

Fisheries and Aquatics Bulletin

A publication of the U.S. Geological Survey,

Fisheries: Aquatic and Endangered Resources (FAER) Program

Edited by Janet A Cushing

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From the Editor's Desk

For this issue of the FAB, I wanted to give a brief update on Native American tribal happenings in BRD. Along with Susan Marcus, the USGS Native American Tribal liaison, Bonnie Gallahan (FGDC/GIO), and Kevin Whalen (BRD), I attended the Native American Fish & Wildlife Society national conference in May. There were approximately 200 attendees from various Native American tribes and Alaskan villages, federal agencies (USGS, FWS, USDA-APHIS, NOAA, BIA), and other organizations.

USGS activities at the conference included:

- USGS table with fact sheets on various BRD and WRD topics.
- Sue Haseltine gave a presentation on Avian Influenza.
- Sue Marcus (Tribal liaison, DO), Bonnie Gallahan (GIO), and Janet Cushing (BRD) gave a presentation on USGS research capabilities and tribal activities.
- Richard Neves (VA CRU) gave a presentation on the ecology and conservation of pearlshell mussels in salmon streams.

About a third of the talks presented dealt with aquatic and fishery issues, and FWS gave a presentation on the National Fish Habitat Initiative (more of which you'll be hearing about in future issues). I know a number of our FAER scientists are collaborating with Native American tribes and Alaskan villages, and that is something that our USGS Tribal liaison wishes to encourage. In the meantime, USGS is developing a Tribal relations course, and welcomes any insights into relationships with tribes or villages from your own experience. Also, if you are interested and need assistance in partnering opportunities with the Native American tribes or Alaskan villages, please contact me at jcushing@usgs.gov, or 703-648-4093, or Susan Marcus at smarcus@usgs.gov, or 703-648-4437.

Meet the New FAER Program Coordinator

On May 1st, 2006, Doug Beard started as the new program coordinator for the Fisheries: Aquatic and Endangered Resources program in BRD. He comes to us from the USGS Bioinformatics program where he was the Fisheries and Aquatic Resources Node Manager and Manager of the Aquatic GAP program for the last 3 years.

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Here are a few words of introduction from Doug:

"Prior to working at USGS, I worked for the Wisconsin Department of Natural Resources for 13 years as a staff fisheries biologist coordinating the tribal fisheries management program, lakes monitoring program and bioinformatics program. I have a B.S. in Zoology from the University of Wisconsin-Eau Claire, an M.S. in Fish and Wildlife Science from Penn State University and a Ph.D. in Zoology from the University of Wisconsin-Madison. My research background includes aquatic ecosystem management, analysis and modeling of social-ecological systems, population dynamics, and management of inland fisheries resources and biometrics. I have been active in the American Fisheries Society, serving on the governing board from 2001-2005 and currently serve as a science editor for Fisheries

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magazine. During this first year, I'm going to try and visit most of the Centers that focus on Fisheries work to develop a broader understanding of the entire FAER program. One of my primary focuses during this first year will be to develop some strategic ideas of how best to integrate USGS science efforts with the National Fish Habitat Initiative science and data needs.

Please feel free to introduce yourself at your earliest convenience and I will be in touch with many of you as I learn about the ongoing activities of the FAER program."

Science Features:

USGS Florida Integrated Science Center Scientists Continue to Study Threatened Gulf of Mexico Sturgeon -Ken Sulak, Mike Randall, and Randy Edwards, USGS Florida Integrated Science Center

Gulf of Mexico sturgeon (*Acipenser oxyrinchus desotoi*) is an anadromous (adults spend about half the year in marine environments and the other half in freshwater), protected species (Federally listed as Threatened in 1991). Genetically distinct populations of this ancient, large (largest of non-marine fishes in the southeastern US), and iconic species exist in major river systems around the Gulf of Mexico from the Suwannee River, FL to as far west as the Pearl River, LA. Most populations are at perilously low levels. The largest population exists in the Suwannee River and comprises about 8,000 adults, which is probably as many as that of all other populations combined.



Measuring adult Gulf sturgeon.

Scientists at USGS, Florida Integrated Science Center, Gainesville have been studying Gulf of Mexico sturgeon (GS) for approximately two decades and have made important progress in understanding its biology and ecology through studies that have determined population levels, identified and characterized spawning sites, determined spawning periodicity, examined potential relationships to river water temperatures and springs, identified important summer holding areas,

measured potential estuarine prey densities, studied jumping behavior, determined marine migrations, shown that adults do not feed while in freshwater, and identified winter marine feeding habitats.

Recent USGS work has focused on young-of-the-year (YOY) Gulf sturgeon and their winter, estuarine, feeding habitats. FISC researchers previously had determined that, after being spawned at a handful of sites over 200 km upstream, YOY GS make their way gradually downstream arriving at the river mouth and adjacent estuarine areas (within the Lower Suwannee National Wildlife Refuge) by early winter and remain in these food-rich, important nursery habitats for several months before moving back upstream in the spring. Recent analyses have shown that the recovery of Suwannee GS is very sensitive to survival rates of juvenile GS, and that recruitment rates are in turn correlated with river flow conditions during the winter months when the YOY utilize the river-mouth and estuarine habitats.



Juvenile Gulf sturgeon with acoustic tag at the base of the dorsal fin.

This year FISC researchers conducted a pilot study of YOY GS in their winter/estuarine habitats, with the overall goal of understanding YOY habitat utilization and movements. We captured 14 YOY GS with gill nets, tagged them with miniature coded acoustic transmitter tags, and deployed 13 automated acoustic receivers (listening posts) at key locations in the Suwannee delta and within the near-shore estuarine zone. The results show complex patterns of movements between various river-mouth locations and the estuarine zone, with rapid, extensive movements interspersed with relatively long periods (days to



Mike Randall downloading archived acoustic tag data from automatic listening post.

weeks) of residence at specific locations. Although additional study of winter habitats of YOY GS is planned, our findings have greatly increased our understanding and ability to protect this life stage and its habitats.

In another ongoing project, FISC researchers are updating the Suwannee River population estimate by conducting a mark/recapture study of subadult and adult GS. New mark/recapture data will be entered into an existing extensive data base and will be used to assess population status and trends since the last estimate



FISC researchers setting drift net to capture Gulf sturgeon on the Suwannee River.

seven years ago. So far, 159 fish have been collected in 2006, with a target of 500 for this year's work.

Future work plans include continuation and expansion of studies of Suwannee River winter nursery habitats, incorporating a quantitative benthos (sturgeon food resources) study. Adult census work will continue in 2007, with a target of another 500 fish to be collected and tagged. Also, a project funded by USFWS will allow YOY winter nursery habitat studies to be extended to the Apalachicola River in NW Florida.

Over the years, this work has been accomplished through funding support or scientific collaboration with multiple partners including: USFWS, NOAA-NMFS, Florida Fish and Wildlife Conservation Commission, Florida Department of Environmental Protection, University of Florida, National Fish and Wildlife Foundation, Phipps Foundation, Lotek Ltd, University of South Florida, and a host of volunteers. If you are interested in obtaining more information, please contact Ken Sulak (ksulak@usgs.gov), Mike Randall (mrandall@usgs.gov), or Randy Edwards (redwards@usgs.gov), or by visiting the FISC website at: <http://fisc.er.usgs.gov/>.

Photo credits: USGS.

Changing Needs: Outcomes from the USGS/NOAA Striped Bass/Mycobacteriosis Workshop

-Chris Ottinger, USGS Leetown Science Center

Mycobacteriosis in Chesapeake Bay striped bass was once viewed as a resource issue. It still is. Now the problem is also viewed in the context of ecosystem health and ecosystem change. Striped bass populations were once managed in isolation. New fishery management models include multiple stocks recognizing the ecological relatedness of individual species. Fishery managers once viewed disease as an unexplainable component of natural mortality in population models. This perspective is slowly changing. Now, integrated fisheries management forces the consideration of interactions (biotic and abiotic) and thus drastically increases information needs and by extension provides data about the ecosystem that has broader application. This information need can best be met through highly integrated and well coordinated research programs.



Chesapeake Bay striped bass exhibiting skin lesions.

Photo credit: Mark Marsche, Maryland Dept. of Natural Resources

In May of 2006, the USGS Leetown Science Center partnered with the NOAA/NOS Cooperative Oxford Laboratory to sponsor a workshop on mycobacteriosis in Chesapeake Bay striped bass. The goals of this workshop were to: 1) establish the state of knowledge 2) to develop a prioritized research agenda; and 3) to identify mechanisms by which research efforts could be optimized. This workshop involved the principal federal, state and academic scientists, resource managers, and a review panel charged with assessing information generated in the workshop and providing input on the state of knowledge, knowledge gaps, and information needs.

Synthesis of multiple data sets that occurred as part of the workshop process made apparent trends that had either been partially recognized or not seen at all. Mycobacteria-associated infection and disease in Chesapeake Bay striped bass is age and sex dependent.

The relative prevalence and severity of the disease has both spatial and temporal components. Temporal components appear to be relatively stable with the most severe disease occurring during the late summer and fall. Spatial components appear less stable with the exception of potential foci located in the northern region of the Bay. Although there was some disagreement regarding modeling methods, population data generated through tagging programs in Chesapeake Bay seem to indicate that the natural mortality rate in the spawning component of the striped bass stock had increased dramatically (2x to 3x) beginning in the late 1990's. The relationship between this increase in natural mortality and the mycobacteriosis epizootic has yet to be established. However, the simultaneous occurrence of the two events has raised concerns about the impact of mycobacteriosis on the striped bass population.

Determining the impact of mycobacteriosis on the striped bass populations was the top priority of resource managers and was given top priority in the future research agenda. Other priorities included developing a better understanding of mycobacterial ecology especially as it relates to disease transmission and the characterization of stressors that increase striped bass disease susceptibility. The development of the prioritized research agenda was supplemented by the identification of several overarching themes. Workshop participants recognized that the scope of this disease issue transcends individual research or resource management organizations and that its resolution will require integration of effort and optimization of available resources. The need to consider socioeconomic and human health concerns was also recognized.

Final recommendations from the workshop included the development of a multiagency steering committee that will be charged with issues including: 1) the continued development of diagnostic tool and methods standardization; 2) development of a standardized data base for all data related to mycobacteriosis/striped bass research in Chesapeake Bay as well as adjacent estuaries; 3) transfer of data for use in ecosystem modeling such as the program currently being developed by the NOAA Chesapeake Bay Program; and 4) the development of a communications network designed to rapidly disseminate research finding, announce upcoming research activities, and provide guidance on research needs as the knowledge base evolves.

Editor's note: For more information regarding the research of the Fish Health Branch, please visit their website at <http://www.lsc.usgs.gov/FHBindex.asp>.

Missouri River Sturgeon

-Carl Korschgen, USGS Columbia Environmental Research Center

The USGS Columbia Environmental Research Center (CERC) is in the third year of a scientific research effort to determine the ecological requirements for reproduction and survival of pallid (*Scaphirhynchus albus*) and shovelnose (*Scaphirhynchus platorhynchus*) sturgeon in the Missouri River. Evidence suggests that recruitment of pallid sturgeon to the adult population is limited in the Missouri River. In contrast, the closely-related shovelnose sturgeon is reproducing and recruiting. While their spawning requirements and behavior may be similar in many respects, the reasons behind the apparent difference in reproductive success of the two species are not easily discerned. Increased understanding of the reproductive physiology of these sturgeons and the ability to predict or assess relative reproductive success will increase the ability of managers to tailor prescribed management actions to promote species recovery.

The CERC summer's sturgeon research activities are in full swing: tracking, monitoring and assessing reproduction and habitat.

Telemetry: In cooperation with the Nebraska Game and Parks Commission, CERC is using telemetry to track 100 shovelnose and 10 pallid sturgeons in the lower Missouri River. This determines direction, magnitude, and habitat used during spawning migrations. In addition, reproductive physiology is described and evaluation of the effects and response of a semi-natural increase in water flow has on the sturgeons. Fifty female shovelnose sturgeon in reproductive condition and one male and one female adult pallid sturgeon were implanted with a Combined Acoustic Radio Transmitter (CART) tag and a Data Storage Tag (DST). Tracking activity results show that 79 of 100 shovelnose and 9 of 10 pallid sturgeons were located. **Aaron DeLonay** (adelonay@usgs.gov)



Data Storage Tag (DST) and Combined Acoustic Radio Transmitter (CART)

Reproductive Physiology: In cooperation with the U.S. Fish and Wildlife Service, South Dakota Game, Fish and Parks, Nebraska Game and Parks Commission, and the Missouri Department of Conservation, a

polarization index measurement is being used on sturgeon eggs collected from the Missouri River, as an indication of readiness to spawn in the river. Blood samples are drawn to assess hormone fluctuations and are then related to the data derived from the telemetry tags. Relating these two allows the assessment of what environmental factors are associated with aberrant patterns as to why fish didn't or complete a spawn.

Diana Papoulias (dpapoulias@usgs.gov)

Site-specific Identification of Spawning Locations:

In cooperation with South Dakota Game, Fish and Parks, evaluations are underway to determine the importance of substrate deposits to aggregation and spawning of sturgeon. The occurrence, relative abundance, and reproductive condition of sturgeon are being assessed over time at targeted and random locations to determine if and when sturgeon in reproductive condition occur and aggregate near coarse substrates. To characterize spawning habitats and determine spatial and temporal patterns in spawning occurrence, egg mats are deployed in arrays over the deposits at locations having habitat characteristics similar to those used by other sturgeon species (e.g., *Acipenser* spp.) in other river systems, and at other locations determined as potential spawning sites by the Missouri River telemetry efforts. Also, ichthyoplankton nets are used to sample larval fishes immediately below substrate deposits and above and below tributaries.

Darin Simpkins (dsimpkins@usgs.gov)



Egg mat used by sturgeon when placed over coarse substrates in the Missouri River.

Habitat: In cooperation with four USGS Water Science Centers, CERC has combined telemetry and habitat assessments to understand sturgeon habitat preferences, determine if needed habitats are limited, and evaluate efficacy of restoration projects. The environmental and physical habitat data (water quality, hydrology,

geomorphology, and hard substrate mapping) obtained concomitantly with tracking gravid and post-spawn females, provides information critical to understanding when, where, and under what conditions shovelnose sturgeon spawn. This information is not



Gravid female pallid sturgeon captured in the Missouri.

only important to determining what environmental factors cue spawning, but will begin to elucidate the optimal environmental conditions in terms of magnitude, frequency, and duration of water flow needed for successful spawning. Results obtained will also be used to quantify existing spawning habitat and to develop management strategies that attempt to create suitable and sufficient spawning habitat.

Robert Jacobson (rjacobson@usgs.gov)

Editor's note: For more information regarding CERC's Missouri River research, please visit their website at http://www.cerc.usgs.gov/Research/missouri_river.htm. Photo credits: USGS CERC

New Publications

Great Lake Science Center

Basic research is conducted at the Great Lakes Science Center in Ann Arbor, but field stations and vessels on each lake allow the unique ecological challenges of those lakes to be addressed in focused studies. Although the loss of native lake trout occurred almost across the basin, research on the individual lakes must focus on different species, for example the loss of Atlantic salmon in Lake Ontario. A series of publications released this year highlight the diversity of research approaches that are being applied by Great Lakes Science Center researchers to support the conservation and restoration of this vast ecosystem.

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Great Lakes research provides opportunities for applications of interdisciplinary approaches to characterizing ecological interactions. A recent publication looks at complex connections among geologic, hydrologic, chemical, and biological processes in different near-shore habitats of the Great Lakes, and potential influences on aquatic communities.

Citation: Haack, Sheridan K., Brian P. Neff, Donald O. Rosenberry, Jacqueline F. Savino, and Scott C. Lundstrom. 2006. An evaluation of effects of groundwater exchange on nearshore habitats and water quality of western Lake Erie. *Journal of Great Lakes Research* 31 (Supplement 1): 45-63.

To find other current USGS publications from the Great Lakes Science Center go to:

<http://www.glsc.usgs.gov/main.php?content=products&title=Products0&menu=products>

New Publication in Hydrobiologia

Citation: Papoulias, Diana, Duane Chapman and Donald Tillitt. In press. Reproductive Condition and Occurrence of Intersex in Bighead Carp and Silver Carp in the Missouri River.

This publication from USGS Columbia Environmental Research Center scientists describes the reproductive condition of the bighead carp (*Hypophthalmichthys nobilis*) and silver carp (*Hypophthalmichthys molitrix*), much needed understanding about the reproductive biology of these exotic species in the Missouri River. Results show that both species have a protracted spawning season, and spawn multiple times during that period. In addition, reproductive abnormalities such as intersex, atresia, and sterility are documented. Knowledge of the reproductive activity of these invasive carps will be useful to resource managers tasked with controlling these exotics, and in addition, the reproductive abnormalities observed can be used in evaluations of the Missouri River environmental condition relative to supporting healthy fish populations.

Thermal Rearing Restrictions for Juvenile Coho Salmon

Citation: Madej, M. A., C. Currens, V. Ozaki, J. Yee and D. G. Anderson. 2006. Assessing possible thermal rearing restrictions for juvenile coho salmon (*Oncorhynchus kisutch*) through thermal infrared imaging and in-stream monitoring, Redwood Creek, California. *Canadian Journal of Fisheries and*

Aquatic Sciences 63: 1384–1396.

Redwood Creek is currently listed as temperature- and sediment-impaired under the Clean Water Act because of past timber harvest, removal of riparian vegetation, widespread streamside landsliding, and channel aggradation. In the June issue of the *Canadian Journal of Fisheries and Aquatic Sciences*, USGS scientists Mary Ann Madej, Christopher Currens, and Julie Yee, with National Park Service colleagues Vicki Ozaki and David Anderson, hypothesized that elevated stream temperatures in the middle river reach of Redwood Creek constitute a thermal restriction for juvenile coho rearing. The scientists used seven years of in-stream temperature monitoring in conjunction with a thermal infra-red flight to identify warm reaches of Redwood Creek and to compare temperature regimes in coho-bearing and non-coho-bearing river reaches. The scientists discuss in detail trends in maximum and minimum stream temperature and duration of high temperatures along the length of Redwood Creek.

In Press - Five New Publications on Native Mussels!

USGS scientists are part of a research partnership that has resulted in five new publications about imperiled native mussels. The publications reveal new knowledge about life history and environmental considerations for the restoration of native mussel populations. Unexpected effects of synthetic contaminant effects on different life stages have been discovered. New technologies for assessing mussel communities and contaminant effects are also provided. Look for these new publications in the following journals:

Gooding, M.P., T.J. Newton, M.R. Bartsch, and K.C. Hornbuckle. In press. Toxicity of synthetic musks to glochidia and juvenile life stages in the freshwater mussel *Lampsilis cardium*. *Archives of Environmental Contamination and Toxicology*.

Kesler, D.H., T.J. Newton, and L. Green. In press. Long term monitoring of growth in the Eastern Elliptio (*Elliptio complanata*) in southern New England: a transplant experiment. *Journal of the North American Benthological Society*.

Morales, Y., L.J. Weber, A.E. Mynett, and T.J. Newton. In press. Mussel dynamics model: a tool for analysis of freshwater mussel communities. *Ecological Modeling*.

Morales, Y., L.J. Weber, A.E. Mynett, and T.J. Newton. In press. Effects of substrate and hydrodynamic conditions on the formation of mussel beds in a large river. *Journal of the North American Benthological Society*.

Newton T.J. and W.G. Cope. In press. Biomarker responses of unionid mussels to environmental contaminants. In *Freshwater Bivalve Ecotoxicology*, J.L. Farris and J.H. Van Hassel, eds., SETAC Press, Pensacola, FL and Taylor & Francis, Boca Raton, FL.

developmental physiology and behavior in Atlantic and Pacific salmon. The physiology of another diadromous species, the sea lamprey, will also be explored. Results of radiotelemetry studies to describe fish behavior in relation to barriers to fish passage will be of special interest to anadromous fish managers on both coasts. The Book of Abstracts is already available on the congress website:

<http://www.fishbiologycongress.org/>.

Funding Opportunities

Short notice alert—

Request for Proposals:

Wildlife Habitat Policy Research Program

The Wildlife Habitat Policy Research Program (WHPRP) is soliciting Letters of Intent (**Due July 10, 2006**) for our competitive awards program. Application for the awards is open to everyone. The WHPRP will fund eight specific projects in 2006 related to the implementation of State Wildlife Action Plans and wildlife habitat conservation in the United States.

The WHPRP's mission is to develop and disseminate new information and tools to accelerate the conservation of wildlife habitat in the US. The WHPRP sponsors work that is of the highest technical quality and also relevant to the needs of policy makers, administrators, resource managers, practitioners, and landowners.

Based upon the Letters of Intent, three candidates for each project will be invited to submit full proposals for external review. Awards are expected by November 1, 2006 and will range from \$25,000 to \$250,000 each, depending on the project. **Further information, full project descriptions, and instructions for Letters of Intent are available at: www.whprp.org.**

The WHPRP is a program of the National Council on Science and the Environment (NCSE), an independent, not-for-profit NGO, dedicated to improving the scientific basis for environmental decision-making. **Please contact Christina Zarrella at czarrella@ncseonline.org or 202.207.0007 if you require further information.**

Upcoming Meetings

USGS Researchers Present at the 7th International Congress on the Biology of Fish

The 7th International Congress on the Biology of Fish is being held in St. John's Newfoundland, Canada, **July 18-22, 2006**. USGS anadromous salmon scientists will give presentations about environmental effects on

12th Annual Drug Approval Coordination Workshop

The USGS Fisheries: Aquatic and Endangered Resources Program, U.S. Fish and Wildlife Service, and University of Wisconsin-La Crosse are sponsoring a workshop on aquaculture development on **August 1-2, 2006**, in La Crosse, Wisconsin. This year's workshop will be held in the South Hall Ballroom of the La Crosse Center featuring a beautiful view of the Mississippi River. The workshop will provide a forum to:

- Coordinate research efforts
- Network with other researchers
- Share information concerning the development and status of aquaculture drugs in the approval process
- Recognize drug approval accomplishments
- Introduce new drugs that have the potential to benefit aquaculture

The USGS and FWS will also co-host the National Aquaculture Drug Research Forum (NADRF) on **August 3rd**. The NADRF is associated with the Joint Subcommittee on Aquaculture's Working Group on Quality Assurance in Aquaculture Production. The goal of the NADRF is to identify and resolve issues challenging researchers working to gain FDA approval for aquaculture drugs. To achieve this goal, the NADRF works to (1) provide a forum for information exchange, (2) educate, and (3) broadly disseminate information relative to developing drugs for use in aquaculture. Enter the http://www.umesc.usgs.gov/dacw/dac_workshop.html website for additional information and to register on-line, by phone, fax, or mail.

For more information, please contact Jeff Meinertz of the USGS Upper Midwest Environmental Sciences Center at jmeinertz@usgs.gov.

Ecological Society of America 91st Annual Meeting

The annual meeting of the Ecological Society of America will take place **August 6-11, 2006**, in Memphis, TN. This year's theme, "Icons and Upstarts in Ecology," will be addressed through symposia and organized oral

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sessions that feature both established and emerging scientists addressing concepts, techniques, or research topics that are currently established, those that are trendy, and those that are new, innovative and/or controversial. For more information, please go to the following website: <http://www.esa.org/memphis/>.

Open House at the U.S. Geological Survey's Upper Midwest Environmental Sciences Center

The U.S. Geological Survey's Upper Midwest Environmental Sciences Center (UMESC) is having an Open House on Saturday, **September 9, 2006, from 10:00 AM to 4:00 PM**. The Center is located at 2630 Fanta Reed Road, La Crosse, WI, near the Colgan Air Services by the La Crosse airport on French Island.

The Open House celebrates the UMESC 47th year of service on the Upper Mississippi River and in the upper Midwest. USGS scientific research and monitoring support all levels of natural resource management and decision-making for America. Science programs focus broadly on invasive species, declining species, large rivers, habitat restoration, and decision support systems. Science expertise includes aquatic and wildlife ecology/toxicology/modeling, water quality, freshwater mussels, large river and landscape ecology, photo-interpretation and remote sensing, and fish culture and physiology. Visitors can also learn about the Environmental Management Program's 20th anniversary of understanding and restoring the Upper Mississippi River; USGS leads the Long Term Resource Monitoring Program component of EMP in partnership with the Corps of Engineers and the states of IL, IA, MN, MO, and WI.

Displays and activities are planned for the whole family to better understand who and what USGS does. Children can enjoy face painting, coloring walls, and seeing live fish, mussels, amphibians, snakes, and other "critters" from the river. Children can get their photos taken in a research laboratory as a "Young Scientist". Hands-on displays and research equipment can be viewed by the whole family. Kids and adults can learn how to "radiotrack" wildlife. Thousands of fish can be seen in the fish holding facilities. Invasive species like sea lamprey, zebra mussels, and silver carp can be seen. Come and enjoy the celebration on Saturday, September 9 with USGS!

American Fisheries Society 136th Annual Meeting

The annual meeting of the American Fisheries Society

will take place **September 10-14, 2006** in Lake Placid, NY. The theme for this year's conference is "Fish in the Balance." For more information, please go to the following website: <http://www.afslakeplacid.org>.

2006 Annual Meeting of the Association of Fish and Wildlife Agencies

The annual meeting of the Association of Fish and Wildlife Agencies will take place **September 17-22, 2006**, at the Snowmass Resort in Aspen, CO. For more information, please go to the following website: <http://www.iafwa.org/annualmeet.html>.

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<http://www.usgs.gov>

NOAA's California Sea Grant Awarded to USGS Biologist

NOAA's California Sea Grant has recently awarded support for a parasite study that focuses on trematode parasites in California horn snails from 30 coastal salt marshes between Marin County and the U.S.-Mexico border. For information on this collaborative effort between USGS and the University of California, go to:

www-csgc.ucsd.edu/STORIES/HealthyMarsh.html.

Share Your Expertise through the Fisheries and Aquatics Bulletin

Thank you to all those who have contributed material to this issue of the FAB: our Science Features authors, Robin Schrock, Marcia Nelson, Gloria Maender, Jill Jenkins, Jeff Meinertz, and Randy Hines.

We'll be updating our FAER website (<http://biology.usgs.gov/farp/index.htm>), and gladly accept suggestions for what you want to see on it.

Communicate your fisheries and aquatic resources items of interest to gain national exposure. Send articles and photographs with credits and captions to:

*Janet Cushing—jcushing@usgs.gov
FAER Program Analyst*

or

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FAER Assistant Program Coordinator*