



# ***FISH HEALTH NEWSLETTER***

American Fisheries Society/Fish Health Section

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## **President's Report**

As my term as President ends, I would like to thank the Fish Health Section committees for a job well done. Without the efforts of the FHS committees, our organization could not be successful. One of the most important aspects of the FHS is our communication network, so I'd like to give special recognition to Lora Petrie-Hanson (Newsletter Editor), Jerri Bartholomew (Listserve-FHSupdate editor), and Benjamin LaFrentz (Website editor). The Journal of Aquatic Animal Health is also a vital component of the FHS communication network, and the editors of our Journal deserve praise for their excellent work. Vicki Blazer and Laura Brown have done a masterful job as co-editors, and Andrew Goodwin and Christine Moffitt, our new outreach editors, have started working on increasing the visibility of the Journal.

The 2005 FHS Annual Meeting is 26-29 July in Minneapolis, Minnesota. Thanks to Joe Marcino and Paul Bowser for their work in organizing this meeting. A continuing education course, organized by Andrew Goodwin, will be on the day following the FHS Annual Meeting. Additional information about the Annual Meeting and the associated continuing education course can be obtained from the FHS website ([http://www.fisheries.org/fhs/2005\\_fhs.htm](http://www.fisheries.org/fhs/2005_fhs.htm)) and a tentative program is included in this issue of the Newsletter.

In 2006, the FHS will host the Fifth International Symposium on Aquatic Animal Health. This meeting will be 2-6 September at the Marriott Hotel in San Francisco, California. Please visit the FHS web site ([http://www.fisheries.org/fhs/isaah\\_2006.htm](http://www.fisheries.org/fhs/isaah_2006.htm)) to obtain updates about this meeting. This meeting will continue the tradition of excellent International Symposia hosted by the FHS. I hope to see you in San Francisco!

John Grizzle

**Annual Meeting of the Fish Health Section of the American Fisheries Society**  
**Ramada Inn Airport at the Mall of America**  
**Minneapolis, Minnesota**  
**26 – 29 July 2005**  
[http://www.fisheries.org/fhs/2005\\_fhs.htm](http://www.fisheries.org/fhs/2005_fhs.htm)

**Continuing Education Session**  
**Aquatic Toxicology**  
**30 July 2005**

\*\*\*\*\* DRAFT: 1 JULY 2005 \*\*\*\*\*

**Tuesday 26 July 2005**

Travel Day	
5:00 – 8:00 pm	Registration
1:00 –	FHS/AFS ExCom Meeting

**Wednesday 27 July 2005**

8:00 – 12:00	Scientific Sessions
12:00 – 1:30	Lunch Break
1:30 – 5:00	Scientific Sessions

**Thursday 28 July 2005**

8:30 – 12:00	Scientific Sessions
12:00 – 1:30	Lunch Break
1:30 – 3:00	FHS/AFS Business Meeting
3:30 – 5:00	Poster Viewing
6:00 –	FHS/AFS Banquet

**Friday 29 July 2005**

8:30 – 10:30	Scientific Sessions
10:30	FHS/AFS Scientific Meeting Concludes

**Saturday 30 July 2005**

8:00 – 12:00	Continuing Education Session: Aquatic Toxicology
12:00 – 1:30	Lunch Break
1:30 – 4:00	Continuing Education Session: Aquatic Toxicology

**Annual Meeting of the Fish Health Section of the American Fisheries Society  
Ramada Inn Airport at the Mall of America  
Minneapolis, Minnesota  
26 – 29 July 2005**

**Scientific Meeting Schedule**

**Wednesday 27 July 2005**

**Session 1. Bacteriology, Parasitology, Virology – I**

- 8:00 – 8:15      Opening Remarks
- 8:15 – 8:30      Parasite induced granulomas in white perch *Morone americana*.  
Cathy Czerwinski
- 8:30 – 8:45      Mycobacteriosis in Chesapeake Bay Striped Bass: large-scale field survey of disease prevalence  
and severity.  
David Gauthier
- 8:45 – 9:00      Comparative Susceptibilities of Great Lakes and Pacific Coast Chinook Salmon (*Oncorhynchus*  
*tshawytscha*) to *Renibacterium salmoninarum* Challenge.  
Diane G. Elliott
- 9:00 – 9:15      Quantitative PCR Assay Used to Measure the Prevalence of *Clostridium botulinum* Type E in  
Fish.  
Rodman Getchell
- 9:15 – 9:30      Evaluation of lethal and non-lethal sampling for the detection of WSIV in white sturgeon  
(*Acipenser transmontanus*).  
John D. Drennan
- 9:30 – 9:45      Piscirickettsiosis-like syndrome in tilapia.  
Michael J. Mauel
- 9:45 – 10:00     Important changes in the new addition of the FHS Blue Book.  
Diane Elliott and Susan Marcquenski
- 10:00 – 10:30    Coffee Break

**Session 2. Bacteriology, Parasitology, Virology – II**

- 10:30 – 10:45    Pathogenesis of *Edwardsiella ictaluri*.  
Ronald Thune
- 10:45 – 11:00    Cyprinid herpesviruses: Genetic relationships and pathogenic properties.  
Ronald Hedrick
- 11:00 – 11:15    The Whirling Disease Initiative Outreach Program.  
Amy Rose
- 11:15 – 11:30    Transmission studies with *Icthyophonus* in rainbow trout.  
Scott LaPatra
- 11:30 – 11:45    Susceptibility of Pacific Herring to Viral Hemorrhagic Septicemia Virus as Pre-Metamorphosed  
Larvae and Postmetamorphosed Juveniles.  
Paul K. Hershberger
- 11:45 – 12:00    Koi Herpesvirus in Wild Common Carp in New York State.  
Paul Bowser

12:00 – 1:30 Lunch Break

### **Session 3. Immunology**

- 1:30 – 1:45 A Rapid, Direct Assay to Measure Release of Neutrophil Extracellular Traps from Fish Neutrophils.  
Dusan Palic
- 1:45 – 2:00 Immunogenicity of a *Streptococcus agalactiae* Vaccine: the Role of Extracellular Antigens and Antibodies.  
David Pasnik
- 2:00 – 2:15 Identification and expression of the gene encoding an immuno-reactive heat shock protein of *Flavobacterium psychrophilum*.  
Ken Cain
- 2:15 – 2:30 Expression of toll-like receptors (TLR3 and TLR5) in catfish during infection with *Edwardsiella ictaluri*.  
Lanie Bilodeau
- 2:30 – 2:45 Immunogenic Potential Of *Aeromonas hydrophila* Outer Membrane Porin (LamB).  
Tanuja Upadhyaya
- 2:45 – 3:00 Specificity of antibodies induced after DNA vaccination against infectious hematopoietic necrosis virus.  
Scott LaPatra
- 3:00 – 3:30 Coffee Break

### **Session 4. Unusual Diagnostic Cases**

(Currently in Development)

3:30 – 3:45

3:45 – 4:00

4:00 – 4:15

4:15 – 4:30

4:30 – 4:45

4:45 – 5:00

### **Thursday 28 July 2005**

#### **Session 5. SPECIAL SESSION: EMERGING DISEASES**

- 8:30 – 8:55 Largemouth Bass Virus Disease: Effects on Wild Fish Populations.  
John Grizzle
- 8:55 – 9:20 Streptococcal Arthritis, Osteolysis, Myositis, and Spinal Meningitis in Channel Catfish *Ictalurus punctatus* Broodstock.  
Alvin C. Camus
- 9:20 – 9:45 Diagnosis and Management of Streptococcosis in Intensive Aquaculture.  
John Hawke

- 9:45 – 10:10 The biology and politics of viruses infecting cyprinid fishes.  
Andrew Goodwin
- 10:10 – 10:40 Coffee Break
- 10:40 – 11:05 *Centrocestus formosanus* in Cultured and Wild Fishes: Impact on Fish, Distribution in the United States, and Host Information.  
Drew Mitchell
- 11:05 – 11:30 Mycobacteriosis: an emerging disease of wild and cultured fish with zoonotic potential.  
Stephen Smith
- 11:30 – 11:55 The Catfish Trematode Troubles.  
Robin Overstreet
- 12:00 – 1:30 Lunch Break
- 1:30 – 3:00 **FHS/AFS Business Meeting**
- 3:30 - 5:00 **Poster Viewing**
- 6:00 - **FHS/AFS Banquet**

## Friday 29 July 2005

### Session 6. General Fish Health Management – I

- 8:30 – 8:45 Stress and Disease Susceptibility in Nile Tilapia, *Oreochromis niloticus*, Exposed to Un-ionized Ammonia.  
David Pasnik
- 8:45 – 8:30 Tissue elimination of Aquaflor (florfenicol) in Tilapia and Walleye.  
Rachelle Kosoff
- 8:45 – 9:00 Upcoming aquaculture drug approvals.  
Rosalie (Roz) Schnick
- 9:00 – 9:15 Impact of Aquaflor (florfenicol) on CYP4501A enzyme activity in Tilapia.  
Rachelle Kosoff
- 9:15 – 9:30 Sustainable control and prevention of bacterial fish diseases in Nigeria: strategies for implementation and linkage.  
Tosin Olarinmoye
- 9:30 – 10:00 Coffee Break

### Session 7. General Fish Health Management – II

- 10:00 – 10:15 Intersex and Other Indicators of Exposure to Endocrine-Disrupting Chemicals in Bass from the Potomac River.  
Vicki S. Blazer
- 10:15 – 10:30 Health of Brown Bullhead at Selected Areas of Concern on Lake Erie.  
Vicki S. Blazer
- 10:30 FHS/AFS Scientific Meeting Concludes

**Annual Meeting of the Fish Health Section of the American Fisheries Society  
Ramada Inn Airport at the Mall of America  
Minneapolis, Minnesota  
26 – 29 July 2005**

**POSTER PRESENTATIONS**

**Thursday 28 July 2005  
3:30 – 5:00 Poster Viewing**

Microbiological survey of puffer fish in Florida: A potential source of saxitoxin.  
Theresa Cody

Apolipoprotein A-I and Diet: modulators of Striped Bass (*Morone saxatilis*) Innate Defense.  
Danielle Johnston

Assessment of the New Zealand Mud Snail *Potamopyrgus antipodarum* as a Potential Fish Disease Vector.  
Linda Beck

The role of fish health in stock enhancement: determining production and release strategies for a marine sport fish.  
Heather Wolfe

Dynamics of Viral Hemorrhagic Septicemia, Viral Erythrocytic Necrosis, and Ichthyophoniasis In Confined Juvenile Pacific Herring.  
Paul K. Hershberger

Red Drum Health Reference CD “A Guide to Health Practices and Problems for Cultured and Wild Red Drum.”  
Christy M. Stephenson

Interfacing With The Public: Using Web-based Technology To Achieve Public Participation In A Statewide Fish Health Monitoring Program.  
Christy M. Stephenson

Preliminary data in health monitoring of blue crab, *Callinectes sapidus*, from Tampa Bay, Florida, USA.  
Yasu Kiryu

Health assessment of hard clams, *Mercenaria*, in the Indian River Lagoon, Florida.  
Jan Landsberg

**Continuing Education Session  
Aquatic Toxicology  
Annual Meeting of the Fish Health Section of the American Fisheries Society  
Ramada Inn Airport at the Mall of America  
Minneapolis, Minnesota**

**Saturday 30 July 2005  
8:00 – 4:00**

**8:00 – 8:15**

**Intro to Fish Toxicology and Session Overview**

Andy Goodwin

University of Arkansas at Pine Bluff

**8:15 – 8:45**

**Algal Toxins in Freshwater Systems**

Andy Goodwin

University of Arkansas at Pine Bluff

Freshwater algal toxins; their mode of action, their sources, their effects on fish and how to investigate a suspect fish kill. Cyanobacteria, golden algae, anatoxins, microcystins, nodularins, cylindrospermopsin...

**8:45 – 9:45**

**Marine Algal Toxins**

Wolfgang K. Vogelbein

Department of Environmental Sciences, The College of William and Mary

Marine algal toxins: Red tides, Pfiesteria, other toxic blooms, and bioaccumulation of toxins in marine animals. What happens to fish and how to recognize toxic bloom problems.

**9:45 – 10:15 Break**

**10:15 – 11:00**

**Mycotoxins**

Patricia S. Gaunt

Mississippi State University College of Veterinary Medicine

Fungal toxins: their mode of action, their sources, and their effects on fish.

Ochratoxin, aflatoxin, and a bunch of other “o-toxins”

**11:00 – 12:00**

**Botulism**

Rod Getchell

Cornell University, Department of Microbiology and Immunology, College of Veterinary Medicine

Botulism in farmed and wild fish: Aquaculture, the Great Lakes, and more.

**12:00 – 1:00**

**Lunch**

**1:00 – 1:30**

**Pesticides and Herbicides**

Andy Goodwin

University of Arkansas at Pine Bluff

Drift and runoff of pesticides, what are the real risks to aquatic animals? How do you investigate a suspect pesticide kill?

**1:30 – 2:15**

**Heavy Metals and Acid Rain**

John M. Besser

USGS Columbia Environmental Research Center

Metal ecotoxicology: Metal sources, routes of exposure, and toxic effects on fish.

**2:15 – 3:00**

**Pollution and Neoplasia**

Jack Fournie

EPA, Gulf Breeze, FL

Toxicant induced neoplasia in fish. Sources, metabolism, and typical lesions.

**3:00 -3:15 Break**

**3:15 – 4:00**

**Methods To Assess Sub-Lethal Exposure**

Donald Tillitt

USGS Columbia Environmental Research Center

Biological markers for sub-lethal exposure to natural and man-made toxicants: Induction of hepatic enzymes, endocrine disruption, and other biological markers of chemical exposure and effect.

**4:00 Continuing Education Session Concludes**

**HAVE A SAFE TRIP HOME**

## **Minutes of 2004 FHS Annual Business Meeting**

27 July 2004, Shepherdstown, West Virginia

Meeting Minutes recorded by Benjamin LaFrentz

Meeting called to order by President Chris Wilson

### 1 – 2006 International meeting

- FHS will negotiate with John Cooksey as a consultant for the meeting
- Potential Sites: San Diego, San Francisco
- John Hawke will organize the planning committee
- Keith Johnson asked to avoid August for date of meeting due to spawning (July is good)
- Cindy Brunner said that mid-summer is best due to the academic calendar of most universities

### 2 – Treasurer's Report

- \$5000 increase in reserve funds due to Bluebook sales and saving money on newsletter mailings

### 3 – Bluebook 2004 Version

- Waiting for some updates before burning to CD

### 4 – Elections

- Elected individuals will be announced at the banquet

### 5 – Publications Committee

- Will try to resolve the slow turn-around time on publications
- FHS members get page charge discounts – be sure to write this in submission letter
- Newsletter: Lora Petrie-Hanson is frustrated with lack of submissions
  - Vicki Blazer stated that combining the newsletter and list serve may be a good idea

### 6 – Membership

- Ron Thune said that it may be a good idea to make the newsletter for members only to provide incentive to join the FHS

### 7 – Website

- Ben LaFrentz has agreed to take over the website
- He will post his email on the website for updates, etc.
- Internet is an excellent tool, and we need to use it more efficiently

### 8 – QA/QC

- Trish Barbash has draft form of QA/QC which will be forwarded to the Technical Standards Committee
- Good model for getting close to 17025 guidelines
- Proficiency/ring testing should be considered

### 9 – Membership

- Membership has stabilized
- Students should be encouraged to get involved
- Need to work harder at explaining benefits
  - Discounts should be provided for members and students at meetings
- Cindy Brunner said that it might be a good idea to survey the membership with respect to employment, alma mater, and academic degrees
- Committee plans to update brochure and display poster

### 10 – Future meetings

- 2005 meeting will be hosted by Joe Marcino, 26-29 July in Minneapolis
- 2006 meeting will be on the west coast
- 2007 meeting may be at Prince Edwards Island and hosted by David Groman

## Nominating and Balloting Committee Report 2004-2005

Gael Kurath (Chair), Chris Ottinger, Laura Brown, Chris Wilson

This year the section elected a Vice-president, Secretary-Treasurer, and new members for each of three committees: Nominating and Balloting, Technical Standards, and Professional Standards. The call for nominations, biographical sketches, and ballots were all distributed in three ways: 1) Jerri Bartholomew sent them out to individual members on her Listserve email list, 2) Ben LaFrentz put them on the FHS website, and 3) they were included in two issues of the FHS newsletter done by Lora Petrie-Hanson. Twenty-eight envelopes containing a ballot and the biographical sketches were sent out by regular mail to members on the April 2005 membership list who did not have email addresses but did have mailing addresses.

It was a good year for voting - we received a total of 119 ballots. Of these 113 were confirmed to be current members of the section. The great majority of these were received by email either as direct replies to Jerri's message, which she had set up to reply to the committee chair, or as email messages with attached ballot files. Three were received by fax and seven by regular mail.

### **The elected are as follows:**

Vice-President	Ted Meyers
Secretary-treasurer	Linda Beck
Nominating and Balloting committee	Evi Emmenegger
Technical standards committee	Drew Mitchell
Professional standards committee	Christine Densmore

The committee would sincerely like to thank all candidates for agreeing to participate. All candidates received many votes, and their commitment to the section is very much appreciated.

The election process followed suggestions made by the former Nominating and Balloting committee chair Beth MacConnell in last year's report. When ballots were received, they were given a number and the name was written on the top for verification of membership. Those who were not on the current member list were notified by email and most responded with valid explanations (e.g. paid just recently so not on list yet).

A week after the voting ended the names were cut off the ballots and they were counted by an impartial person who is not in the Fish Health Section. The only difficulty we had was with the membership lists, which appear to drop members if their dues are not paid in time, and the listserv list, which was not initially updated to coincide with the current membership list. Jerri Bartholomew has taken steps to correct this and she deserves thanks for making the FHS communications efficient. The committee would welcome any suggestions for improving this process. In addition, the chair wonders if some very general written guidelines for the election process would be helpful to future chairs, since everyone only does this once? If this is deemed useful, the chair can provide it.

## **Workshops and Training**

### **Training Course: Care, Handling and Use of Aquatic Animals**

The Canadian Aquaculture Institute (CAI), in association with the faculty and technical staff at the Atlantic Veterinary College at the University of Prince Edward Island is offering training for researchers/technicians, veterinarians and animal health care professionals who use or care for aquatic animals in laboratory settings.

The Care, Handling and Use of Aquatic Animals

August 22 - 26, 2005 (Registration Deadline is July 22nd)

Atlantic Veterinary College, Charlottetown, Prince Edward Island (Canada)

For more information, visit <http://www.upei.ca/fishcarecourse> or Contact Christine Jackson, Program Coordinator at 902-894-2839 or email at [acjackson@upei.ca](mailto:acjackson@upei.ca).

CAI also offers online training - see <http://www.upei.ca/cai/experimentalfish.htm> to learn more about The Experimental Fish.

### **Special Meeting on Biologics on August 1 before the Annual FWS Drug Approval Coordination Workshop**

As a follow-up to our discussions on biologics at the last meeting of the Working Group on Quality Assurance in Aquaculture Production, a special session on this subject is being planned on August 1, the day before the Annual FWS Drug Approval Coordination Workshop in Bozeman, MT scheduled August 2-3, 2005.

## **11TH ANNUAL FWS DRUG APPROVAL COORDINATION WORKSHOP**

AUGUST 2 & 3, 2005

BOZEMAN, MT

The U.S. Fish & Wildlife Service's Aquatic Animal Drug Approval Partnership (AADAP) Program is pleased to announce the 11th Annual FWS Drug Approval Coordination Workshop in Bozeman, MT. We are also pleased to announce that this year's Workshop will be co-hosted by the U.S. Geological Survey's Upper Midwest Environmental Sciences Center. The Workshop will be held August 2 & 3, 2005, and is scheduled for two full, action-packed days!! This year's Workshop will again be held at the Holiday Inn, Bozeman, MT. Workshop format will be similar to that of last year's Workshop, and will include presentations/discussions on the status of all ongoing aquaculture drug approval activities. We hope to expand our core group of attendees to include representation from additional federal, state, tribal, and private partners, and from groups involved in aquatic animal drug approval efforts, such as the Joint Subcommittee on Aquaculture (JSA) - Working Group on Quality Assurance in Aquaculture Production (QAAP), International Association of Fish and Wildlife Agencies Drug Approval Working Group (DAWG), EPA, and the National Research Support Program - 7. And, as in the past, we are fortunate that once again representatives from FDA's Center for Veterinary Medicine (CVM) are planning to attend. It is a tremendous opportunity for those of us developing aquaculture drug approval data to be able to discuss with CVM our progress and strategies with respect to INAD/NADA objectives. As an added bonus, we are also tentatively planning to host a JSA - Biologics in Aquaculture working group meeting on Monday, August 1st to shed some light (and share information) on the status, use, and approval of aquatic biologics (primarily vaccines and bacterins). The emphasis of this Special Session is to reach out to the aquaculture and research communities to foster a better understanding with respect to the

regulatory aspects of licensing biologics, and to begin to provide organized and coordinated guidance / recommendations / suggestions regarding the use and approval of biologics. And, on Thursday, August 4th we will host the second meeting of the recently formed Aquaculture Drug Research Forum (ADRF). The ADRF is a subgroup of the QAAP Working Group that was developed to facilitate and promote increased success in collaborative drug approval research efforts. The Biologics Session and the ADRF meeting will be held at the Bozeman Fish Technology Center (and home of AADAP) that is located ~ 4 miles north of the Holiday Inn. These meetings are open to anyone interested in attending!! Lodging accommodations have been reserved at the Holiday Inn, Hampton Inn, and Days Inn. Rooms have been reserved for August 1 - 5, 2005. Rooms may be reserved for any portion of this period. Please note that the hotels will release all unreserved rooms by July 1, 2005, and that cancellations can be made up to one day prior to arrival. Although in some cases, blocks of rooms have been reserved at rates higher than the Government rate, we've found that you may (?) in fact be able to reserve these rooms at the Government rate if you request such rates when actually making reservations. As in the past, this year's Workshop is again scheduled to be held at the same time as Bozeman's Annual Sweet Pea Summer Festival, so available rooms will be at a premium. Local hoteliers suggest booking rooms through the weekend if you have even the slightest interest in spending any extra time in Bozeman. Attempts to get an extension of your reservation once you arrive will most likely be unsuccessful. Please note that AADAP staff will be happy to help arrange transportation for participants between the airport and hotels, and between hotels and the Workshop conference room at the Holiday Inn. Similar to last year's Workshop, this year there will be a Workshop Registration Fee to help defray meeting costs. Hence, please be prepared to pay the \$20 (cash on the barrelhead!) registration fee at the door when you pick up your registration packet. To help us coordinate administrative related activities, please return the Registration Form to us by Fax, email ([molly\\_bowman@fws.gov](mailto:molly_bowman@fws.gov)), or snail-mail as soon as possible. We encourage all those interested in getting the most up-to-date information on the status of aquaculture drug approvals to attend the 11th Annual FWS Drug Approval Coordination Workshop. If you have questions, or would be interested in giving a presentation at the Workshop, please call or email Molly Bowman at (406) 994-9916, [molly\\_bowman@fws.gov](mailto:molly_bowman@fws.gov).

#### Schedule of Events

11th Annual FWS Drug Approval Coordination Workshop and Related Meetings  
Bozeman, MT August 1 - 4, 2005  
JSA - Biologics in Aquaculture August 1, 2005 (Monday)  
Drug Approval Coordination Workshop August 2-3, 2005 (Tuesday - Wednesday)  
Aquaculture Drug Research Forum August 4, 2005 (Thursday)

For more information or registration forms, contact:

Molly Bowman  
AADAP Program  
4050 Bridger Canyon Road  
Bozeman, MT 59715  
Fax: 406-582-0242  
email: [molly\\_bowman@fws.gov](mailto:molly_bowman@fws.gov)

## **New Books from AFS**

### **Black Carp: Biological Synopsis and Risk Assessment of an Introduced Fish**

Leo G. Nico, James D. Williams, and Howard L. Jelks

This book is a detailed risk assessment and biological synopsis of the black carp, a large mollusk-eating cyprinid fish native to eastern Asia. A great deal of controversy surrounds the presence of this foreign fish in the United States. Most of those associated with the aquaculture industry view black carp as an important tool in controlling disease-carrying snails that infest aquaculture ponds. Those interested in mollusk protection and groups involved with aquatic ecosystem conservation are concerned that continued use of black carp by U.S. aquaculturists will lead to the species' establishment in open waters.

Major subjects addressed are (1) taxonomy, description, and distinguishing characteristics; (2) native distribution; (3) biology and natural history; (4) history of the species in world aquaculture; (5) history of introduction within and outside the United States; (6) use as a biological control agent; (7) alternatives to the use of black carp; (8) environmental tolerance and potential geographic range; and (9) risks associated with its introduction.

Special Publication 32

337 pages, hardcover, subject index

List price: \$60

AFS member price: \$42

Stock number: 510.32C

### **The Behavior and Ecology of Pacific Salmon and Trout**

Thomas Quinn

Few subjects have generated as much emotional dialogue around conflicting scientific and policy agendas as the protection and management of Pacific salmon resources. In this major new work, Thomas Quinn distills from the vast scientific literature the essential information on the behavior and ecology of Pacific salmon, including steelhead and cutthroat trout. Unlike other books that examine only selected life stages, habitats, or species, this book—richly illustrated with beautiful photographs and original drawings—thoroughly covers the complete life cycle, emphasizing common themes and differences among the various species of salmon.

Representing the range of species and geographic regions, the book includes examples from classic studies by pioneers of salmon biology and from the most current research to illustrate the important features of salmon life history and behavior and the complex physical, biological, and human factors that affect them.

328 pages, 64 in color

Stock number: 637.07P

List price: \$35.00

Member price: \$28.00

More information and to order: <http://64.224.98.53/publications/catbooks/x63707P.shtml>

## **Monitoring Stream and Watershed Restoration**

Philip Roni, editor.

Millions of dollars are invested annually to aquatic restoration, yet little guidance exists on how to monitor and evaluate these activities. This long-awaited book provides a practical resource for designing and implementing monitoring and evaluation programs for restoration activities at various scales – from individual, site-specific actions to multiple projects throughout a watershed.

Chapters are organized around the major types of restoration techniques, including road improvements, riparian silviculture, fencing and grazing management, floodplains, estuarine, instream, nutrient enrichment, and acquisitions and conservation easements. Also includes chapters on economic evaluation and monitoring design.

The book will particularly appeal to scientists evaluating restoration techniques, to groups implementing restoration, and to agencies and entities responsible for funding restoration efforts.

350 pages, glossary, index

Stock number: 550.47P

List price: \$65.00

Member price: \$45.00

More information and to order: <http://64.224.98.53/publications/catbooks/x55047P.shtml>

## **Propagated Fish in Resource Management**

Mary Nickum, Patricia Mazik, John Nickum, and Don MacKinlay, editors.

This book contains the peer-reviewed technical papers presented at a June 2003 symposium examining the effective use of fish culture as a tool for fisheries resource management.

The symposium identified information gaps in technical knowledge, debated the appropriateness of assumptions and current theories being used to make resource management decisions, and attempted to reconcile philosophical differences that have become an obstacle to science-based resource management. Ten AFS Sections collaborated in this effort that showcased several themes:

- Decision Making and Risk Evaluation in Fish Stocking.
- Fishery Perspectives and Managing for Multiple Goals.
- Differences Between Propagated Fish and Wild Fish.
- Fish Health, Environmental Health and Hatchery Reform.
- Propagated Fish and Resource Management – Science & Agency Perspectives.

Symposium 44

640 pages, hardcover

List price: \$75

AFS member price: \$53

Stock number: 540.44C

More information and to order: <http://64.224.98.53/publications/catbooks/x54044.shtml>

American Fisheries Society, Attn: Orders Department, 1650 Bluegrass Parkway, Alpharetta, GA 30004.  
Phone: 678-366-1411. Fax: 770-442-9742. Online: [www.fisheries.org](http://www.fisheries.org) (click on "Bookstore")

## **Student Spotlight**

My name is Nicole White and I am a second year graduate student in the Biology Department at Northern Michigan University. I completed my B.S. in Ecology in 2004 from NMU and plan to finish my M.S. from NMU in spring 2006. I have helped with coaster brook trout research in the field, lake trout diet analysis in the lab, and fish care in a lab. For my Master's project, I will be examining the River Continuum Concept as it applies to fish diversity in Miner's River in the Pictured Rocks National Lakeshore in Alger County, MI. This river has a sea lamprey barrier, a lake, and a large waterfall. These barriers may affect fish diversity. Further, macroscopic exo- and endo-parasites will be examined from a subsample of all fish species caught to determine how barriers may affect parasite diversity. My advisors are Dr. Jill Leonard (fish physiologist) and Dr. Jackie Bird (parasitologist). Other graduate projects in our lab include coaster brook trout movement, sea lamprey wound healing in lake trout, fish migration, and coaster brook trout physiology. Other graduate students include Ashwin Sreenivasan, Dan Armichardy, Sean Stimmell, Shawn Nowicki, Gerrit Cain, and Todd Anderson. Undergraduate students include Nick Griewahn, Rachel Holman, Jeff Amann, Jesse Karner, and Brian Clark. I am a Teaching Assistant in the Biology Department where I teach 3 biology labs per semester. I helped start a student organization in 2004 called Fish Heads. This group is for students interested in fisheries management and conservation. I am currently the President. I was the Student Concerns Chair for the Michigan Chapter of the American Fisheries Society for one year. I helped allocate student travel grants. I am currently the Continuing Education Co-chair for the Michigan Chapter of the American Fisheries Society and have helped with two workshops. I will also be assisting with a student webpage for the Fish Health Section in the near future.

## **Fish Health Newsletter – Editorial Policy**

The Fish Health Newsletter is a quarterly electronic publication of the Fish Health Section of the American Fisheries Society and is available for downloading in Adobe pdf file format. Submissions on any topic of interest to fish health specialists and preliminary case reports are encouraged with the understanding the material is not peer-reviewed. Submissions of abstracts of manuscript submitted to the Journal of Aquatic Animal Health are also encouraged. Newsletter submissions must be formatted in Microsoft Word, WordPerfect, or Rich Text Format, and can be sent by electronic mail or via 3.5" floppy disk to the editor's address below. Graphics files should be sent separately in jpeg format.

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