1998 and has held at around that level since then. Kahn said an analysis of tagged fish indicates the numbers are declining because the striped bass are dying, not because they are being harvested. One possible cause of natural mortality popped up the year before the commission's data reflected the decline in striped bass survival. Previously seen only in confined populations of fish in aquaculture, a disease called mycobacteriosis was discovered in the bay's striped bass in 1997, a year before striped bass survival rates fell. At first, an estimated 10 percent of the bay's resident striped bass were believed infected with the disease that often leaves red sores on their flanks and attacks their internal organs. Now, more than 70 percent of the fish are infected, said Vogelbein, the VIMS scientist. Biologists are trying to determine the cause of the infection and why it is spreading in the bay. By comparison, infection rates in neighboring Delaware Bay run between 5 percent and 10 percent, according to Kahn. "This seems to be something specifically happening to Chesapeake Bay as opposed to other areas on the East Coast," Kahn said.

Two leading possibilities: **Pollution.** Nutrients from sewage-treatment plants and polluted runoff from farms and development create algae blooms that leave a vast "dead zone" in the bay's depths devoid of oxygen. Striped bass normally seek summer refuge in deep water but now must make do in shallower water that contains oxygen but is warmer than the fish prefer. **Lack of food.** Menhaden, which was once the striped bass' chief food supply, have declined, coastwide, according to population estimates. Studies show that 80 percent of the diet of striped bass in the Maryland portion of the bay was menhaden in the 1950s. "Now, it's down to 20 percent of their diet," Kahn said. At the same time, striped bass are now skinnier. "Fish in the bay are comparable to fish starved in the lab," he said. Researchers expect that a work session scheduled next month on the ecological role of menhaden in the bay may begin to shed light on whether changes in the menhaden population are affecting striped bass.

The commission workshop "is probably the most significant event to happen since I first began working on this problem," said Jim Price, a former Maryland fishing guide who has been arguing for years that striped bass are going hungry in the bay. "They're competing for food that doesn't exist," he said. The bay's striped bass population may be out-growing its forage base, he said. "We need to kill more of these fish," he said of striped bass. "If someone were raising these animals, would they be so inhumane as to starve these fish? I want to see the bay get back into balance." Achieving balance may not be easy, VIMS scientist John Hoenig said. The concept of managing predators and prey species as a unit for the benefit of both and the fisheries that exploit them has never been tried before in the United States but it has a name - multi-species management. "And now it's a buzzword," Hoening said. "Everybody says we need it, but nobody has a clue how to do it."

Contact Lawrence Latane III at (804) 333-3461 or llatane@timesdispatch.com
"The UMCES family is grateful to the regents for their continued support and understanding of our mission of science for the preservation and protection of the environment," Mr. Boesch said. "Properties like the Horn Point Laboratory are important not only for research and education, but also for the protection of sensitive environments around the shores of the Chesapeake Bay." During its meeting at the University of Baltimore, the Finance Committee voted to recommend that the Center's property in Cambridge not be categorized as one of the system's under-utilized or unutilized properties, or appear on any list of property that the system is considering to sell. The UMCES Horn Point property consists of 840 acres donated by Francis V. duPont to the city of Cambridge in 1962 and then deeded to the state in 1972 for use by an institution for environmental and estuarine studies and higher education. Since that time, the Center has maintained a pioneering environmental science and education program, combining its strengths in ecology, oceanography and aquaculture with the ground-breaking research conducted by its two other laboratories in Solomons and Frostburg.

A scientific leader with a national reputation for its research on the Chesapeake Bay, the Horn Point Laboratory is most popularly known for its aquaculture work with native oyster restoration. Last November, the Center opened its newest facility on the Cambridge campus - the Aquaculture and Restoration Ecology Laboratory. This $25 million state-of-the-art building is the nation's only university research facility dedicated to restoration ecology in which aquaculture approaches are integrated with ecosystem science to produce effective and environmentally sustainable strategies for coastal environments. The Center also remains committed to sharing its scientific knowledge with the public. Educating thousands of Eastern Shore students annually from grades K-12 and hundreds of Maryland's elementary, middle and high school teachers in the latest scientific research each year, the Center strives to help Maryland schools encourage and inspire lifelong science learning. "The regents and our local community are proud of the scientific strides we've made. This spectacular property will provide a natural laboratory for our growing research programs and opportunities for generations of young Marylanders to learn about their natural environment. In addition, we are committed to making these landscapes and shorelines an important asset for the Dorchester County community," Mr. Boesch said.

UMCES is the state's premier higher education institute for environmental science and an international model for coastal studies. Its three laboratories and outreach program - Appalachian Laboratory in western Maryland, Chesapeake Biological Laboratory in southern Maryland, Horn Point Laboratory on Maryland's Eastern Shore and the Maryland Sea Grant College - are strategically located to cover critical parts of the Chesapeake Bay watershed.

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**STUDENT MATTERS**

**PREPARING FOR AQUACULTURE AMERICA 2005**

NEW ORLEANS, LOUISIANA, JANUARY 17-20

Kristie A. Vanpatten  
**Student Liaison to the Executive Board of the United States Aquaculture Society**

I am pleased to announce that this year at Aquaculture America, 2005 (AA05) in New Orleans, Louisiana (January 17-20, 2005) has several NEW activities for student members along with regular benefits students have come to expect. Please read on to learn more about the exciting benefits and opportunities awaiting you at AA05!

**Become a student member of the USAS:**

In order to take advantage of many of the following benefits, you must first be a student member of the United States Aquaculture Society. Visit the World Aquaculture Society website ([www.was.org](http://www.was.org)) for applications and information. World Aquaculture Society student membership is $40 (reduced from the regular membership rate) and USAS membership is $5.
NEW! Student Sub-units: The USAS and the Student Activities Committee are proud to announce the opportunity to form student sub-chapters of the USAS at your university. Congratulations to Brent Southworth, President of the University of Arkansas at Pine Bluff (UAPB) and Jesse Trushenski, President of the Southern Illinois University Carbondale (SIUC) for forming the first 2 student sub-units of the USAS. Amy Nickens (Amy.Nickens@noaa.gov), past Student Liaison to the USAS is heading this program so please contact her for more information on how to get started! This exciting opportunity will allow even more students to benefit from and get involved in USAS student activities and programs. For more information on the student sub-units, please check our website at http://www.was.org/usas-sac/studenthome.htm.

Keep up with student activities and benefits:

NEW! Student Booth: We have organized a student booth for AA05! The student booth will serve as a hub for student activities at the conference. We will have information on all the student activities planned for the conference as well as general information on student membership and benefits. You can meet various members of the SAC, volunteer for activities, give suggestions and find out how to take advantage of the many benefits of a USAS student membership.

Student Orientation: The USAS is sponsoring the Student Orientation for ALL STUDENTS attending AA05 on January 17th from 4:00 to 4:30 p.m. Check the USAS student website for updates. BE SURE TO ATTEND THE USAS BUSINESS MEETING, immediately following the Student Orientation Session, AND LET YOUR VOICE BE HEARD. As a student member, you have all the rights and privileges of a full member. Come find out what’s going on at the conference and get more information about the services and activities for students at AA05. It’s also a great place to meet USAS Board and Student Activities Committee members. Those students working or moderating, at the conference are required to attend.

Student Packets: Student packets will be available to ALL students attending AA05. These packets will contain the dates, times and locations of all student activities as well as important forms and flyers for students, and tickets to the student reception. Get your packets from the registration desk when you check in at the conference and carry them with you throughout the conference. You don’t want to miss the exciting student events scheduled at AA05.

Student Website: Thanks to webmasters Ken Webb and Dennis McIntosh, the USAS Student Activities Committee brings you a website specifically for the students of the USAS. Visit the site regularly to keep updated on student benefits and conference activities. The website may be accessed directly at http://www.was.org/usas-sac/studenthome.htm.

Student Listserver: The USAS SAC listserver is up and running. The URL is http://ag.arizona.edu/mailman/listinfo/usassacstudent. From this main page, you can subscribe and/or change your personal settings. We encourage you to use the list to keep in touch with your fellow USAS students and activities. Using the list is easy! Below is some information to get you started. If you have additional questions or would like more information let your listserver administrator, Ken Webb (kenw@utmsi.utexas.edu), know how he can help.

List Subscription

- From the USAS SAC listserver main page, enter your e-mail address and desired password
- Once you have been successfully added to the list, you should receive a confirmation via e-mail
- List subscribers should automatically receive monthly reminders of your username and password

Posting a Message

- Send an e-mail to usassacstudent@Ag.Arizona.Edu.
- Your message will be sent to all subscribers of the list
Unsubscribing

- From the USAS SAC listserv main page, enter the 'Subscribers' section at the bottom of the page
- Enter your e-mail address or select your name from the list
- You will be asked to provide your password to remove yourself from the list
- Or, to subscribe or unsubscribe to/from the list, send an email directly to the administrator.

Student Awards and Scholarships:

Best Abstract/Travel Award: To be eligible for this award, you must be a USAS student member and must have submitted your abstract by the August 1, 2003 deadline. Additionally, you must attend and present your paper at the conference. A total of three winners will each be awarded certificates plus $200 at the conference, and will be recognized at the plenary session.

Best Oral and Poster Presentations: Student members of USAS giving oral and poster presentations will be eligible for the Best Oral Presentation (one $400 first place award and one $200 second place award) and Best Poster Presentation (one $400 first place award and one $200 second place award) awards. Winners of these awards will be announced soon after the conference ends.

Sea Grant Association Best Student Paper Award: The Sea Grant Association will present its Best Student Paper Award to one student that presents outstanding work in marine or Great Lakes related research (oral presentations only). Students must be a member of WAS to be eligible. One winner will receive an award of $350 and a plaque.

NEW! MP Mulvihill Scholarship: In honor of Michael P. Mulvihill, the Mulvihill family and Aquaculture Research/Environmental Associates, Inc. (AREA) are now offering the M.P. Mulvihill Aquaculture Student Scholarship. The third annual scholarship for $1,500 will be presented at AA05 to a deserving aquaculture student to help further his/her education. APPLICATIONS ARE DUE BY NOVEMBER 15, 2004. Selection of the winner will be made by early January 2005. The winner of this scholarship will be announced and awarded a plaque at the Student Reception. To be eligible for the M.P. Mulvihill Aquaculture Student Scholarship, an applicant must be a United States citizen, a student member of the World Aquaculture Society and the United States Aquaculture Society at the time of application submission, and a graduate or upper level undergraduate student. Selection will be based upon the student's financial need, academic history, contributions to aquaculture or the USAS to date, and commitment to aquaculture. Please visit the USAS student web site for scholarship details and application information.

$$$$ Student Work at AA05: If you are interested in earning $9.00/hr to help offset your registration costs, we are looking for students to work during the meeting. Students are needed to run slide projectors, help with registration, stuff conference bags, and work in the information booths. What a great way to meet people in the aquaculture industry and academia and earn money! Sign up EARLY, as jobs will go fast! To sign up, contact: Melody Danley, Student Worker Coordinator, (mldanley@hotmail.com). Students signed up for student work at AA05 are required to attend the Student Orientation for updates on their tasks.

Student Registration Rates: As a student member of the USAS, you are eligible for a reduced registration rate of $95 before January 5th, and $125 after January 5th.

“Free” Student Room Lottery: APPLICATION INCENTIVE! ONLY 2 PEOPLE ASSIGNED PER ROOM! Student members of USAS may enter the Student Room Lottery. Preference will be given first to students presenting papers, then those working at the conference, and finally, those simply attending AA05. Winners of the lottery will share a free (extras not included) room to stay in while at the AA05. Please check our website for updates on how many rooms will be available and where they will be located. Occupants of the rooms will be assigned by gender. Sign up EARLY to enter the lottery for a “free student room.” To sign up, contact David A. McKee, Ph.D., Student Complimentary Room Coordinator, Texas A&M University-Corpus Christi, Department of Physical and Life Sciences, 6300 Ocean Drive,
Your application must include the following information about yourself: name, gender, postal address (including country), email address, phone number (including country and city codes), fax number (including country and city codes), abstract number, abstract title, whether you are a student working at the conference or just attending, expected arrival and departure dates. All applications must be received by December 1st, 2004. The lottery will be conducted and rooms randomly selected and assigned on December 3rd. Winners will be notified by DEC.3.

**IMPROVED! Roommate service program:** This annual service is now called the Student Discount Room Service for AA05, and is improved in terms of flexibility to accommodate the students of WAS. Sharing a hotel room with someone is a great way to save money and make new aquaculture contacts! Now students have the option of choosing with whom and how many others they share discounted rooms, making it more comfortable for everyone involved. If a student does not have preferred roommates and so desires, he/she can request to be paired with someone. A maximum of four people per room and a minimum of two persons per room will be assigned. Please check our website regularly for updated information on how many rooms will be available, where they will be located, and how much they will cost. To be eligible for a discounted room, you and all of your preferred roommates must be current members of WAS. Rooms will be assigned on first come first serve basis. The Student Discount Room Service Coordinator will try to accommodate all students by their preferences.

To apply, contact Paola Calle, Student Discount Room Service Coordinator, (paola.calle@msci.sc.edu). Applications must include the following information about yourself and your preferred roommates: name, postal address (including country), email address, phone number (including country and city codes), fax number (including country and city codes), and gender. If you do not have preferred roommates, please note this and indicate with how many others you would like to be paired, if any. All applications must be received by December 1st, 2004. Roommates will be notified of the final arrangements by December 3rd. Remember this is first come, first served and rooms are expected to go fast.

Cautions: It will be up to the students themselves to make payment arrangements after they have received each other’s contact address from the coordinator. This includes additional costs occurred during the stay in the room such as hotel taxes, phone call charges, etc. Please discuss how this will work with your roommates and be sure everyone is aware of the final arrangements.

**Find a job, make contacts, and advance your knowledge:**

**Student Reception:** The USAS Student Reception brings together students, participating society board members, and established aquaculture and fisheries representatives (including academia, production, development, and other exciting sectors of the industry) and gives students a chance to meet and talk in a relaxed environment. What a great way to meet the people who are and will be our aquaculture leaders and discuss areas of interest – it’s an opportunity no one should miss. The student reception is scheduled for Wednesday, January 19th from 7:00 pm to 9:00 pm.

**WAS Employment Service:** This service provides an excellent means of information exchange for job seekers. Jobs and resumes are posted at WAS and USAS meetings and at the online job and resume databases. At AA05, job announcements and resumes will be posted for inspection on the employment service display boards located near the WAS information booth in the registration area. These items may be submitted either by mail or electronically (as an attached file to email). Students seeking employment and employers advertising job openings should send four copies of their resume or job announcement (one copy if sent electronically) to John W. Ewart, WAS Employment Service, c/o Delaware Aquaculture Resource Center, College of Marine Studies, University of Delaware, 700 Pilottown Road, Lewes, DE 19958, Phone: (302) 645-4060, Fax: (302) 645-4213, E-Mail: ewart@udel.edu. Complete details on the employment service can be found at http://darc.cms.udel.edu/wases/wasesinfo.htm.

**Aquaculture Career Seminar:** The USAS is proud to once again sponsor the Aquaculture Career Seminar for students attending AA05. The theme of this year’s career seminar, organized by Sierra Tobiason and Melody Danley, will be career planning and development: discovering your ideal job. The seminar is a 1.5 hour session, in which up to 5 speakers representing Extension/Consulting, Nutrition, Biotechnology, Genetics, and Employment Opportunities will
present 15-minute talks. Please check the USAS student website for updated information on the session location, date and time.

Volunteers are Needed for the Student Activities Committee!

Student Activities Committee Meeting: If you like the programs listed above and would like to see them continued and new programs added, then become involved at AA05! The USAS will hold their Student Activities Committee Meeting immediately following the Student Reception. Students can volunteer for specific duties and make suggestions for future projects in this short organizational meeting. The USAS is working hard to improve student services and needs your input. This is a great opportunity to voice your opinions. Come and get involved in the student group. New ideas are always welcome!

Contact your Student Liaison: The Student Activities Committee has been very busy preparing for AA05. We are always looking for interested students to help with activities. Getting involved is a great way to meet other students and learn about aquaculture outside of your specialty. If you would like to get involved or have any questions or comments, please don’t hesitate to contact me. I can be reached by email at kav@u.arizona.edu. I look forward to seeing you at AA05.