President’s Message

Welcome to the fall edition of the United States Aquaculture Society’s (USAS) newsletter. I hope everyone’s summer has been productive as well as successful (however you define success) which I hope will carry over for the remainder of the year and into the next. I’m anxiously looking forward to Aquaculture 2007, a triennial meeting, in San Antonio, Texas next February 26 through March 2 and I hope to see all of you there. For anyone new to USAS, this is a meeting of our parent organization, the World Aquaculture Society (WAS), the National Shellfisheries Association, and the American Fisheries Society’s Fish Culture Section. It is held every three years here in the U.S. and includes the annual international meeting of WAS which, in turn, provides us with an opportunity to interact with many of our parent society’s international members.

I’m pleased to report that, from my biased perspective, our Chapter continues to be a vibrant organization all of which is due to our members and those who so willingly give of their time and talent in serving on behalf of the organization. The Chapter is also in good financial shape and the Executive Board is continuing their efforts in devising a long-range plan that will insure financial stability for the Chapter into the foreseeable future.

If you are not aware, our Chapter has developed a proposal process for the production of USAS-sponsored publications. The first publication resulting from that process was the CD entitled “U.S. Aquaculture Outreach Publications 2006” which I mentioned in the last newsletter and a copy of which was given to all Chapter members who attended Aquaculture America 2006. Our publication proposal process is led by the chair of the Publications Committee, Dr. Wade Watanabe, who is at the University of North Carolina Wilmington. Wade and his committee have done an outstanding job. Please see his article on page ten of this newsletter to learn more about this program.

In closing, I would like to extend an invitation for you to contact me or any other Executive Board member at any time. We are here to serve our membership and we can only do that if we receive your input.

NOTICE: The USAS annual business meeting will be held Monday, February 26th, 4:00-5:00 pm. See Aquaculture 2007 conference agenda for location.
Spartina Control: Success for Washington Shellfish Growers

The unintentional introduction of *Spartina alterniflora* from packing materials for east coast oysters in the late 1800s, created a serious ecological problem years later in the coastal estuaries of Washington state. Quickly colonizing the intertidal zone, *Spartina* displaced native plants and animals, disrupting critical habitat for marine fish and shellfish species, as well as migratory waterfowl. Sloping mud flat areas were transformed into large, flat, cordgrass meadows, cut by deep channels, creating both biological and hydrodynamic alterations. Shellfish growing areas were among the nearly nine thousand acres affected in Willapa Bay, an area producing nearly 25 percent of the nation’s oysters.

Early efforts at controlling this invasive weed in the late 1980s included covering, mowing, and crushing, but these physical methods proved costly and ineffective in this estuarine setting. A full integrated pest management process was developed, including research on biological control using the leafhopper Prokelesia. Herbicide applications with glyphosate and various surfactants showed promise, and full-scale aerial and ground application programs were undertaken for several years. However, with limited dry time, sediment interference on the leaf surface, and challenging logistical problems, the glyphosate treatment program was only marginally successful. Although leafhoppers in the biological control program became established, they did not provide sufficient suppression of weed growth and expansion.

Washington State University researchers began studying the efficacy of a new herbicide, imazapyr, that had been used successfully in New Zealand for *Spartina* control. In 2004, the necessary ecological risk assessment of imazapyr by state and federal regulatory agencies was completed, and the first field applications were initiated. Nearly seven thousand acres were treated with the herbicide in 2005, with dramatic results. Treated areas showed very high levels of control, with little regrowth in the spring. Shellfish growing areas were returned to production after treatment, and shorebird habitat was restored. Continued control efforts will target higher intertidal areas as well as follow-up treatment to control new plants and re-growth.

Let Geoducks Stick Their Necks Out

Geoduck farms have begun to alarm some residents along Puget Sound. The objections are so far mainly esthetic, and absent serious environmental problems, geoduck aquaculture should carefully go forward. These great bivalves were for a long time virtually unused. Few people dug them, and those who did, didn't know what to do with them. Some diced them for chowder, which is like grinding tenderloin of beef to make cheeseburgers.

It was the Chinese who made a delicacy of the long neck and who bid up its price to gourmet levels. Being favored by the chefs can be hazardous. Shark's fin soup has been no boon for certain Pacific sharks. And until recently, geoducks were harvested, like sharks, entirely from the wild. With demand so strong, probably it is better that they are farmed.

The current method of farming them makes the beach at low tide look like a forest of half-buried white flower pots covered by nets. The "pots" are segments of PVC pipe. The vista is not attractive to those who like a wild beach, but probably an acre of wine grapes or of hops is not attractive to those who prefer natural land. People get used to it. Almost all the geoduck farms are on private property, which extends down to the water line at extreme low tide, though the state Department of Natural Resources has put up several tracts of public tidelands for lease.

The DNR says it will use several of its leases to monitor the effects of geoduck growing and harvesting on other sea creatures and plants. It also has a technical team developing a list of scientific studies that need to be done. If substantial damage is found, and it cannot be mitigated, the farms may have to go. Until proven guilty, Washington’s emblematic bivalve must be considered innocent.

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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 for the purpose of 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. This year the Northeastern Aquaculture Conference and Exposition will be held on December 6 to 8, 2006 in historic Mystic, Connecticut. Dr. John Connelly, President, National Fisheries Institute, will be the featured Keynote Speaker. The 27th Milford Aquaculture Seminar, NOAA’s Northeast Fisheries Science Center, Milford Laboratory’s annual aquaculture seminar will be held as a special session in conjunction with NACE™ 2006. Technical sessions will include oral and poster presentations of current research on all aspects of shellfish aquaculture. For additional information contact Walter Blogoslawski, session chair, at (203) 882-6535 or <walter.blogoslawski@noaa.gov>. Program information and registration details can be found at the NACE™ website: <http://www.northeastaquaculture.org/>.

NEW BROCHURE PROMOTING STATE'S AQUACULTURE INDUSTRY
Cultured Shellfish Seen as Soon Becoming a Million Dollar Industry

PROVIDENCE - The Department of Environmental Management (DEM), the Rhode Island Coastal Resources Management Council, and the Ocean State Aquaculture Association (OSAA) announce the availability of a new brochure promoting Rhode Island's aquaculture industry and the nine farms currently operating in the state. "Rhode Island continues to increase its production of cultured oysters as new growers begin to harvest their first crops while established growers continue to expand their lease areas and learn new ways to squeeze more production out of existing grounds," says Perry Raso, president of the OSAA. "Growers are now producing enough product that they see the benefits of a proactive marketing effort. In fact, several were able to establish lucrative new accounts from buyers from across the country at the International Seafood Show held in Boston in March."

Raso notes that while increases in production have fluctuated widely from year to year, "On average we have enjoyed double digit growth in production for seven years, and Rhode Island growers are poised to break the one million dollar mark very soon."

"As the lead state agency in managing and promoting Rhode Island's aquaculture industry, we are pleased that this brochure will now be available to the public as an education and information tool," said CRMC Chairman Michael M. Tikoian. "This brochure will nicely showcase the results of the assistance provided to the aquaculture industry by CRMC and DEM and by the organizations and universities that contribute greatly to aquaculture in the state."

The brochure, "Enjoy Rhode Island Cultured Shellfish", can be found on DEM's website, www.dem.ri.gov, by clicking on "Topics", then "Agriculture". It is also on CRMC's web site, www.crmc.state.ri.us, and can be accessed by clicking on "Projects" and "Aquaculture".

Source: News Release, RI Department of Environmental Management

GreatBay Aquaculture will receive $249,000 in funding to support the development of sustainable Atlantic cod production through aquaculture, announced Sen. John Sununu, R-NH, chairman of the Commerce Committee's National Ocean Policy Study Subcommittee.

According to George Nardi, chief technology officer of GreatBay Aquaculture, "This project is all about demonstrating the commercial production of cod in an environmentally sustainable manner from the hatchery through harvest. In the long term, this is a great opportunity for the New England seafood community, providing new skills and jobs as the industry grows and high quality seafood to the consumer on a year-round basis."

Source: Michael McCord, Portsmouth Herald
Increasing Capacity in Aquaculture in the American Pacific

The aquaculture industry in the American flag territories of the Pacific is in its infancy, compared with other countries. This includes the island of Guam, American Samoa, and the Commonwealth of the Northern Marianas Islands. Interest has been demonstrated but the knowledge level of professionals in these islands varies. To help build capacity that may be directly transferred to local residents in these islands, a project was proposed by David Crisostomo, aquaculture specialist at the University of Guam Cooperative Extension Service, to the Western Sustainable Agriculture Research and Education’s Professional Development program. The project, entitled “Capacity Building and Training in Sustainable Aquaculture for Guam, Commonwealth of the Northern Marianas, and American Samoa” was funded in the amount of $90,000 for the 2-year project. The project included a study tour of commercial aquaculture in Thailand as well as training, taken in June of 2006. Training and accommodations were provided by the Asian Institute of Technology in Bangkok, Thailand. The 14-day study tour consisted of lectures, visits to commercial aquaculture farms, research and hatchery facilities and markets. Thailand was selected because it closely parallels the environments of the tropical islands of the Pacific.

The purpose of the trip was to educate farmers and aquaculture professionals in commercial aquaculture technology. The participants included commercial farmers and aquaculture professionals from each of the islands. A total of 12 persons were trained and received Certificates of Professional Development. This provided a team approach so that these teams could spread the knowledge that they gained to others in their island. The training consisted of lectures in Policies and Strategies for Intensive Inland Aquaculture Development; Pond Design and Construction Management; Feeds Production and Feeding Methods; and Hatchery Production and Management.

Additionally, a media production specialist was brought along to document the training activities, with the intent of producing a few videos as supporting training materials to conduct more effective workshops and seminars. Training materials will be made available after completion of the project. For more information, contact David Crisostomo at dcrisost@uog9.uog.edu.
FISHING FOR ANSWERS? TRY ALearn!

Got a fish-related question? It’s a whole lot easier to catch an answer these days, thanks to a new website developed and sponsored by the Auburn University Department of Fisheries and Allied Aquacultures.

The site, called ALearn (www.alearn.info), was launched last year as an outreach resource for everyone from anglers, pond owners and commercial fish farmers to citizens’ groups, teachers and students. Its mission: to provide Alabamians with useful, timely and interesting information about the state’s waters and the creatures that live in and on them.

Len Lovshin, a retired AU fisheries professor, spearheaded the site’s development and implementation. “We had the departmental website (www.ag.auburn.edu/fish), but we felt we needed a site that was an Extension tool that could provide information to our constituency in and outside Alabama,” said Lovshin.

That idea had been discussed for several years, but it took off when Lovshin volunteered to develop the site after he retired. He began by talking with Extension faculty in the fisheries department to determine the types of information that the site should offer. Based largely on that input, he chose four major categories: education, aquaculture, recreational fishing and natural resources.

With the help of Troy Hahn, the department’s information technology specialist, Lovshin designed a user-friendly site which Extension specialists can update regularly to ensure the information is current. Since its launch in October 2005, the website has welcomed almost 33,000 visitors.

“It offers a very broad range of information,” Lovshin said. “Our primary intent is to provide information to non-academics and non-scientists and to provide lots of how-to information, but we do offer some information of a higher academic level so scientists can use it as well.”

While AU personnel are the main source of information for the site, it does tap into numerous other resources across the state and region. “We tried to find the best information we could for the state of Alabama, so we gathered it from all over the place,” Lovshin said. “It is as broad-based as possible.”

The site also contains a useful search engine so visitors can easily get to specific subject areas, and it has many links to other resources, such as the fisheries department’s main website, a fisheries and aquaculture photo gallery, weather radar and even recipes.

Join the National Aquaculture Educators Network

There are ongoing efforts among aquaculture educators (Extension Specialists, VoAg, university, and secondary school instructors, curriculum developers, etc.) to provide educational materials for secondary school and university students. However, these efforts tend to be fragmented and inconsistent. The National Aquaculture Educators Network (NAEN) is being developed to help coordinate and develop these efforts. The NAEN will involve multiple universities, state and federal agencies, interested secondary school teachers, aquaculture interest groups and suppliers as well as other parties.

Our primary goal is to find individuals who share a passion for aquaculture education and are interested in a networking opportunity:

To help educators motivate students using aquaculture and water-related topics in science as well as in math, language arts, social studies and the fine arts.
To develop and share curriculum materials, hold workshops, provide in-service teacher training, and facilitate networking among teachers and other educators.
To stimulate communication among all persons interested in developing aquaculture and preserving the aquatic environment.
To provide opportunities for the study of aquaculture and aquatic environments.
To create an enthusiastic, dynamic, and dedicated team of educators, and scientists who recognize the importance of aquaculture and the vital role it plays in global food production and other areas.
To develop an aquaculture literate society and promote awareness of aquatic systems by integrating aquaculture into existing curricula.
To provide opportunities for personal and professional development.

To subscribe to the NAEN list serve:

Send an email from your personal email program to major-domo@acesag.auburn.edu with only the following text in the body of the email.
subscribe naen
You will then receive an email asking you to confirm your desire to join the list, followed by a welcome message. This list will serve as a method of communication between members and a means for us to let you know how the organization is developing, including new resources and opportunities.

If you have further questions or are interested in participating on the leadership team please contact David Cline, Extension Aquaculturist, (334)-844-2874 Email: clinedj@auburn.edu
The International Boston Seafood Show (IBSS) attracts visitors from all over the globe. This year that group of visitors included seven representatives of Alabama’s catfish industry hoping to learn about emerging trends and markets in the “seafood” industry. The visit was coordinated by Auburn University’s State Aquaculture Extension Specialist, Dr. Jesse Chappell. Accompanying Dr. Chappell were, The Catfish Institute’s board member and president of the Alabama Catfish Producers Association Butch Wilson; Jamie Clary, Executive Director of the Alabama Catfish Marketing Association; and Extension Aquaculturists David Cline and Claude Reeves. The group was warmly received and guided at the show by American (Southern) Pride Seafood’s live fish procurement officer, Donnie Wedgeworth and Southern Pride’s then vice president of catfish operations, Benny Bishop.

Since 1982, The International Boston Seafood Show has attracted thousands of seafood professionals from over 80 countries, making it the largest annual seafood show in the United States. Attendees include buyers from leading restaurants, hotels, resorts, institutions, seafood markets and supermarkets, as well as distributors/wholesalers, processors, importers, exporters, brokers and traders. IBSS features approximately 800 exhibitors in more than 1,600 booths representing all facets of the seafood industry including fresh, frozen, live, value-added, branded and private label. The inclusion of the Seafood Processing America Show within the IBSS further enhanced the show’s offerings and reach by presenting processing equipment and services ranging from machinery to refrigeration.

The show can be a bit overwhelming to the neophyte. The pace is hectic and there is much to see and learn. One of the shows primary objectives is to provide a venue for international buyers, suppliers, distributors/wholesalers, importers, exporters, brokers and traders to gather to launch and source new products, identify niche markets, connect with customers, evaluate industry trends and learn about the latest in seafood technology and products.

It was quite an eye opener for our group from Alabama. I am sure that each member of the group brought home some new information and insights. We made a number of observations that might be interesting to other southern aquaculture devotees (see sidebar at right).

We were also fortunate enough to be invited to tour American Pride Seafood’s processing and product development facility in New Bedford, MA. One of the industry giants, American Pride Seafood controls roughly 20% of the cod, pollack, catfish, and scallop market. The facility had two distinct areas, one that processed frozen fish blocks into over 250 different products and a second area that received and processed scallops. Both facilities were very clean and impressive. We saw scallops being unloaded from fishing boats right at the docks (the facility is on the waters edge) and followed their path through the plant. The scallop portion of the facility has only been part of American Pride Seafood since 2002 and production has increased from 4 to 12 million pounds per year in that short time.

The trip was not all work and no play. The group visited a couple of fine Boston landmarks including “Cheers” the bar/restaurant made famous by the long running television show and the Union Oyster House, the oldest continuously operating restaurant in North America (since 1826). The group agreed that the New England clam chowder at the Oyster House was the best on the planet. We were also quite happy to evaluate the tasty samples provided at the show.

Overall the trip was a great learning experience and a much appreciated opportunity. It allowed the group an excellent opportunity to see what was going on in the seafood industry and try to find ways to improve our products’ position within the grand scheme of things. Improvement in our ability to market products in venues such as the IBSS and finding innovative ways to add value to our catfish and aquaculture products will help us remain competitive in a growing global market. Spending time with and learning from the folks involved in different aspects of catfish production, processing and marketing enables each of us to be more effective in advancing our personal goals as well as our industry.

The following table shows the number of exhibitors listed in several of the searchable categories.

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of Exhibitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrimp</td>
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<tr>
<td>Tilapia</td>
<td>85</td>
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<tr>
<td>Salmon</td>
<td>71</td>
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<tr>
<td>Oysters</td>
<td>49</td>
</tr>
<tr>
<td>Catfish + Aquaculture</td>
<td>19</td>
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<tr>
<td>Smoked Seafood</td>
<td>23</td>
</tr>
<tr>
<td>Roe and Caviar</td>
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<tr>
<td>Basa</td>
<td>17</td>
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<tr>
<td>Bass</td>
<td>6</td>
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<tr>
<td>Fish meal/oil and byproduct</td>
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</tr>
<tr>
<td>Alabama</td>
<td>4</td>
</tr>
<tr>
<td>Mississippi</td>
<td>3</td>
</tr>
<tr>
<td>Shipping and handling</td>
<td>49</td>
</tr>
</tbody>
</table>

Alabama Contingent Visits 2006 International Boston Seafood Show (IBSS)

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The importance of aquaculture within the grand scheme of the seafood business is still relatively small. While aquaculture’s role steadily grows each year it is hard to grasp the magnitude of the overall “seafood” industry.

The array of value added products and packaging was incredible. The emphasis was on convenience, especially for retail consumers. We saw a number of microwave ready meals that included the fish and accompanying veggies, etc.

Many exhibitors had elaborate and expensive displays, which indicated to me that their marketing programs were very important. Only a few of the aquaculture companies had such impressive displays.

Passing out samples was another important method to draw attention to new products and demonstrate product quality. There were very few folks distributing farm raised catfish samples. This might be an opportunity for TCI or the catfish industry to try and differentiate their products from the other non-farm raised catfish being sold at the show.

Mississippi Seafood Marketing had a booth as did many other states. Another potential opportunity for Alabama and our southern states.

There was a significant emphasis on nutrition, food safety and organic products.

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Notes from the Univ. of Arkansas at Pine Bluff Aquaculture/Fisheries Center

Dr. Alf Haukenes has joined the UAPB Aquaculture/Fisheries Center as an Assistant Professor (Reproductive Physiology). He will be developing research initiatives related to improving reproductive outcomes of commercially important warmwater aquaculture species. Dr. Haukenes will also develop both graduate and undergraduate courses related to Fish Physiology and Hatchery Management.

The UAPB Aquaculture/Fisheries Center hosted the annual Aquatic Sciences Day on September 21, 2006. Nearly 200 high school students from 12 different high schools participated in a wide variety of learning centers that focused on the application of science to high school curricula. Educational booths discussed the biology of sex and sterility in fish, life history of the American eel, water quality in catfish ponds, plankton identification and role in ecosystems, a fish in art exhibit along with a gyotaku fish print activity, fish trivia, and fish identification. Other stations demonstrated the proper way to seine ponds, backpack shocking techniques, and students could try their hand at cast netting and fishing for hybrid bream.

The bi-annual Aquaculture Field Day was scheduled for October 5, 2006. Several hundred fish farmers from the region were expected to be in attendance. Demonstration included a hybrid-channel catfish growout challenge, results of the 2006 state-wide survey of the catfish trematode, fish biosecurity initiatives, including “The Seinitizer,” and a session on “Why Chemical Treatments Fail,” with a demonstration of proper chemical application methods. Other demonstrations included a new system that uses handheld computers for maintaining and using farm records, understanding electrical costs and interpreting electrical bills, electrical safety on fish farms, and the new Arkansas Baitfish Certification Program.

Wanted
Judges for student abstracts, oral presentations and posters at Aquaculture 2007

Contact: Brian Nerrie
bnerrie@vsu.edu
804.524.5903
Fourth National Aquaculture Extension Conference Planned

The Fourth National Aquaculture Extension Conference is scheduled for April 30 - May 4, 2007 and will be co-hosted by The Ohio State University and Kentuck State University, at the Garfield Suites Hotel in Cincinnati, Ohio. The conference is sponsored by the USDA Cooperative State Research, Education and Extension Service's (CSREES) five Regional Aquaculture Centers. This event has been held about every five years since 1992 and promises to strengthen professional development and growth for all levels of experience and years of service in extension education. The conference program is aimed for organizations and individuals who have extension education and outreach responsibilities in the diverse disciplines associated with aquaculture, including production, marketing, economics, risk management, processing, engineering, public policy and more.

The conference will focus on innovative techniques, current issues and emerging technologies of interest to Extension educators who work with diverse aquaculture clientele. The program tentatively includes one day of technical presentations, one day for participation in several hands-on workshops, and a day devoted to field tours of various places of interest in Cincinnati. We are working on a behind-the-scenes tour of the Newport Aquarium, a tour of Jungle Jims, a large international market with a huge seafood department (photo above), a trip to the Cincinnati Asian Market and a tour of Jones Fish Hatchery in Newtown, OH.

Details on how to submit an abstract for all oral and poster presentations will be forthcoming. The conference registration fee has not yet been determined but we are trying to keep it around $100, which will cover the cost of conference materials, several meals and transportation for workshops and field visits.

For details on the conference planning, including hotel reservations, visit: http://southcenters.osu.edu/aqua/extension%20conference/Extension%20conference.htm

NCRAC Hires Regional Extension Specialist

Prompted by industry requests, the North Central Regional Aquaculture Center (NCRAC) has recently hired a new extension specialist to supplement the region's current aquaculture extension ranks. As the new “Regional Aquaculture Extension Specialist”, JJ Newman Rode will be working in all 12 NCRAC states, bringing the region’s full-time equivalents (FTEs) in aquaculture extension to 4.6.

Newman Rode comes to the North Central Region from University of New Hampshire Cooperative Extension, where she worked on statewide aquaculture development for the past nine years. Some years prior to that, from 1990-1993, she worked on a Michigan aquaculture feasibility study for the MSU Agricultural Experiment Station. She has been involved with aquaculture - as an extension specialist, researcher and student - since 1983.

Newman Rode is spending her time initially getting up-to-speed with the aquaculture situation throughout the region. "When I worked in Michigan before, I was housed in the same building as NCRAC, and I was lucky enough to become familiar with the aquaculture situation and some of the growers in many North Central states. So, while I am familiar with aquaculture in the region, I am seriously out of date and need to get caught up. I also want to find out what kinds of additional extension efforts are needed in this region, and how I can best support the existing extension specialists. I want to talk with as many industry people as possible, state association members, extension folks and state agency people. I need to read the NCRAC white papers, state aquaculture plans, legislation and regulations in the different states. I also want to visit as many farms across the region as I can in the next six months or so. I have a lot to do!", she laughs.

Newman Rode was hired through a three-year NCRAC grant to Ohio State University, and is housed at Purdue University in West Lafayette, Indiana. You can reach her by email at jjrode@purdue.edu.
**Mixed Bag**

*Stuff you should know*

*Photo of the season:* Twins? No, just a recent molt of a freshwater shrimp (*Macrobrachium rosenbergii*). Interesting how they even pull out of their claws.

*Regional Editors:* The USAS newsletter relies on regional editors to deliver the news you want to know. Please contact them if you have news to share. Here’s a brief snapshot of a couple of our volunteers.

**David Crisostomo:** David received his undergraduate training at the University of Washington in 1979 with a Bachelor of Science degree in Fisheries. He also received his Masters degree in 1984, from Texas A&M University in Fisheries Science. He began his aquaculture career in 1980 at the University of Guam (UOG) with a full-time appointment to the Guam Cooperative Extension Service. Had developed the first aquaculture undergraduate class at UOG in 1985 and has taught every class. David has served on many local and regional committees to develop the aquaculture sector. His most recent projects include a capacity building project in Bangkok Thailand, to train professionals and producers in American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands as well as a project to evaluate 5 strains of tilapia for the establishment of a commercial tilapia hatchery in Guam. David has served on the Technical Committee of the Center for Tropical and Subtropical Aquaculture since 1988. Currently, he serves as Program Leader for the Agriculture & Natural Resources program of the Guam Cooperative Extension Service.

**David Cline:** David is an aquaculture specialist with the Alabama Cooperative Extension System specializing in freshwater fish and crustacean production, small-scale marketing and aquaculture education. He received an A.B. from Colgate University in 1986, a Master of Aquaculture degree from Auburn University 1991 and is currently pursuing a Ph.D. in the area of aquaculture education. David has been a member of WAS for nearly 20 years and has served as a moderator, presenter, special session organizer and served as a program chair for the 2003 National Aquaculture Extension Conference. He is now the chair of the WAS ad hoc committee on aquaculture education and leading the effort to form a national aquaculture educators’ network. For the last 13 years, he has found great satisfaction in working within the US aquaculture extension community bringing the latest research, production, and marketing information to the industry and interested citizens. Having been actively involved in both the private and educational/ government sectors of aquaculture for the last 17 years, David has gained a broad perspective of the issues and opportunities facing the industry. He believes in the outreach and education mission of USAS and looks for opportunities to strengthen and expand this valuable network. David is also an avid photographer; you can see some of his work at [www.davidclinephotography.com](http://www.davidclinephotography.com).

Eat fish twice a week...the Government says so!

There was a lot of coverage on this topic this week by several major TV networks. The Harvard study, published October 18, 2006, provides additional information on this subject and the recommendation that consumption of seafood reduces coronary heart disease is somewhat stronger than the NAS report. Both reports address the issue of PCBs and dioxins in some seafood and also present a comparative framework of these contaminants in other commonly consumed foods. The reported levels of these contaminants are significantly below U.S. government established action or tolerance levels in the different categories of food. The Harvard study reports that the benefits of consuming wild and farmed salmon far outweigh any health risks associated with reported levels of these contaminants.

For more details: [http://www.iom.edu](http://www.iom.edu)

Excerpted from an email:
Gary Jensen
CSREES-USDA
USAS Announces Upcoming Publications

Since spring 2005, the US Aquaculture Society has been seeking proposals for USAS-sponsored publication projects. The goal is to improve the availability of publications for our membership, including books, conference proceedings, fact sheets, pictorials, hatchery or production manuals, data compilations, and other materials that are important to U.S. aquaculture development and that will be of benefit to USAS members. Proposals are evaluated and rated by the USAS board of directors according to a number of criteria, including situation or problem addressed, new approaches and special features, authors’ qualifications, and target audience and market demand. To date, several projects have been selected for support and are highlighted in this report.

The first project entitled “U.S. Aquaculture Outreach Publications 2006” is a searchable CD which contains all USDA Cooperative State Research, Education, and Extension Service’s Regional Aquaculture Centers and NOAA Sea Grant College Program aquaculture publications. This project was submitted to USAS by the joint USDA-NOAA National Aquaculture Extension Steering Committee, with Michael Masser and LaDon Swann serving as project co-leaders. USAS sponsored and produced the CD, and all USAS Chapter members who attended Aquaculture America 2006 received this CD in their registration packet at no charge. Additional copies may be ordered for $10 through the WAS on-line store (http://www.was.org/shopping/ShopExd.asp?ID=398).

USAS is pleased to announce that it has entered into an agreement with Blackwell Publishing Company to co-publish two books, which are currently well on their way to completion. The first entitled “Species and System Selection for Sustainable Aquaculture” is edited by PingSun Leung, Cheng-Sheng Lee and Patricia O’Bryen. This book, which will consist of 13 chapters, represents the proceedings of an Aquaculture Interchange Program workshop held in Honolulu, Hawaii in October 2005. As a main theme, invited international experts share their experiences from a public sector perspective in identifying potential species and production systems for sustainable aquaculture development in their respective countries and regions, with a focus on socioeconomic aspects, including the role of government in the process, and case analyses of successes and failures and lessons to be learned. This book is targeted for publication in August 2007.

The second book project, entitled “Environmental Best Management Practices for United States Aquaculture” is edited by Craig S. Tucker and John Hargreaves and contains 13 chapters written by experts in U.S. aquaculture as well as one chapter by an expert on environmental conservation. The book will review the scope and diversity of aquaculture in the U.S. and its potential and perceived impacts, the use of BMPs for environmental management in and outside the U.S., specific management practices used to mitigate environmental impacts in freshwater pond culture, marine shrimp culture, net pen facilities, flow-through culture systems, recirculating aquaculture systems, and molluscan shellfish aquaculture, the use of drugs and chemicals in aquaculture, and the economics of BMPs. Publication is anticipated for December 2007.

USAS members may check www.blackwellfish.com for the most current publication dates for both books. These books will be available to USAS members at a 30% discount, which will be redeemable through the use of a source code provided to USAS members on special member promotions. It is the aim of USAS that these book projects provide timely information to our membership, and that the co-publication with Blackwell Publishing will result in publications of highest quality at a reasonable cost.

Individuals interested in submitting proposals for consideration for publication may find detailed instructions for proposal preparation online at the World Aquaculture Society website http://www.was.org/Main/Default.asp. Submit proposal to USAS Publications Committee, c/o Dr. Wade Watanabe, University of North Carolina Wilmington, Center for Marine Science, 7205 Wrightsville Ave., Wilmington, NC 28409, Tel 910-256-3721 x245; Email: watanabew@uncw.edu. USAS publications committee currently include Drs. Wade Watanabe (chair), Jimmy Avery and Jeff Hinshaw. Justin Jeffryes is Blackwell Publishing’s Commissioning Editor.