



The President's Vector by Duane Chapman

The newsletter makes its appearance after a long hiatus and under a new name! Thanks to Kevin Irons for suggesting "Pathways" as the name for the newsletter, and to Phil Moy for his suggestion, which I have incorporated into the name of this column.

The "State of the Section" is "Active". We have several projects underway, and a lively, informative list serve. We are working with the Fisheries Management Section and the Colorado-Wyoming Chapter to develop a resolution regarding intentional, illegal, stocking. The National Sea Grant legal section has also offered to help us in that effort.

Our Section has recently written letters to the New York Times (a response to an article promoting the indiscriminate enhancement of fisheries for undesirable non-native species) and to Bombardier, Inc. (expressing our concern regarding ballast water in personal watercraft as a potential vector). We have written a letter to the US Fish and Wildlife Service requesting that they provide informational materials on the Lacey Act and on illegal fish stocking that can be provided to aquaculturists, so that the aquaculturists can in turn provide the information to fish buyers that might intentionally or unintentionally violate that law. We are sponsoring a symposium on success stories in the management of aquatic nuisance species at the 2008 annual meeting in Ottawa. We have made substantial progress toward the update of the glossary of introduced species terminology, and we have a committee in place to complete that effort. At the Ottawa meeting, we will be offering, for the first time, an award for best student paper on aquatic introduced species.

In this issue of the newsletter, we have added a bibliography section. This is a list of recent publications that were either 1) published by the American Fisheries Society and having an introduced aquatic species angle, or 2) submitted for this list by section members. For this edition I included publication from January 2007 - December 2008. In the list, the names of section members are highlighted. There were 38 American Fisheries Society publications on the list, an indication of the importance of aquatic introductions to the Society. However, one thing that bothers me is the paucity of section members' names among those authors. It appears to me that some of those authors would be well served by membership in the section. And we could use their participation.

This brings up the question of membership in the section. Overall, membership is declining in American Fisheries Society sections. Our section roster, a bit less than 200-strong, declined by about five percent between 2006 and 2007. Turnover was high - we had 47 members that did not re-up between 2006 and 2007, and 37 new members in 2007. The turnover is striking, and I wonder about the reason for it. I hope it does not mean that people try the section for a year, are disillusioned, and do not rejoin the next year. I hope that resuming publication of the newsletter will help keep members in the fold--but the newsletter will be available to anyone, regardless of whether they pay their dues.

One thing is clear - if people do not perceive some benefit of staying in the section, they will not do so. The list serve, and the information stored in the Yahoo group files area, are

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primary benefits that the section offers, but only about 1/3 of the Section membership subscribes to the group and list serve. The other benefits that the Section offers (symposia, policy statements, resolutions, and outreach), like this newsletter, accrue to non-members as well as members. What we have to sell is opportunity as professionals to comment on and influence issues of the day, and information transfer between members. If you have suggestions as to how I can improve these services, please let me know.

I am doing what I can to reverse the membership decline. I contacted, by email or regular mail, the 47 members from 2006 that did not re-up in 2007 (only \$5), and invited them to rejoin our list serve as well as the Section for 2008. I also advised current members on how to join the list serve and Section and invited their vote for the Section president-elect. I will contact members again to inform them of this newsletter. You can help by downloading the Section's brochure (in the files section) and taking a few copies with you to the next professional meeting you attend.

Communication with members that are not on the list-serve is difficult. Emails with too many recipients are often blocked by spam blockers, thus many individual emails must be sent. Some members have no email address or their address is incorrect. I try to send those members information and notification by regular mail. Another problem has been notification when new members join the Section. Notification has lagged well behind the date when dues are paid, thus sometimes members hear nothing from the section until a substantial portion of their dues-paid period has expired. I brought this up at the AFS mid-year meeting in mid-March. As a result of my comments and those of other unit representatives and parent society leaders, AFS is going to revisit the membership issue, and hopefully eventually install new software and a system which hopefully will be more responsive to our needs. However, there is no off-the-shelf product which does exactly what we want, so this will take some time. In the meantime, Gus indicated that Unit presidents can contact the parent society office and ask for an updated membership list at any time during the year and that a reasonably updated membership list will be provided within two weeks of the request. I recently requested and received an updated list of Section members. I'll talk about those data in the next Vector.

Thanks to Mac Kobza, who did a great job on putting this newsletter together in its shiny new format, and to those who offered material for the newsletter. I think we have some really good contributions. If you have news that you would be willing to share with the Section for the next newsletter, please let us know. This newsletter can only be as good as what you put into it. Also, I draw your attention to the limericks at the end of this newsletter. If you do not wish to suffer more of my attempts at low poetry, you can offer your own poetic, lyrical, cartoon, or comedic works to fill that space. I intend to offer one or two in each newsletter - so pony up, those of you with better skills than I!

Barrier Update by Phil Moy

True progress on the Chicago Sanitary and Ship Canal dispersal barrier has been slow during the last twelve months. The original barrier (Barrier I) that went online in April 2002 continues to hum along though it has surpassed its five-year design life. Construction of the new larger, longer lasting and more powerful barrier (Barrier II) is partially complete. Barrier II consists of two separate arrays (IIA and IIB). Barrier IIA is complete and the electrodes for IIB are in place but there is no control building for IIB as construction funds for the project ran short after IIA was completed. Safety has been a critical concern during the last year. When Barrier IIA was being tested sparks were observed between barges at a coal dock facility immediately downstream from Barrier IIA. This problem has been resolved.

“Monitoring indicates Asian carps have not advanced further upstream”

On the bright side, Congress passed the Water Resources Development Act (WRDA) late in 2007. This provided authorization for the Corps of Engineers to undertake construction and operation of the dispersal barrier project at full federal expense. Unfortunately we are still waiting on about \$8.1 million in appropriations to accompany the authorization in order to complete construction of Barrier IIB.

Monitoring indicates Asian carps have not advanced further upstream; they are still about 13 river miles and two locks downstream of Barrier II; however they are increasing in abundance. Last summer thirteen Asian carp were captured during the annual US Fish and Wildlife Service Round Goby Round-up and Carp Corral and a bow fisherman captured both a bighead and a silver carp in the same navigation pool. The Dispersal Barrier Advisory Panel will meet January 17th in Chicago.

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Annual Meeting Award



At 2007 Annual Meeting of the American Fisheries Society, Duane Chapman, (incoming president of the Introduced Fish Section), presents Marg Dochoda (now immediate past-president) with certificate of appreciation for her service as president of the Section. Also pictured are Phil Moy, recent president of the Section, and Walter Courtenay, Section member and 2007 recipient of the prestigious Ricker Award.

Invasive Species Experts Database Launched by Pam Fuller

The Aquatic Nuisance Species Task Force has launched an on-line database for finding experts who can help identify or control invasive species (<http://www.anstaskforce.gov/experts/>). Although the ANSTF deals primarily with aquatic species, the database is designed to allow for the inclusion of information to address terrestrial species as well.

The database is set up as a two-tiered system. The general public only has access to the first tier of experts. These are generally state resource managers who can identify the common species and know where introduced species already are in their state. They serve as a filter to ensure that other biologists are not swamped with common questions from the public. It also ensures that the state is the first point of notification.

The second tier is only accessible with a log-in. First tier experts and others with a legitimate need are given log-ins. If the first tier person can't answer a question or identify a species, they can log in to obtain contact information for a second tier person.

A person's expertise is categorized based on a geographic location (state); a discipline (control, ecology, genetics, laws and policy, pathways, physiology, and taxonomy); and a taxonomic group (diseases, parasites, annelids, mollusks, fish, crustaceans, aquatic plants, etc.). A person may be an expert in multiple states, disciplines and/or groups. Hence an individual can be categorized as an expert in ecology and control of mollusks in Florida and Georgia. Furthermore, there is room for a profile to describe the expert does. For instance, an individual may be classified as an expert in taxonomy of fishes and their profile may distinguish their expertise more specifically as gobies.

The Introduced Fish Section would like to make everyone aware of this resource, and encourage people to sign up. The database already has many biologists with general expertise or knowledge of local fauna, but it needs more experts in specific introduced species or groups. So if anyone reading this article has a particular expertise, please become part of this network and share that knowledge with those seeking it!

Interested individuals may register to be added by filling out the form on: http://nis.gsmfc.org/expert/add_expert.htm. The system can be viewed by going to <http://www.anstaskforce.gov/experts/> and using the log-in user=Tier-1_user; psswd=expert07. Please do not change this password as it is used by many people!

“The Introduced Fish Section would like to make everyone aware of this resource, and encourage people to sign up”

National Management Plan for Asian Carps Approved by ANS Task Force by Greg Conover

On November 7, 2007, The Aquatic Nuisance Species Task Force (Task Force) approved for implementation the ‘*Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States*’ (Plan) submitted by the Asian Carp Working Group.

The U.S. Fish & Wildlife Service’s (FWS) Carterville National Fish & Wildlife Conservation Office chaired an Asian Carp Working Group for the Task Force and led the collaborative development of the national management plan for Asian carps. A broad array of stakeholders, representing varied interests, participated on the Working Group and included representatives from federal and state agencies, tribal and Canadian governments, academia, private industry, and non-governmental organizations.

Collaborative development of the national Plan began in May 2004 when the FWS hosted the first meeting of the Asian Carp Working Group. Multiple drafting teams were organized to develop effective management strategies and recommendations to address preventing introductions, containing feral populations, reducing abundances of feral populations, research needs, information and outreach needs, and cooperative implementation. The individual components developed by the drafting teams were compiled into a single document and vetted through the Asian Carp Working Group. Following several rounds of comments, revisions, and editing, a first draft of the Plan was submitted to the Task Force in April 2006. Following a review by Task Force members, the draft Plan was released to the public for a 60-day review and comment period that ended in December 2006. The draft Plan was revised by the Asian Carp Working Group to include agreed upon revisions based on comments received from the Task Force and the general public. The final Plan includes 48 strategies and 131 recommendations that the Asian Carp Working Group reached consensus on to manage and control Asian carps in the United States. The Plan can be down loaded from the Task Force website at www.ANSTaskForce.gov.

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Following approval of the Plan, the Task Force immediately turned its focus to coordinated implementation and decided to establish an Asian Carp Implementation Team under the Task Force’s Control Committee. The implementation team will coordinate implementation of recommendations among all components of the Plan into a single strategy, identify available resources and funding needs, seek funding for full implementation of Plan recommendations, evaluate success and apply adaptive management strategies, and communicate progress and needs to the Task Force. The Task Force requested the FWS assemble and Chair the implementation team, and for the implementation team to be convened prior to the Task Force’s next meeting in spring 2008.

Your IFS Yahoo! Group

Aquatic_introductions is the listserv for interactive information sharing and support in preventing, containing, and managing introductions—authorized or not—of all aquatic species. Any member of the Introduced Fish Section of the American Fisheries Society is welcome to join, as are AFS officers and staff and—by invitation of moderator—interested persons from related fields such as policy development and aquatic-plant research and management. A primary objective of this listserv is to discuss and execute business of the Introduced Fish Section. *However, we welcome and encourage the active participation of all our list members.*

http://tech.groups.yahoo.com/group/aquatic_introductions/



CALL FOR NOMINATIONS! By Michael Quist

*Excellence in Fisheries Education Award
Education Section, American Fisheries Society*



The American Fisheries Society (AFS) Excellence in Fisheries Education Award was established in 1988. The award is administered by the Education Section and is presented to an individual to recognize excellence in organized teaching and advising in some aspect of fisheries education. Nominees may be involved in extension or continuing education, as well as traditional college and university instruction. Nominees must be AFS members, have been actively engaged in fisheries education within the last five years, and have had at least 10 years of professional employment experience in fisheries education. Two or more people may act as nominators, but at least one nominator must be an AFS member. The nominator(s) is responsible for compiling supporting material and submitting the application. The suggested format for applications can be found on the Education Section web site (<http://www.fisheries.org/units/education/>). Application materials should be sent to **Michael Quist** (mcquist@iastate.edu) in digital form. Nomination deadline is **May 16, 2008**. Additional information can be obtained from:

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Biologists Hunt for Asian Carp, Round Goby and Fish Disease

by Pam Thiel

The 12th Annual Goby Round Up and 6th Annual Carp Corral was conducted in mid-June on a 180-mile stretch of the Illinois Waterway from the western suburbs of Chicago to south of Peoria. The objectives of the effort are to chart the downstream leading edge and relative abundance of round goby and determine the relative abundance and upstream distribution of the invasive silver and bighead carp, as well as collecting fish health samples.



Pam Thiel of the US Fish and Wildlife Service pilots a boat through a school of silver carp during the goby roundup/carp corral.

A total of three bighead carp were collected by our monitoring in the Dresden Island Pool. A bow fisherman shot two bigheads that were verified by IL DNR the week before our surveillance efforts. This indicates that the number of bighead carp is probably increasing in the Dresden Island Pool.

Fourteen crews sampled with electrofishing units, gill and trammel nets, minnow traps, and angling. Participants were from 13 entities, including three federal (FWS, USGS, and COE), three state (IL DNR, INHS, and IL/IN Sea Grant), two aquariums (Shedd and Discovery World), the Cook County Forest Preserve, the University of Wisconsin-Madison, the Field Museum, and The Nature Conservancy.

Our surveillance did not find round goby any further downstream than where they had been collected in July of 2004 by the Illinois Natural History Survey, just below the Peoria Lock and Dam. Round goby are now nearly 170 miles from Lake Michigan and half the distance to the Mississippi River.

This year we collected a bighead carp at River Mile 281.5. The previous upstream record was from a 2002 collection at River Mile 275. This now places bighead carp about 15 miles below the electrical

The Starved Rock area of the Peoria Pool is one of our long-term sampling sites and the number of Asian carp in this stretch significantly increased over last year. During the 4-day sampling period in 2006, 128 bighead and silver carp were collected. This year, 236 bighead and silver carp were collected. In addition, we had 60 “flying” carp jump in the boat.

Round goby, bighead, silver, grass and common carp were collected as part of the US Fish and Wildlife Service’s Wild Fish Health Survey. Samples were checked for a cadre of bacterial and viral pathogens and parasites. We were especially interested in determining if round gobies and other fish species are infected with Viral Hemorrhagic Septicemia (VHS) and if carp species are infected with Spring Viremia of Carp Virus (SVCV). This year VHS and SVCV were not detected, but in 2003, SVCV was found in one common carp collected in the Calumet Sag Channel.

If you are interested in experiencing jumping carp first-hand on this exciting mid-June event, please contact Pam Thiel at 608-783-8431 or pam_thiel@fws.gov.

New Arkansas Bait and Ornamental Fish Certification Program Started in Spring of 2007 by Andy Goodwin (agoodwin@uaex.edu).

Regulators in northern states are increasingly worried about the potential for shipments of wild baitfish to spread exotic plants, fish, mollusks, and diseases. These concerns were triggered by...

- The discovery of the exotic Spring Viremia of Carp virus in farmed or wild fish in North Carolina, Virginia, Wisconsin, Illinois, Washington, and Missouri.
- The discovery of exotic VHS virus in the Great Lakes.
- The emergence of a new parasite (*Heterosporis*) in Wisconsin, Minnesota, Michigan, and Lake Ontario.
- Increasing recognition of the disease transmission and ANS (zebra mussels, exotic plants, exotic fish, and snails) potential of wild-caught baitfish.

“The program serves as a model for other state and national programs designed to prevent the spread of exotic fish diseases”

This concern has increased interest in the benefits of farmed baitfish that are cultured under controlled conditions and subject to health inspections. In order to demonstrate the safety and superiority of their product, Arkansas fish farmers desired a means to distinguish their high quality farm-raised bait and ornamental fish from wild fish. Unfortunately, there was no program at the state or federal level that Arkansas farmers could use to demonstrate the safety and environmental superiority of their farmed product. In response to industry interest, a voluntary fee-based State certification program to “...provide high quality, farm-raised bait and ornamental fish, free of certain diseases, undesirable plants, undesirable animals, and other contaminants deemed injurious to fish or fisheries” was developed.

The first steps toward this program occurred in 1995, when the University of Arkansas at Pine Bluff (UAPB) Diagnostic laboratory became approved by USDA/APHIS to inspect fish for export. Aquaculture/Fisheries Center fish health specialists held biosecurity and fish inspection education sessions for farmers and participation in the health inspection program gradually increased. Large increases in participation occurred following disease outbreaks elsewhere in the US. In 2005, the Arkansas Bait and Ornamental Fish Growers Association worked with the State to authorize a comprehensive certification program that included fish disease, aquatic nuisance species, and farm biosecurity. Over the following year, UAPB worked with industry and the State to develop the technical details of that program and to provide the needed training for farmers and Arkansas department of Agriculture inspectors. By 2006, more than 85% of all Arkansas bait and ornamental fish production acreage was doing semi-annual inspections for exotic pathogens through the UAPB laboratory under APHIS export program guidelines.

The state certification program was formally begun in Spring 2007. It includes disease inspection, biosecurity, and aquatic nuisance species provisions. More than 95% of all Arkansas bait and ornamental fish production acreage is undergoing the inspections needed for participation in this voluntary program. The Arkansas Certified Commercial Bait and Ornamental Fish program provides assurances that products from participating bait and ornamental fish farms are free of the listed pathogens, plants, animals and other contaminants. The program serves as a model for other state and national programs designed to prevent the spread of exotic fish diseases. For more information on the Arkansas program, contact Andy Goodwin at UAPB.

Lighter Side

As mentioned in the Vector, this is a section for whimsical material. If you have cartoons, poetry, or similar submissions in an introduced aquatic species vein, please submit to the Newsletter. Be on notice: If no submissions are forthcoming, you will be subjected to more of my limericks - Duane Chapman.

At least it's not *Salvinia*

A beautiful flower called *Eichornia*
 Impressed florists from Rome to California
 Now the plant's ugly floats leave no room for our boats
 Oh, our wide open lakes, how I morn 'ya.

Lacey Act Loser (or, Somebody give this guy the brochure!)

There once was a man from Pawtucket,
 Who hauled illegal bait in a bucket.
 The law fined the man for his crayfish and clams
 and as for the bucket, the law tuckit.

Curse of the "Ninja Forktail"

The silver carp, with a stupendous leap
 came flying up out of the deep
 Breaking all odds, struck my head, then my rods
 I've some flyrods for sale, dirt cheap.

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Objectives of the Invasive Fish Section:

The Introduced Fish Section's organized as a subunit of the American Fisheries Society under bylaws approved on August 26, 1990. Under the bylaws, the term "Introduced fish" is taken to include fish, shellfish, crustaceans, and other aquatic organisms regulated by fisheries legislation or affecting the well-being of fisheries resources.

- To develop and maintain an association of persons interested and involved in the use of introduced and other aquatic organisms,
- To coordinate and develop programs to advance the knowledge and concerns related to introduced species,
- To provide a forum for identifying and bringing attention to bear on the beneficial and potentially harmful impacts of introduced species,
- To encourage communication among scientists, administrators, managers, educators, aquaculturists, and others interested in introduced species,
- To assist federal, state, and private groups in making informed decisions on introduction of species, and
- To advise private industry in developing procedures for the safe handling of introduced species intended for closed system maintenance and culture.

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The New Banner

About the new "Pathways" banner art: The banner was created by Caleb Chapman, and depicts stylized Eurasian Water Milfoil forming the letters of the newsletter name. The carp swimming through the weeds are a silver carp and a bighead carp created by Jessica Counihan of the Columbia Environmental Research Center. In future issues, it is my intent to swap the carp out with contributions from other members. If you have introduced aquatic species pictures or art to share for the banner, please contact Duane Chapman, dchapman@usgs.gov. Artwork used will be credited in this space. If desired, artwork contributors may also include a link to a website of their choice as part of the credit.
