74-4

FISH HEALTH SECTION Newsletter

AFS

Dec. 1974

FHS elects GUS, JIM, MAC, RON

Membership and Balloting Chairman Chuck Hicks reports that the recently completed balloting for 1975 FHS officers resulted as follows:

Courtney Gustafson - President - Courtney is a fish pathologist with the Pennsylvania Fish Commission at their Benner Spring Fish Research Station, RD #1, Box 200-C, Bellefonte, PA 16823. (Courtney's specialty is whirling disease and he was chairman of the parasite work group at the August Denver meeting.)

James Warren - Vice President - Jim is Hatchery Biologist at the U.S. Fish and Wildlife Service's Hatchery Biologist Laboratory, P.O. Box 252, Genoa, WI 54632. (Jim was instrumental in organizing the FHS and has been FHS Secretary-Treasurer for 2 years.)

Ivan McElwain - Secretary-Treasurer - Ivan is the Director of the U.S. Fish and Wildlife Service's Fish Disease Control Center, P.O. Box 917, Ft. Morgan, CO 80701. (Ivan's specialty is fish viruses and he served on the virus work group and IHN/VHS committee at the Denver meeting.)

Ron Goede - Chairman, Nominating Committee - Ron is in charge of the Fisheries Experimental Station of the Utah Division of Wildlife, P.O. Box 254, Logan, UT 84321. (Ron is the current President of the Western Division of the American Fisheries Society and has also been very active in the Bonneville Chapter-AFS.)

DENVER WORKSHOP PROCEEDINGS

Dave McDaniel, Chairman of the Technical Procedures Committee, reports that excellent progress is being made in readying the FHS approved methods and procedures for printing and distribution. The parasite and bacteria sections are typed and ready for review and final editing. The virus section will be typed this week (12/9). Dave, in working closely with FHS President Pete Bullock, has spent a great deal of time collating the three different sections to assure continuity and similarity among them in format and style. Pete is going to prepare the introduction and lead-in to the text and will ask Dr. Stanislas Snieszko, former director of the Eastern Fish Disease Laboratory and internationally recognized fish health "first fiddle", to review and edit the entire manuscript.

President Bullock reports that several avenues were pursued to obtain financial backing and/or printing assistance to help our insufficiently wealthy group so that these proceedings could be made available as soon as possible. Very favorable response was received from the U.S. Fish and Wildlife Service, which has agreed to print (free of charge) these proceedings as FHS approved methods for diagnosing certain fish diseases.

F. Hsheries Doc 1974

Professional News & Views

1. Studies of the PLEHN CELL, a secretory cell in fish tissue sometimes mistaken for a sporozoan parasite, are being conducted at the Pathology Department of the Osborn Laboratories of Marine Sciences, New York Aquarium. These cells, also referred to as pear-shaped cells and rodlet cells, are derived from reticular elements and are found in the epithelium of the gills, intestine, olfactory capsule, gall bladder, bile duct and in the endothelium of the bulbus and conus arteriosus. The cells are present in larval (lab raised) and adult marine and freshwater fish collected from various parts of the world. The present investigation is concerned with the light and EM studies of the cell morphology, factors involving their production, distribution, and on the chemical nature of the secretory products. Recent literature tends to consider the PLEHN CELLS as protozoan parasites. (For further information, or to contribute information, contact: Dr. Ross Nigrelli; Osborn Laboratories of Marine Sciences; New York Aquarium; Boardwalk & West 8th Street; Brooklyn,NY 11224.)

2. The New York Ocean Science Lab is continuing the investigation of STRUCTURAL DEFORMITIES among wild populations of marine fish. Emphasis has been given to the striped bass Morone saxatilis, and the bluefish Pomotomus saltatrix. A possible relationship between the degree of severity of pugheadedness and year class strength has been suggested from the data collected from the striped bass of the Chesapeake Bay. Some deformities found to occur repeatedly in the bluefish have not previously been reported in the literature. (For further information, or to submit specimens, please contact: Dr. Clarence R. Hickey; New York Ocean Science Lab.; Montauk, NY 11954.)

3. Investigation of the TOXIC ACTION OF CHLORINE on freshwater fish is currently being conducted at the Va. Polytech. Inst. and State Univ. The intermittent chlorine discharge from cooling towers of steam electric generating plants is being simulated under laboratory conditions and the effects on rainbow trout and bluegill sunfish are being monitored. Response of the fish has been found in cough rate, heart rate, breathing rate, blood oxygen content, blood pH and other blood parameters. Histological examination of gill tissue is also being conducted. Anyone having information concerning the physiological response of teleosts to chlorine toxicity is requested to contact Dr. Alan Heath; Biology Dept.; VPI & State U.; Blacksburg, VA 24061.

4. WINTER SURVIVAL OF ENTERIC MICROORGANISMS is being studied in the Tanana River near Fairbanks, Alaska. This river provides an excellent field laboratory for studying enteric survival when the water temperature is essentially 32°F and there is total ice cover. A large amount of domestic wastewater enters the river near Fairbanks, then flows more than 200 miles (7 days flow time) without further wastewater addition. Researchers have found that these bacteria survived in greater numbers and for longer periods than expected, when compared to data from more temperate climates. As a result of this research, it was possible to begin examining the survival relationship between the accepted fecal indicator bacteria and the enteric pathogens under the same environmental conditions. In the preliminary examination of this relationship (March 1973), it was found that Salmonella serotypes could be isolated both quantitatively and qualitatively at all sample stations on the 200-mile reach of river. (For further information contact: R.C. Gordon; Arctic Environmental Research Lab.; College,AK 99701.)

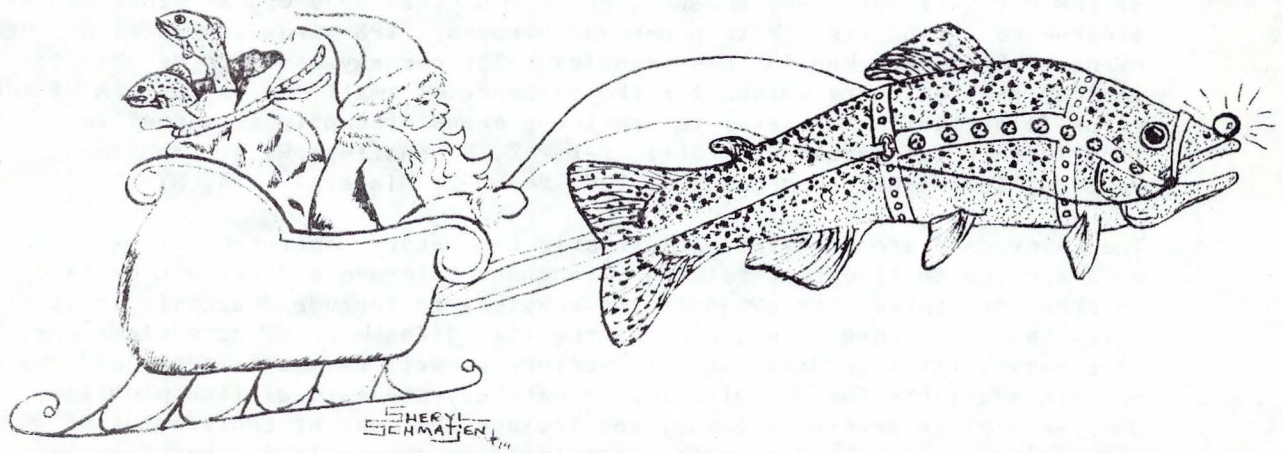
5. Fingerling Atlantic salmon and brook trout have been shown to be susceptible, experimentally, to INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS. The fingerlings were infected by injection and were held at 8°C. Clinical signs of disease began to show in the salmon in 6 days and in the brook trout in 12 days. This adds to information on species susceptibility to IHNV and points up the

cont. from page 2

need for continued vigilance in inspection/certification in moving fish and/or fish eggs. (For further information contact: Dr. Ken Wolf; Eastern Fish Disease Laboratory; Route 1, Box 17A; Kearneysville, WV 25430.)

6. Preliminary test results obtained at the Oklahoma Cooperative Research Unit indicate that the incidence of Plistophora ovariae in golden shiners can be significantly reduced by feeding nitrofurazone-bearing feed. Nitrofurazone was tested in young-of-the-year shiners at levels of 50, 75 and 100 grams active ingredient per 45.4 kilograms feed (fed at 1% body weight per day five days per week, for approximately 6 weeks). The 75 and 100 gram levels significantly reduced the incidence rate but some fish in each test group still became infected. Trials are being planned for 1975 to determine if higher drug levels might produce more desirable levels of control. (For further information contact: Miss Mary Nagel; Oklahoma Cooperative Fishery Research Unit; Oklahoma State University; Stillwater, OK 74074.)

7. SPINAL CURVATURE OF YEARLING LAKE TROUT was once a problem at the Lanesboro State Fish Hatchery, Lanesboro, Minnesota. The problem was first noted after the feed ration was changed from a meat and meat/meal mixture to a dry diet. The vitamin premix added to this diet did not contain ascorbic acid and a switch back to the ascorbic acid-containing meat/meal diet decreased the spinal curvature problem. For the past several years a dry diet with added ascorbic acid has been used and the occurrence of both lordosis and scoliosis has disappeared. (For further information contact: William Thorn; Area Fisheries Headquarters; Department of Natural Resources; Lanesboro, MN 55949.)



Rudolph the Red Nose Rainbow wishes you a very Merry Christmas!!!

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

Meetings and Miscellany

1. Copies of the proceedings of the 1972 international symposium on fish pathology, held at the Walter Reed Army Medical Center, are now available. This symposium was sponsored by the Registry of Comparative Pathology and the American Registry of Pathology, Armed Forces Institute of Pathology. Universities Associated for Research and Education in Pathology, Inc. and the University of Wisconsin Sea Grant Program added support. Copies can be ordered from the Registry of Comparative Pathology or the University of Wisconsin Press.

2. ERRATUM

   Gillespie, D.C., T.P.T. Evelyn, C. Frantsi, R.M. MacKelvie, and N. Neufeld. 1974. Methods for the detection of certain pathogens of salmonid fishes. Fish. Res. Board Can. Misc. Spec. Publ. 23: 19 p.

   Page 4, line 27, "2%" should be "10%"

   Gillespie, D.C., T.P.T. Evelyn, C. Frantsi, R.M. MacKelvie, et N. Neufeld. 1974. Méthodes de détection de certains agents pathogènes chez les salmonidés. Fish. Res. Board Can. Misc. Spec. Publ. 23: 21 p.

   Page 4, ligne 34, "2%" devrait être "10%"

   ---

3. The Carborundum Company has developed an apparatus, the AQUELLA virus concentrator, by means of which low concentrations of viruses in water can be concentrated for subsequent laboratory study. Initially its use has been confined to the study of human enteric viruses, however, the company has underway an experimental program to extend its use to non-human viruses. IPN virus is the first such virus to be undertaken in these studies. The company hopes to be able to monitor fish hatchery waters for the presence of small concentrations of IPN virus (1 per gallon or less) to provide a means of continual surveillance. (For further information contact: Peter T. B. Shaffer; Water Management Venture; The Carborundum Company; P.O. Box 337; Niagara Falls, NY 13402.)

4. The Colorado State University Diagnostic Laboratory, operated for many years as a service to livestock raisers throughout Colorado and certain parts of neighboring states, has expanded its services to include diagnosis of fish diseases. Dr. George Post, head of the fish disease section, advises they have capabilities in diagnosing infectious as well as non-infectious diseases and are available for consultation on hatchery and natural fish problems. Charges are, in general, nominal and include the cost of replacement of materials used in the diagnosis. The staff is available for hatchery, stream or lake visitations, but the cost for a diagnosis must reflect travel costs in such cases. (For further information contact: Dr. George Post; Colorado State University; College of Veterinary Medicine and Biomedical Sciences; Diagnostic Laboratory; Fort Collins, CO 80521.)

5. The FISH DISEASE CONTROL COMMITTEE of the Great Lakes Fishery Commission has drafted and approved a "Great Lakes Fish Disease Control Policy" which has been distributed to all the member agencies of the Commission. Section 2 of the policy is quite interesting in that it states the basic obligation to which the member agencies are asked to subscribe. This reads: "The member agencies shall take all appropriate measures including the development of legislative authority and regulations, where necessary, to restrict the spread of certifiable fish diseases, to contain them within their known geographic range and to strive for their elimination in accordance with the provisions of this policy."