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FISH HEALTH SECTION

Newsletter

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Sept. 1974

Denver Workshop Successful

The Fish Health Section workshop on procedures and standards, held at the Radisson Denver Hotel, August 12-15, was considered a great success by many who attended. FHS President, Graham (Pete) Bullock, and several other Executive Committee members voiced opinions of satisfaction over the outcome of this "first of its kind" workshop.

Attendance at the workshop included 61 FHS members among the 81 total registrants, and represented commercial, university, and governmental organizations. The attendees, and in particular the committee and work group leaders, are to be commended for outstanding results in their 3½ days of concentrated efforts. After numerous debates (some sounded like arguments), many procedures were written and approved by the attendees to cover diagnosis and confirmation of a good many parasite, virus and bacteria infections.

John Fryer, FHS president in 1973, gave a very pertinent and informative address while discussing the state of the art of fish health work and the importance of this workshop to fishery resources and to the professionals working with this resource. As John mentioned in his address, he stood before us a living example of what happens when pathogen and host come together under the right conditions. Even though suffering from the "virulent punies", John gave a very good presentation.

The subject of professional standards was discussed at great length. The major decision made was that the Professional Standards Committee is to work solely, at this time, on developing a list of people recognized by the FHS to be capable and competent in providing fish disease inspection/certification services.

It was decided during the workshop that the FHS should publish a dictionary on nomenclature and terminology related to fish health and fish culture. George Klontz was assigned the task of compiling the dictionary and will have assistance and input from a number of FHS members on sections dealing with fish culture, specific diseases, pathological terms, epizootiology, etiologic agents, toxicology, therapeutics, immunology, nutrition, materials and miscellany, and anatomy/physiology. The target date for completion of the rough drafting is February 1975.

The committee and work group chairmen at this workshop are now preparing typed drafts of all the procedures arrived at in Denver. All the material will then go on to Dave McDaniel, chairman of the Technical Procedures Committee, who will collate them and make final preparations for publication. President Bullock is presently seeking financial assistance from the AFS to get these proceedings published and it is hoped that the published materials can be ready for circulation in two months.

FHS

Sept 1974

Professional News & Views

1. **COUGHING FISH ? -- YES!** Fish coughs are phenomena that occur naturally in bluegill, sunfish, fathead minnows, and all species of trout and salmon. And the US Environmental Protection Agency's National Water Quality Laboratory (NWQL) at Duluth, Minnesota is studying the possibility of using fish coughs to monitor the water quality of lakes and streams by using fish as watchdogs. Robert Drummond, aquatic biologist in charge of the coughing fish project says the most significant phase of this study involves a polygraph similar to those used as lie detectors. The apparatus measures and records the number of coughs per minute among fish subjected to various pollutants. Thus far, tests with mercury and copper have shown that coughing increases significantly at roughly the same levels previously shown to be damaging to fish growth and reproduction in long term exposure. (For further information and photos contact: Chris West, Public Affairs Director, National Environmental Research Center, 200 S W 35th St., Corvallis, OR 97330)
2. Thermal shock accounted for the deaths of SEVERAL HUNDRED THOUSAND MENHADEN during August and September of last year in Long Island Sound, New York. Using SCUBA, investigators observed fish swimming from underlying cool water into surface water heated by the effluent from an electric generating plant. Fish died within several minutes after contacting the heated water and exhibiting spinal flexing, disequilibrium, and arrhythmic opercular movements. (For further information contact: Sandyhook Laboratory, National Marine Fisheries Service, Highlands, NJ 07732)
3. Techniques to quantify CIRCULATING STEROID HORMONES in teleostean fishes are presently being researched at Virginia Polytechnic Institute. Competitive protein binding assay and radioimmunoassay are being used to determine levels of androgens, corticoids, and estrogens in large numbers of samples in relatively short periods of time. This type of analysis can be used to identify stressful and hidden factors in experimental design which can have significant impact on results. These factors include 1) effects due to blood sampling, 2) false assumptions regarding organ-product relationships, and 3) effects of anesthetics. These methods may also be of value in recognizing the presence and effects of stressful environmental conditions. (For further information contact: Dr. Carl B. Schreck, Dept. of Fish and Wildlife Science, VPI and State U., Blacksburg, VA 24061)
4. **KIDNEY DISEASE** has recently been serologically confirmed in a naturally reproducing population of brook trout in North French Creek in Wyoming. For each of the past three years, kidney disease has been presumptively diagnosed as the cause of mortalities occurring in this population just as the ice goes off the stream in late June or early July. Of interest is the fact that North French Creek was stocked prior to 1968 with known kidney disease infected hatchery reared fish. Studies are being planned to assess the extent of this annual mortality and to determine the incidence of KD infection among the various year classes of fish in the population. (For further information contact: Doug Mitchum, Fish Pathologist, Wyoming Game and Fish Dept., Game and Fish Lab., University of Wyoming, Laramie, WY 82071)

The NEWSLETTER of the Fish Health Section of the American Fisheries Society is published four times annually in accordance with Section objectives. Use of company or trade names does not constitute endorsement but serves to keep members informed. NEWSLETTER contributions should be sent to a committee member no later than the 15th of January, April, July or November to be included in issues that follow these dates.

Newsletter Committee - 1974

Dennis Anderson, Chairman and Editor, FDCC, P.O. Box 917, Ft. Morgan, CO 80701
Charles Berry, Jr., Div. Forestry & Wildlife, VPI & State U., Blacksburg, VA 24061
Dr. Chris Frantsi, Huntsman Mar. Lab., Salmon Res. Cntr., St. Andrews, N.B., Canada
Chris Jensen, Oregon Game Commission, P.O. Box 3503, Portland, OR 97208
Monty Millard, Warm Water Hatchery Biologist Center, Tishomingo, OK 73460

Nominations

The Nominating Committee of the FHS would be pleased to receive your suggestions for nominees for the following offices for 1975: President, Vice-President, Secretary/Treasurer. Please submit your preferences to any of the following committee members by September 16, 1974 :

Fred Meyer, Fish Control Laboratory, P.O. Box 862, LaCrosse, WI 54601

Ronald Goede, Experimental Hatchery, Rt. 1, Box 254, Logan, UT 84321

David Locke, Fish and Game Dept., State House, Augusta, ME 04332

Meetings and Miscellany

1. Dr. Glenn L. Hoffman, Parasitologist at the Fish and Wildlife Service's Eastern Fish Disease Laboratory for many years, has recently transferred to the Fish Farming Experimental Station, P.O. Box 860, Stuttgart, AR 72160. Dr. Hoffman will be conducting parasite research studies at Stuttgart and is interested in having suggestions from the field on problems of importance that should be investigated.
2. Biometrics, Inc. of P.O. Box 11227, Tacoma, WA 98411 is being organized as a diagnostic service company for fish diseases. Dr. Edward M. Wood, well known for his participation in fish pathology studies, is presently serving as the organizer for this new business. Initially, Biometrics will establish laboratory facilities staffed by personnel qualified to diagnose IPN, IHN, VHS, furunculosis, kidney disease, Myxosoma cerebralis, ulcer disease, ceratomyxa, enteric redmouth, infectious dropsy in Cyprinids (IDC), and ulcerative dermal necrosis (UDN). Diagnosis for other common fish diseases will also be available. The staff will include certified inspectors for the examination of fish eggs and fish populations requiring disease free certification before shipment. It is anticipated that all facets of fish disease and mortality investigation will be available as well as water quality monitoring and analysis. Also, antibiotic residual analysis will be offered. Dr. Wood is asking members of the fish health and fish cultural fields to write him in regard to interest in utilizing this type of "fee for service" organization. Dr. Wood is also interested in qualified personnel available to participate on a consultant or staff basis.
3. Reporters asked to cover the Western and Midwest fish disease meetings in June and July reported that, while these meetings covered many interesting topics, no really newsworthy items were discussed. The Western meeting will be in Moscow, Idaho next year and the Midwest meeting will likely be in Carbondale, Illinois.
4. It appears that the plea for submission of news items in the last Newsletter was either overlooked or not accepted as the Newsletter reports that I recently received from the committee members indicated they had received almost no replies from the people they contacted for news. There was some concern several months ago that the FHS bank account balance would not support the Newsletter for the rest of this year. However, the way the news is not pouring in, we needn't be concerned by the fact that finances are limited. When I first accepted this job as chairman of the Newsletter committee, it was my understanding that the job involved editing and printing of news items reported in to committee members and forwarded to me. Every time the Newsletter is to go to print, however, this job involves much more scrounging and struggling for news than it does editing. I can't help think that the supply of news is good but the willingness or incentive for submitting it is in critically short supply. I shall now stop bitching and hope that we'll be swamped with news items for the December issue. (Ed.)

Annual Report Highlights

According to the Bylaws of the Section, an annual report must be submitted to the AFS concerning the status of serious fish diseases, the status of fish disease research, the general status of fish health and the activities of the FHS. The following are excerpts from the 1974 Annual prepared by Vice President John Plumb with assistance from the Executive Committee:

1. Legislation authorizing the Federal Government to develop fish disease control programs again floundered in Congress. It is doubtful if any "fish disease control legislation" will be passed within the near future.
2. The first confirmed case of Infectious Hematopoietic Necrosis (IHN) virus in Alaska was reported. IHN resulted in the loss of nearly 90% of the sockeye salmon at one hatchery and the virus was also isolated from returning adult salmon.
3. The geographical range of Channel Catfish Virus continued to expand with confirmed cases reported in Nebraska, California, and Honduras, Central America.
4. It has been shown that rainbow trout can be immunized against IHN virus. The presence of neutralizing antibody within 4 weeks at 15°C correlates with protection from virulent challenge.
5. The status of bacterial diseases has not changed during the past year. Bacterial gill disease continues to present problems in trout hatcheries. Columnaris disease is a serious problem in many catfish hatchery populations throughout the southern U.S.
6. Protozoan infestations of Ichthyophthirius, Myxosoma cerebralis, and Ceratomyxa shasta remain the most important parasitic diseases.
7. During the past year fish disease research has continued to deal with solving specific disease problems, with the emphasis being placed on developing and improving methods for detecting and diagnosing the serious infectious diseases.
8. The physiological pathogenesis of IHN virus was determined. The disease is characterized by severe acid-base (alkalosis) and fluid imbalance.
9. The Great Lakes Fish Disease Control Committee (GLFDCC) submitted a report to the commission on June 18, 1974, recommending that diseases of the Great Lakes region be categorized as: 1) Emergency diseases, 2) certifiable diseases, and 3) reportable diseases. The committee also recommended that "emergency diseases", when found, receive prompt and effective eradication and that cooperative disease inspections of broodstock populations be initiated.