Fish Health Newsletter

Fish Health Section/American Fisheries Society

October 1999 **Volume 27, Issue 4**

PRESIDENT'S REPORT

Every few years whether in business, academics or government, we are all asked to examine our work, to evaluate our performance, and perhaps most importantly, to formulate a plan delineating future goals. As an organization, the American Fisheries Society is no exception to this self imposed review. Over the past year the AFS has developed and implemented a strategic plan to guide the society's activities in the years 1999-2004. Three major goals were envisioned as part of the mission of the AFS: 1) provide leadership for sound stewardship and sustainable use of fisheries resources and aquatic ecosystems, 2) act as a source of scientifically-based information providing information transfer and outreach, 3) provide excellent and cost-efficient service, operations, and support for its members. About now you are probably wondering why I'm telling you all this, well as an AFS section, Fish Health was asked to describe our section activities as they relate to the AFS's new strategic plan. During a full day retreat at the annual AFS meeting in Charlotte, each section was afforded the opportunity to "present " itself to the officers, section leaders, and staff of the AFS. Representing the FHS, Scott LaPatra and I took a "tag team" approach and each presented a portion of FHS activities. At the end of the day, I was delighted in the realization that the FHS emerged as one of the most active sections, overwhelmingly meeting each of the three goals outlined in the AFS strategic plan.

For example, while other sections were still talking about developing a Web-site, the FHS already has a site up and running; while other sections have a page or two newsletter that usually comes out on time, FHS has a quarterly newsletter often as long as eight pages. FHS has sponsored three international symposia and plans are underway for the fourth to be held in New Orleans in 2002. The FHS has taken the initiative to recruit interested fisheries professionals in national and international arenas through our affiliate membership status. Recently affiliate membership brochures were provided to attendees at the EAFP in Greece, and will be provided at upcoming scientific meetings in Ecuador and Venezuela. The FHS continues as a leader in providing professional credentials through our Fish Health Inspector and Fish Pathologist certifications and continuing education workshops for our full and affiliate members. The "Bluebook" is recognized as a standard for fish health inspectors and diagnostics services, and our journal, JAAH, is one of four published by the AFS. Finally, and perhaps most importantly to an organization, is the mentorship provided and legacy left behind by the founding "fathers". As a section, we recognize the contributions of our outstanding professionals through the S.F. Snieszko Distinguished Service Award and the Special Achievement Award, and provide opportunities and mentor ship to our "members in training" thought the Snieszko Student Travel Award.

Nearly 30 years ago, the Fish Health Section was founded as the **first** specialized section of AFS. Our members were ahead of their time then, and folks I am pleased to say with the efforts and enthusiasm of our members, we are still ahead today ! *Beverly Dixon, President*

In this issue:

ATYPICAL FURUNCULOSIS IN ATLANTIC SALMON RAISED IN CHILE

Sandra Bravo, Instituto de Acuicultura. Universidad Austral de Chile. Casilla 1327. Puerto Montt, Chile. E-mail: sbravo@uach.cl

Atypical furunculosis was diagnosed for the first time in Chile during November 1995 in one of four stocks of Atlantic salmon (***Salmo salar***) reared in seawater net cages at a site located near Puerto Montt. Fish in the affected stock were about 900 g and the water temperature was 111C. The other three stocks at the site were found negative for the presence of the disease although the fish were reared together in the same site. Disease in the infected stock was controlled with flumequine given for 14 days; however, in the spring of the next year, a second outbreak occurred among the affected stock, when the fish were larger than 4 kg. Because of the new outbreak, all fish from the infected stock were harvested immediately to avoid spreading the disease. Since that time, atypical furunculosis has not been reported again in the Puerto Montt area.

During October 1998, the disease appeared at a site near about 50 nautical miles south of the farm were the disease was diagnosed in 1995. Initially, atypical furunculosis was reported only among fish at one of five farms located in the Llancahue area where only Atlantic salmon are reared. The size of the infected fish in the farm at this new location was about 670 g and the water temperature was about 11°C. By December of 1998, the disease had spread to three of the five Atlantic salmon farms and by March of 1999, the disease had spread to all farms at this location where atypical furunculosis is now considered endemic.

In all cases, the disease appeared in the spring when the seawater temperature was over 111C, reaching 171C in December-January. Oxygen depletion during the summer and water clarity less than 4 m were some of the stressful factors which may have contributed to the increase the intensity of the outbreaks. The formerly chronic disease, which was easily controlled with antibiotics, became intense under these more stressful condition and, as new outbreaks reappeared, mortality in some cages exceeded 15% per month where, under normal conditions, the mortality is typically below 0,4% per month for this species.

The infected fish showed superficial ulcers and necrotic swelling in the muscle with eruption of the skin, mostly located on the flanks of the fish; however, hemorrhages were also observed at the base of the fins. In some cases, the necrotic lesions occurred only in the muscle, without external lesions. The main internal signs consisted of hemorrhages in internal organs and mucosa. An empty gut containing yellow mucus and a bloody exudate were also seen. Sick fish showed inappetance, lethargy, loss of orientation and abnormal swimming behavior.

Bacteria were isolated from the kidney of fish showing signs of the disease by inoculation of plates of brain heart infusion agar containing 1.5% NaCl. Numerous light brown colonies grew on plates incubated at 20°C for one week. Short, gram-negative rods that were oxidase-positive, non-motile and indole-positive were identified as atypical *Aeromonas salmonicida.* The periphery of the external ulcers was contaminated with opportunistic bacteria. The diagnosis was confirmed by Dr. Bjarnheidur K. Gudmundsdóttir in Iceland. The *A salmonicida* isolates were sensitive to oxolinic acid, flumequine, oxytetracycline, trimetropine, sulfa and florfenicol.

To date in Chile, there has been no report of atypical furunculosis among fish reared in freshwater or at other marine locations where fish are reared. Because of the apparent rapid spread of the disease, it is possible that the geographic distribution of atypical *A. salmonicida* is extensive in Chilean seawater, either occurring naturally, or as a result of the rapid dissemination of the disease from the initial site of infection.

MASS MORTALITY OF PILCHARD AND HERRING ASSOCIATED WITH VIRAL HEMORRHAGIC SEPTICEMIA VIRUS IN BRITISH COLUMBIA, CANADA

G.S. Traxler, D. Kieser and J. Richard, Department of Fisheries and Oceans
Pacific Biological Station, Nanaimo, B.C.,

Large numbers of pilchards (*Sardinops sagax*) were reported dying at numerous locations in Queen Charlotte Strait, located on the northeast coast of Vancouver Island, British Columbia. First reports of the die-off began in November 1998 and continued into February 1999. The extent of the fish kill was massive with dead and moribund fish found floating on the surface, washed up on shore and littering the bottom of bays and inlets. Pilchards were the primary species involved, however, large numbers of Pacific herring (*Clupea harengus pallasi*) were also found dying in the same area. Many of the fish had external lesions and hemorrhagic areas beneath the skin. Other species were also reported dying, and three blackcod (*Anaplopoma fimbria*), two ratfish *(Hydrolagus colliei*), and one shiner perch (*Cytomaster aggregata*) were obtained for analysis. Samples were collected and tested for the presence of known fish disease agents.

While some *Vibrio* species were isolated from some affected fish they did not appear to be a primary cause of the mortalitiy. Tissue homogenates were inoculated on EPC and CHSE-214 cell lines and incubated at 15**1** C to test for the presence of viruses. Fish were tested from several locations during the epizootic and viral hemmorhagic septicemia virus (VHSV) was isolated from 58% (95/163) of the pilchards, 71% (26/37) of the herring and 33% (1/3) of the blackcod. Virus titers ranged from 1.4×10^2 to 1.6×10^6 pfu/g of tissue. Virus was not detected in the shiner perch or ratfish samples. The isolates were confirmed as VHS virus by PCR and as the North American strain by DNA probe (Batts et al. 1993). This is the first report of VHS virus in pilchards and in blackcod and adds two additional species to the ever increasing host range of this virus.

While conducting the virological tests, two interesting observations were made. First, as previously reported by Meyers et al. 1994 we noted several samples where cytopathic effects developed only in the EPC cells and not in the CHSE-214 cells. The greater sensitivity of certain strains of EPC cells over CHSE-214 cells for detecting VHS virus was documented by Batts et al. 1991. Second, in a group of 23 herring, 15 were positive for VHS virus in the initial inoculation on EPC cells, when the 8 negative samples were blind passed 7 of the samples became positive for VHS virus. These findings indicate the importance of using multiple cell lines and in some cases blind passes to increase the detection of virus when screening fish populations. It may also suggest that the North American strain of VHS virus maybe somewhat fragile and not always easily grown in cell culture.

Because of the extensive fish kill involving several species of fish, it was felt that this isolate may be more virulent than other VHS isolates. Pathogenicity tests conducted by injection and bath exposure of Atlantic salmon (mean wt. 26g), chinook salmon (mean wt. 83 g), and sockeye salmon (mean wt. 42 g) caused losses only in the virus injected Atlantic salmon. Injection of 7.0×10^3 pfu of the virus caused 40% (4/10) mortality and VHS virus was reisolated from all dead fish. At 25 days post-injection, VHS virus was recovered from surviving fish as follows; Atlantic salmon (1/6), chinook salmon (3/10)

(Continued on page 4)

(Continued from page 3)

and sockeye salmon (1/10). No virus was recovered from fish exposed by bath. These results are similar to previous pathogenicity tests with North American strains of VHS virus that showed that the isolates are of relatively low pathogenicity to salmonids, except for rainbow trout which exhibited clinical disease associated with mortality of 12% when challenged by bath exposure. (Follett et al. 1997, Meyers & Winton 1995, Traxler et al. 1995).

Interestingly, a large fish kill involving pilchards occurred in 1941 in the Strait of Georgia (Foester 1941). In 1940, large numbers of pilchards were observed along the west coast of Vancouver Island, in many northern areas and more unusual in the Strait of Georgia. Pilchard mortality was reported from numerous locations on southern Vancouver Island beginning in January and lasting until the end of February 1941. Hemorrhagic areas were reported on the surface of the skin and under the scales. The cause of the losses was not determined. However, unfavorable environmental conditions such as lower water temperatures than normally experienced by pilchards off the California coast and reduced levels of food organisms acted as stressors, possibly increasing the susceptibility of the fish to pathogens.

Warm ocean water off the coast of British Columbia in 1999 may have extended the range of the pilchards further north than normal. Many of the fish may have been isolated in areas of cooler water. Water temperatures in Beaver Cove, an area of high mortality, were 8-9 C during much of period that losses were observed. The environmental stress may have increased the susceptibility of the pilchards to VHSV, which is enzootic in herring populations in British Columbia.

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Update on *Journal of Aquatic Animal Health*

Published quarterly in print and electronic formats by the American Fisheries Society (AFS) and under the guidance of the Society=s Fish Health Section, the *Journal of Aquatic Animal Health* (JAAH; ISSN 0899-7659) serves the international community of scientists concerned with the health of aquatic organisms. The journal seeks research papers on causes, effects, treatments, and prevention of diseases of marine and freshwater organisms, particularly fish and shellfish. Manuscripts describing biochemical and physiological investigations into fish health that relate to assessing the impacts of environmental and pathogenic factors are also welcome

Why submit your papers to the JAAH?

- *Peer review*: The journal=s Editorial Board comprises highly regarded and internationally known specialists in their fields
- *Widely distributed and readily available.* Located on the Web at **http://afs.allenpress.com** and in more than 800 libraries throughout the world, the journal has a very strong circulation.
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*Our sincere thanks to **Margaret Ewing** for her years of service as Co-Editor of JAAH. The members of FHS truly appreciate your efforts and dedication on our behalf. Replacing Margaret and joining **Ron Hedrick** as our new Co-Editor is **Steve Kaatari**. Welcome aboard!*

As most of you know the JAAH has been undergoing some "growing pains", but thanks to the efforts of our Co-Editors and Jim Winton as Chair of the Publication Advisory Committee, we have made progress. As it stands now the page charges will be in effect for the year 2000, but will decrease to half in 2001, and eliminated in 2002. But don't let those page charges fool you, if requested the charges are usually waived. So please keep those short communications, manuscripts, and book reviews coming.
Beverly Dixon

GUIDELINES FOR DEVELOPMENT AND APPLICATION OF AQUATIC ANIMAL HEALTH REGULATIONS AND CONTROL PROGRAM

The American Veterinary Medical Association (AVMA) Aquaculture and Seafood Advisory Committee developed and published a document titled "Guidelines for Development and Application of Aquatic Animal Health Regulations and Control Programs" as a tool to assist aquatic animal health professionals involved in potential regulations or control programs with government and industry entities. The guide focuses on determining whether a regulation or control program is appropriate, and if so, developing a suitable and effective aquatic animal health plan.

The Aquaculture and Seafood Advisory Committee was established in 1992 as an *ad hoc* committee of the AVMA Executive Board. The Committee is composed of 9 veterinarians with diverse interests in aquaculture and seafood, and one non-veterinarian who represents the aquaculture industry. Participants from USDA/APHIS and FDA serve as consultants to the Committee.

These guidelines, which were published in the June 15, 1999 issue of *The Journal of the American Veterinary Medical Association*, are posted on AVMA's website at http://www.avma.org/scienact/asacregs.htm

A copy of the guidelines are included in this issue as an insert, courtesy of AVMA.

OTHER ITEMS OF INTEREST

- The **National Wild Fish Health Survey** web page is now available for your surfing pleasure. The Database, however, is still under construction but is expected to be available for public viewing laterthis fall. Please share this address with other fish health enthusiasts.http://wildfishsurvey.fws.gov *Ken Peters, Bozeman Fish Health Center*

- After many years of work by many persons it with great pleasure to share with you the following notice regarding the **FDA-CVM approval of Chorulon**, an HCG product, as a new animal drug for use in male and female broodfish. It is an important milestone because the last NADA fora new drug approved by FDA for use in aquaculture was a formalin product in 1986. It is also significant to note that HCG is approved for male and female broodfish finfish and not for specific finfish species. Another important stipulation is Federal law restricts this drug to use by or on the order of a licensed veterinarian. The indications of use and allowable dosages are also specified in this new animal drug approval. Note this approval applies only to the registered HCG product, Chorulon, sponsored by Intervet, Inc. Please review the federal register notice for all details associated with this new product approval. *Gary Jensen USDA-CSREES (via e-mail)*

- **5th International Symposium on Fish Parasites**, Czech Republic August 1999 – AFS-FHS members were among the invited speakers and participants at the recent 5th International Symposium on Fish Parasites which took place in picturesque Ceske Budejovice in the south of the Czech Republic. The venue has great meaning for fish parasitologists world wide, as it is the home of the renowned Institute of Parasitology of the Czech Academy of Sciences. Our hosts, Dr. Lom, Dykova, Scholz, Gelnar and Moravec, and their colleagues and students, ensured that the meeting was inspiring, by providing a memorable mixture of excellent science, warm hospitality and a most congenial atmosphere. The meeting was rich in contributions.

  A major focus of the meeting was pathogenic parasites affecting captive species of fish. Of particular interest were the great advances in identification, characterization and phylogeny of amoebae, microsporidia, and myxosporea brought about by the use of molecular techniques. Other areas of focus included host-parasite interactions, parasite ecology, and interactions between parasites and the environment. Planning for the 6th International Symposium on Fish Parasites, to be held in Scotland in 2003, has already begun - it promises to be another excellent meeting. *Sarah Poynton*

CALL FOR FISH HEALTH SECTION AWARDS

S.F. Snieszko Distinguished Service Award - the highest award of the FHS. Dr. S.F. Snieszko stands as one of the most prominent figures in the establishment of the modern fish health sciences in the U.S.A. and internationally. This award is presented to individuals to honor their outstanding accomplishments in the field of fish health. This is a career achievement award. The nomination must be made by a current member of the FHS to the awards committee. The nomination should consist of a current curriculum vitae of the nominee, a letter of nomination and six letters of recommendation that support the nominee=s dedication and contributions to research, teaching and/or service in fish health. **Nominations will be accepted until June 1, 2000.** Also see enclosed flyer about this year's winner.

Special Achievement Award - award for a significant accomplishment in the field of fish health. This award is presented to a FHS member who has in the past year made a significant accomplishment in basic or applied fish health. The achievement must meet a high standard of science as determined by peer review. Candidates for this award must be nominated by a current FHS member. The letter of nomination should state the accomplishment, its importance to the science of fish health, and the implications of the accomplishment (regional, national or international). Copies of articles and other supporting documents should be submitted with the nomination. The nomination may be submitted any time within one year of the accomplishment to the awards committee.

Send nominations to: Dr. John Fryer, FHS Awards Committee, Dept. of Microbiology, 220 Nash, Oregon State University, Corvallis, OR 97331-3804.

Applications for **S.F. Snieszko Student Travel Award** are being **accepted until April 1, 2000**. This travel award was established to help students attend and present a paper at the FHS annual meeting. Applicants must be AFH/FHS members. Submit a letter of application (including a statement of reason travel support is needed), a curriculum vitae, three letters of recommendation, an itemized budget (travel, meals, lodging and registration) and a copy of the abstract of the paper to be presented. Funds are limited and the award will be based on quality of abstract, importance of the findings, academic and professional achievement and financial need. Send applications to Dr. John Fryer, FHS Awards Committee, 220 Nash, Oregon State University, Corvallis, OR 97331-3804.

FHS Student Paper Award - an award will be presented to a student whose paper is being presented at the National Meeting to be held in Pensocola, FL. Selection will be made by 3 judged (to be appointed prior to the meeting) based on (a) scientific content, (b) scientific merit of the research, (c) originality and (d) quality of presentation. Please note on your application if you wish to have you paper judged.

UPCOMING MEETINGS

25TH ANNUAL EASTERN FISH HEALTH WORKSHOP APRIL 10-14, 2000

In the year 2000, the Eastern Fish Health Workshop ushers in a new millennium while celebrating its 25th Anniversary. The National Fish Health Research Laboratory (Kearneysville, WV) is especially proud to host this gala celebration at The John Carver Inn, in Plymouth, Massachusetts. Registration will begin on Monday, 10 April from 5:00 - 7:00 p.m., followed by three full day sessions, 11, 12, and 13 April.
PLEASE NOTE: Not only will there be a complete session on the final day (Thursday,13 April) but that evening will also feature our special Anniversary Banquet with professional entertainment (included in the registration package). Therefore, we encourage you to please make your departure plans for Friday, 14 April.

Sessions will include oral presentations of research studies and clinical reports as well as workshops on current trends in warmwater aquaculture and coral reef diseases. Lodging accommodations must be made with The John Carver Inn at (508) 746-7100 or (800) 274-1620. Check-in time is 3 p.m. and check-out time is 11:00 a.m. The Inn has graciously honored our room rate of two years ago at $60.00 + 9.7% room tax/night for either single or double occupancy. Identify your affiliation with the Eastern Fish Health Workshop to secure reservations at these prices before 1 March 2000. You can visit the Inn at http:\\media3.com/johncarverinn and take a step back in history to review the birth of America and explore the attractions of this New England seaport at http:\\bestreadguide.com\plymouth\index.html. A $105.00 registration fee (U.S. currency equivalent) includes workshop proceedings, refreshments/breaks, continental breakfasts and luncheons on each day of the proceedings, a catered get-acquainted reception on Tuesday evening, and the 25th Anniversary Banquet on Thursday night. Please make checks payable to the "Eastern Fish Health Workshop c/o Rocco Cipriano" and return payment with your completed registration form by 15 March 2000. Contracts for food services necessitate a late registration fee of $120.00 after this date.For additional information, contact: Dr. Rocco C. Cipriano,National Fish Health Research Laboratory, Kearneysville, WV 25430
A Proud Past – A Golden Future

Mark your Year 2000 Calendars!

The **41st Western Fish Disease Workshop** will be hosted by Washington Department of Fish and Wildlife at the Inn at Gig Harbor, Gig Harbor, Washington on **June 28 and 29, 2000**. On **June 27,** an AFS/FHS **continuing education class** will held at the same location. A call for papers and more information will be forthcoming. For more information contact Steve Roberts at 509-255-5907 or robersdr@dfw.wa.gov.

December 7 - 9, 1999
Seattle, Washington

Contacts:
Registration Information - Ray Brunson
Phone: 360-753-9046 or e-mail: Ray_Brunson@fws.gov
Program Chair - Dave Owsley
Phone: 208-476-4591 or e-mail: Dave_Owsley@fws.gov

THE 6TH ANNUAL WHIRLING DISEASE SYMPOSIUM
"SOLUTIONS TO WHIRLING DISEASE: PUTTING THE PIECES TOGETHER"
FEBRUARY 3-5, 2000
COEUR D'ALENE RESORT, COEUR D'ALENE, IDAHO

Please share your expertise and latest findings at the annual symposium on whirling disease. This year, there are four sessions (oral).
Session I: Habitat and Epidemiology
Session II: Parasite Studies
Session III: Fish Host Studies
Session IV: Oligochaete Host Studies

The expanded **poster session** will feature presentations on:
Category I. Disease Management Strategies
Category II. Diagnostic and Field Research Techniques
Category III. Preliminary Research

Please submit your paper or poster TITLE by October 15, 1999 to:
The Whirling Disease Foundation P.O. Box 327, Bozeman, Montana 59771-0327(406)585-0860 phone (406)585-0863 fax whirling@mcn.net e-mail

Requirements: Include author's name(s), affiliation(s), address(es), phone, fax, and e-mail. Make sure to indicate the person who will present the paper or poster. To accommodate a large number of participants, we encourage consolidation of oral papers and use of poster presentations when possible. Conference chair, Dr. Bill Granath, and the session chairs will review all titles.

Notification of acceptance will be made by November 1, 1999. You will then be asked to submit a 1000 word extended abstract, specifications forthcoming, by January 6, 2000. These abstracts will be published before the conference in a Proceedings.

Please call the Whirling Disease Foundation with your comments or questions at (406)585-0860. **You will receive a conference registration packet, including a preliminary agenda, by mail in early December.**

Students: Please indicate if you are a full-time student presenter who would like to become eligible for the juried *"Matthew Clow Excellence in Student Presentation Award."*

Travel Information Call Kristin at the Travel Station (800-522-8747) for information on reduced air fares. Special hotel rates for this conference are available from the Coeur d'Alene Resort (800-688-5253). A full presentation of hotel listings will appear in the December registration packet.

INTERNATIONAL SYMPOSIA ON AQUATIC ANIMAL HEALTH: AN UPDATE VANCOUVER 1990, SEATTLE 1994, BALTIMORE 1998..... NEW ORLEANS 2002!

In late summer 1998, the successful Third International Symposium on Aquatic Animal Health, co-organized by Sarah Poynton and Andrew Kane, was held in Baltimore. The symposium was attended by over 425 participants from more than 35 countries, and included 10 plenary lectures, 4 special sessions, 196 contributed oral presentations and 124 posters. However, more important than the sheer size of the meeting, was the diversity of subjects it embraced, which ranged from cephalopods through shellfish, fish, turtles, pinnipeds and cetaceans - thus covering aquatic animals in the widest sense! Topics included advanced technologies, emerging diseases, environmental changes, bacteriology, global database for integrated monitoring, harmful algal blooms, immunology, legislation, mass mortalities, neoplasia, nutrition, parasitology, prophylaxis, toxicology, vaccines and virology. The breadth of subject matter and depth of coverage was due to the outstanding sponsorship by all six major professional aquatic animal health organizations worldwide: the American Fisheries Society (Fish Health Section), Asian Fisheries Association - Fish Health Section, European Association of Fish Pathologists, International Association for Aquatic Animal Medicine, Japanese Society of Fish Pathology and the National Shellfisheries Association.

The Baltimore meeting represented new steps in the evolution of this series of meetings, (which incorporate the annual meeting of the AFS FHS). In particular, the Baltimore meeting broadened the scope of coverage of "aquatic animals" from a previous focus on fish, to inclusion of shellfish and marine mammals - this was largely due to the new participation of the International Association for Aquatic Animal Medicine and the National Shellfisheries Association as mentioned above. In addition the role of public exhibit facilities in aquatic animal health was exemplified by the strong participation of the National Aquarium in Baltimore in the program. Furthermore, significant sponsorship funds were raised, enabling financial support to be offered to participants in need, especially students, and colleagues from countries far away or undergoing transition. Reduced registration rates also encouraged student participation in the symposium.

So where are we going from here.....? Attendance at the Baltimore meeting clearly demonstrated the great commitment of the international scientific community to this series of meetings. As a result, an international advisory committee is being formed to support future meeting organizers. The committee will comprise a representative from each of the six sponsoring professional organizations as well as the two co-organizers of each of the two most recent symposia.

Our international colleagues have expressed their collective wish that the Fourth International Symposium by held in the USA in late summer 2002, and that local organization be led by the American Fisheries Society - Fish Health Section. The 2002 meeting will again incorporate that years annual meeting of the AFS-FHS. We are delighted that New Orleans is the proposed venue, and that Ron Thune will be playing a key role in organization of the meeting - we wish him well!

Sarah Poynton and Andrew Kane

National Symposium on Catch and Release in Marine Recreational Fisheries
December 5-8, 1999
Virginia Beach Resort Hotel and Conference Center

Sponsors include:

National Sea Grant Office
U.S. Fish and Wildlife Service
American Fisheries Society
Atlantic States Marine Fisheries Commission
National Marine Fisheries Service
Virginia Marine Resources Commission
Sea Grant Marine Advisory/Extension Programs
Coastal Conservation Association-Virginia
American Sportfishing Association
The Billfish Foundation
AFTCO Manufacturing Co.
Federation of Fly Fishers
Eagle Claw Fishing Tackle
American Fly-Fishing Trade Association
Massachusetts Division of Marine Fisheries
Chesapeake Bay Foundation

Objective and Format

The meeting provides a forum for discussing a variety of research, education, and fisheries management catch-release (and tag-release) issues in coastal and offshore recreational fisheries. Presentations, roundtable discussions, a poster session, and educational displays will enhance information exchange. Professional conference facilitators will lead consensus-building sessions to define future research and education-outreach needs. A proceedings is planned through the American Fisheries Society.

Major Issues

The symposium will highlight research on impacts of circle hooks on survival of released fish, including striped bass, summer flounder, billfish, tuna, chinook salmon, and Pacific halibut. Work will be presented on bait-lure and single-treble hook effects on release mortality, venting fish swim bladders, pop-up satellite tag tracking of tournament released billfish, and blood chemistry changes in fish brought to the boat for release. Discussions will also focus on the increasingly important role of catch and release in marine fisheries management, i.e., striped bass, billfish, and other species. Anglers' attitudes and approaches to catch and release fishing will be examined. Roundtable discussions will address the effects of education, including media and tackle industry promotion, on marine anglers' catch-release fishing practices. The latter discussions will include Rip Cunningham and Doug Olander, editors-in chief, respectively, for Salt *Water Sportsman* and *Sport Fishing* magazines, George Reiger, conservation editor for *Salt Water Sportsman* and contributing editor for *Field & Stream*, and Pete Barrett, associate publisher of *The Fisherman*.

Registration information is available on VIMS Web page (>www.vims.edu<) under Catch and Release Symposium. ***The early registration deadline is November 17, 1999*****. Daily registration is available.**

For more information contact: Jon Lucy, Symposium Chair, Virginia Institute of Marine Science, College of William and Mary (804-684-7166; FAX 804-684-7161; email: lucy@vims.edu).

Fish Health Section Newsletter
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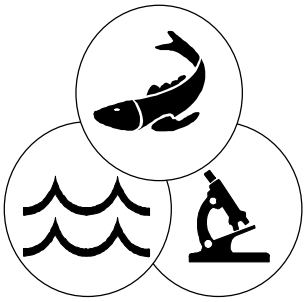

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Deadline for next issue:
December 31, 1999

Fish Health Newsletter - Editorial Policy

The *Fish Health Newsletter* is a quarterly publication of the Fish Health Section of the American Fisheries Society. Submissions on any topic of interest to fish health specialists and preliminary case reports are encouraged with the understanding that material is not peer reviewed. Abstracts submitted to the *Journal of Aquatic Animal Health* are also encouraged. Articles should not exceed two newsletter pages and should not have more than five references. Submissions *must* be formatted in WordPerfect 6.x (preferred) or other major Windows word processors, and can be sent by electronic mail or via 3.5" floppy disk to the content editor's address below:

Dr. Beverly Dixon, Text Co-Editor
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