

Fish Health Section Newsletter



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Number 4

PRESIDENT'S MESSAGE

The Fish Health Section of the American Fisheries Society is a viable, growing, "healthy" organization. An increasing membership and range of interest within the FHS is evidence of our present stature. The recent past President Jim Warren carried through previous programs and initiated new and important ones. I will continue with our current projects and initiate new ones as they are needed.

As the name implies the FHS is interested in all phases of fish health; however, the emphasis has been placed heretofore on communicable diseases of fish. I would like to see the FHS expand its interest to include not only diseases, but "health maintenance" of fish populations. Of course this includes environmental problems which are inseparable from communicable diseases; fish nutrition as it relates to disease; and health of other cultured aquatic animals. Without changing the direction of the FHS these interests can be encompassed in our overall objectives and in so doing it will strengthen our foundation.

As most of you know, those of us who are involved in controlling communicable diseases of fish are concerned about the impending crisis of possible curtailment of the use of many chemicals and drugs that are now commonly used. Last year an ad-hoc committee, headed by Ron Goede, was appointed to determine the impact upon the fish culture industry if these standard drugs are eliminated. (One primary objective of the FHS should be to direct as much influence as possible in the proper places so that chemicals and antibiotics, which are essential for successful fish culture, can be used when necessary and with a minimum of control.) Mr. Carl Sullivan, Executive Secretary of the AFS, has requested a statement from the FHS on our position concerning the chemicals used on fish. In my reply, which is printed elsewhere in this Newsletter, I essentially supported the position of the Great Lakes Fishery Commission. If any of you have any additional thoughts on this matter I would appreciate hearing them.

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Standing Committee
and Back. Nomenclature report

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In the coming year I hope the FHS will continue to be a "healthy" organization. With your help this can be done and I will be calling on many of you during the year for assistance. We have a big event scheduled for July 1978 when the 3rd Biennial Fish Health Meeting will be held in Kansas City in conjunction with the Midwest Fish Disease Workshop. A program committee has been hard at work putting together a program which will interest everyone. I hope that each member of the FHS will plan to attend.

John A. Plumb, President

PRESIDENT'S LETTER

Dear Mr. Sullivan:

Thank you for your memorandum of September 30, 1977 concerning the availability of therapeutics and prophylactics used to control fish diseases. The control of disease therapeutic compounds for fish has been of great concern for the AFS Fish Health Section for a long time. It is our general feeling that if greater restrictions were placed on the use of these compounds the fish culture industry, which plays a direct role in the sport fishery industry, would be in very serious trouble. There are a number of disease causing organisms that when they occur can be catastrophic if not controlled by chemicals or antibiotics. Indiscriminate use of chemicals of any type should not be encouraged or condoned, but when they are necessary they should be readily available.

In comparison to other chemical and drug users, such as veterinary medicine, the fishery industry consumes a paltry amount. If strict registration guidelines are finally imposed and enforced before a compound can be used on food fish, we are concerned that it would not be economically feasible for private industry to invest in the needed registration work. It would be left to the governmental agencies to provide the required data, and I personally do not think that governmental agencies can afford such budgets.

In view of these facts the AFS/FHS supports the resolution set forth by the Great Lakes Fishery Commission. We feel that the chemicals and drugs listed in the resolution should be registered as Approved Drugs for Minor Uses in Food Animals. These compounds should be available to fish husbandry facilities to be used to obtain maximum survival of healthy fish.

If necessary I will be happy to forward my opinion and the policy of the AFS/FHS to the appropriate members of Congress and governmental agencies.

Sincerely,

John A. Plumb, President
AFS/Fish Health Section

EDITOR'S CORNER

Having recently arrived on the West Coast from the Deep South, I quickly came to realize that salmonids are not just the main show in town out here, often they are the only show. I was hoping to obtain some living specimens of Azygia, Proterometra or Leptocleidus megalonchus (= Cleidodiscus megalonchus) if they occur here from black bass, but finding bass at all has been a major problem. I even travelled six hours to several guaranteed spots that were bone dry from our drought.

Therefore, if anyone knows of a location within five or six hundred miles of Arcata, California where I can obtain Azygia or Proterometra from any species of fish or Leptocleidus from any Micropterus species, I would greatly appreciate your informing me of it. I am interested in trying to manipulate taxonomic features in the azygiids by temperature and host changes at different points in their life cycles. With Leptocleidus, I would like to make sections of host tissue to determine the precise pathological damage done by this worm. I already know that the worm can penetrate the bone of the pharyngeal pads, causes hemorrhaging and may be calcified by the host. The potential importance of this monogenetic trematode in providing a portal of entry for secondary invaders has probably been overlooked because of its obscure location among the pharyngeal teeth pads.

By now you are saying "This is an editorial?" Yes, it is. I just finished asking for help from members of the Fish Health Section. I invite those of you who need some assistance to seek it through the Newsletter. What about being scooped? If you are worried about that, you don't need any help. Use the Newsletter when you reach a dead end or when cooperation may avoid duplication of effort.

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The NEWSLETTER of the Fish Health Section of the American Fisheries Society is published four times annually in accordance with Section objectives and mailed to the Section membership in good standing at the time of publication. The use of company or registered trade names does not constitute an endorsement but serves only to keep members informed. Contributions to the NEWSLETTER are encouraged and should be sent to one of the following Committee members no later than the 10th of the month preceding the date of publication to be included in the next quarterly issue. The Newsletter Committee members include:

- Dr. Joseph R. Sullivan (editor), Dept. of Fisheries,
School of Natural Resources, Humboldt State
University, Arcata, CA 95521
- Dr. Mark Dulin, 236 Grandview Terrace, Batavia,
N.Y. 14020
- Dr. Joe Geraci, Pathology Dept., University of
Guelph, OVC, Guelph, Ontario, Canada N1G 2W1
- Dr. Glenn Hoffman, Parasitologist, U.S. Fish and
Wildlife Service, Fish Farming Experimental
Station, P. O. Box 860, Stuttgart, AR 72160
- Mr. Paul Janeke, U.S. Fish and Wildlife Service,
Fish Disease Control Center, 1100 E. Burlington
Ave., P. O. Box 917, Fort Morgan, CO 80701

COMMITTEE NEWS AND REPORTS

FIRST ANNUAL REPORT FROM
~~THE COMMITTEE OF THE FISH HEALTH SECTION~~
 OF THE AMERICAN FISHERIES SOCIETY

Part: Nomencl.

Chairman: S. F. Snieszko

Members: G. L. Bullock, P. T. Evelyn, D. H. Lewis,
 D. H. McCarthy, E. B. Shotts, Jr., and T. J. Trust

The first year was mainly spent in obtaining and exchanging information. This information was exchanged between members of the committee and is expected to serve as a basis for further work.

I had frequent discussions on this subject with my associate, G. L. Bullock. No written information was received from P. T. Evelyn or D. H. Lewis. D. H. McCarthy, who is doing research on Aeromonas salmonicida and A. hydrophila (A. punctata, A. liquefaciens), sent me his contributions -- published or in preparation, and in the form of letters. E. B. Shotts sent me a manuscript prepared by the Aeromonas subgroup (international) of the ASIM (whatever that is). This group works on organisms that are indicators in water pollution. And T. J. Trust sent me a manuscript by Janet Isabel McInnes (Bachelor of Science Thesis) entitled "Association of Aeromonas spp. with Rainbow Trout (Salmo gairdneri)."
 Additional information was received from W. H. Ewing on Yersinia ruckeri n. sp. Indirectly through D. H. McCarthy I received word on Aeromonas from T. Mattheis (Eastern Germany) and from G. W. Stemke (Canada) on kidney disease Corynebacterium.

The information I received is summarized as follows:

The 8th Edition of Bergey's Manual introduced many changes and removed numerous "species" of bacteria. Really, a "species" in bacteriology is not well defined. It seems that often variants are considered species--i.e., listing the endless varieties of dogs, roses, or salmonella as separate species. Reduction in the number of species of bacteria is desirable and deserves support.

Fish pathogenic myxobacteria and myxobacterial fish diseases: This subject received very inadequate treatment in the latest Bergey's. Someone willing to handle this subject should be invited to join the committee. Fish pathogenic myxobacteria are very important and their taxonomy needs thorough attention.

Fish pathogenic mycobacteria and Nocardia: Nocardia asteroides as a fish pathogen does not seem to be controversial.

Mycobacteria is a very confusing group. The present treatment in Bergey's must be considered transitory. Someone should take over this subject. The paper by E. Otte, "Mykobakterielle Infektionen bei Fischen - Erreger und ihre Beurteilung." Zeitschr. f. Fischerei NF Vol. 17 p. 515-546, 1969, is an excellent review.

Vibrio anguillarum seems to be no problem at this time.

Edwardsiella tarda is no problem.

Hemophilus piscium is not listed in the 8th edition of Bergey's. It should be reinstated as a true pathogen of fishes.

Pasteurella piscicida: This well known marine or estuarine fish pathogen observed in the United States, Japan, and Europe is not listed in the latest Bergey's. Perhaps, it ought to belong to Yersinia now.

Aerococcus viridans (Gaffkya homari): Dr. J. E. Stewart from Halifax, Nova Scotia, whom I saw last May in Easton, Maryland, does not accept its identity with Aerococcus viridans. In his presentation he used A. viridans var. homari.

We must also determine what to do with other gram-positive aerobic and facultatively anaerobic micrococci.

Obligate anaerobes as fish pathogens: This is a new subject. Lanny R. Udey from the University of Miami published initial information in 1977 on non-spore forming anaerobes. How about the Clostridia?

Kidney disease Corynebacterium: Don McCarthy sent information on the work in progress by Dr. W. G. Stemke from Edmonton, Canada. Dr. Stemke believes that the K. D. organism is a true Corynebacterium. Perhaps he should be invited to join this committee and encouraged to name the organism.

Redmouth Organism (R.M.): Dr. W. H. Ewing and coauthors recommended that the pathogen be named Yersinia ruckeri n. sp. As of now, I do not know if the paper and the name were accepted by the editors of the International Journal of Systematic Bacteriology.

At the end of this report I am discussing the nomenclature within the genus Aeromonas. The name Aeromonas salmonicida is well accepted, regardless of the existence of non-pigmented and other atypical forms. The 8th edition of Bergey's simply abolished the name Aeromonas liquefaciens but retained A. hydrophila and A. punctata. A. punctata is still exclusively used in Central and Eastern Europe as well as in the entire

U.S.S.R. This is the name given by Schaperclaus in his classic paper on infectious dropsy of carp (1930). I believe that it has a priority over A. hydrophila. Enclosed are excerpts from papers and letters supporting this point of view. This would cause no conflict with Bergey's Manual because the 7th and 8th edition lists A. punctata. In the 8th edition, A. hydrophila is listed as a frog pathogen because as Proteus hydrophilus has been described originally as the agent of the red-leg disease of frogs.

This organism was first described as Bacillus punctatus (masculine) later changed to Pseudomonas punctata (feminine) and in U.S.S.R. is still named Achromobacter punctatum (neuter). Now it is Aeromonas punctata.

I am also of the opinion that A. punctata and A. hydrophila are the same organisms. There are variants, or "atypical" forms. The same is true in regard to many other "species" of bacteria. It is said in the introduction to the 8th edition of Bergey's Manual: "The majority held the view that for most groups of bacteria genera and species are the only categories that can be recognized and defined with reasonable (!!) precision. . ." The word "reasonable" contradicts the word "precision" and impersonal objectivity. The term "species" in bacteriology has a very vague meaning.

S. F. Snieszko
Senior Scientist
Eastern Fish Disease Laboratory
Leetown Route 3, Box 41
Kearneysville, WV 25430

Some of the committee's sources were:

Kleeberger, A. 1977. Taxonomische Untersuchungen an Aeromonaden aus Milch Wasser und Hackfleisch in Zeitschrift für Lebensmitteluntersuchung und Forschung 163: 44-47.

McCarthy, D. H. 1975. The bacteriology and taxonomy of Aeromonas liquifaciens. Ministry of Agriculture, Fisheries and Food Technical Report Series No. 2. 107 pp.

MacInnes, J. I. 1977. Association of Aeromonas spp. with rainbow trout (Salmo gairdneri). Unpublished bachelor's thesis. University of Victoria.

CHAIRPERSONS FOR THE STANDING COMMITTEES

The chairpersons for each standing committee have been appointed. Requests for participation on each of these committees have been extended, but all acceptance or refusals have not been returned. The full committees will be reported when complete. The chairpersons are:

<u>Finance</u> (Sec./Treas.)	Dr. Richard A. Holt, Dept. of Microbiology, Oregon State University Corvallis, OR 97331
<u>Nominating</u> (Elected)	Mr. Roger P. Dexter Craig Brook National Fish Hatchery East Orland, ME 04431
<u>Professional</u> <u>Standards</u>	Dr. Richard Heckmann Dept. of Zoology 153 Wide B., Brigham Young University Provo, Utah 84601
<u>Technical</u> <u>Procedures</u>	Dr. Daniel M. Mulcahy Fisheries Research Center Naval Support Act. Bldg. #204 San Point, Seattle, WA 98115
<u>Membership &</u> <u>Balloting</u>	Ms. Diane Elliott Tavolek, Inc. 2779 - 152nd Ave., N.E. Redmond, WA 98052
<u>Newsletter</u>	Dr. Joseph R. Sullivan Department of Fisheries School of Natural Resources Humboldt State University Arcata, CA 95521

If anyone in the FHS has a question about a specific committee or has a contribution to a committee, please contact the specific chairperson.

NEW PUBLICATIONS

AQUATIC ANIMAL MEDICINE: A NEW SPECIALTY FOR VETERINARIANS, an article by Dr. Mark P. Dulin in the June 1977 issue of Veterinary Medicine/Small Animal Clinician (pp.1060-1067) encourages veterinarians to enter the fish health field and gives them some idea of what to expect. I wonder how many of us without veterinary degrees would feel threatened if D.V.M.'s in great numbers began "competing" with us? We may tell ourselves that our knowledge of aquaculture as well as fish diseases gives us an advantage, but do we fear the prestige the "D.V.M." behind a name brings with it? Would someone care to take this ball and run with it? (editor's comments).

TRANSLATION AVAILABLE. CAMALLANATA OF ANIMALS AND MAN AND DISEASES CAUSED BY THEM. Written by V. M. Ivashkin, A.A. Sobolev, and L. A. Khromova (1971), 381 pages, it is Vol. XXII of Skrjabin's Essentials of Nematodology of the USSR. A large number of the hosts of the Camallanata are fishes. Some free copies are available from Rosetta Johnson, Division of Cooperative Research, USFWS, Department of the Interior, Washington, D.C. 20240. Copies will also be for sale (\$13.00) as No. TT 76-50005 from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151. For further information contact Dr. Glenn L. Hoffman, Parasitologist, U.S. Fish and Wildlife Service, Fish Farming Experimental Station, P. O. Box 860, Stuttgart, Arkansas, USA 72160.

CALL FOR PAPERS, MEETINGS

JOINT FISH HEALTH SECTION/MID-WEST FISH DISEASE WORKSHOP CALL FOR PAPERS

Jim Warren has informed us that the upcoming Joint FHS/MWFD Workshop (Kansas City, Missouri, August 15-18, 1978) is soliciting papers. Technical reports on fresh research findings and practical reports on the application of disease control techniques, diagnostics, current disease problems, the status of therapeutics or other topics appropriate to the theme "Fish Disease Control" are desired.

Interested people should contact:

Dr. John Schachte
Fish Pathology Unit
Rome Fisheries Lab
8314 Fish Hatchery Rd.
Rome, N.Y. 13440
Phone: (315) 337-0910

Dr. Guy Tebbit
Wildlife Vaccines Inc.
11475 W. 48th Ave.
Wheat Ridge, Col. 80033
Phone: (303) 422-8323

THIRD ANNUAL EASTERN FISH DISEASE WORKSHOP

Auburn University, Auburn, AL will host the 3rd Annual Eastern Fish Disease Workshop on May 23 and 24, 1978. The Southeastern Cooperative Fish Disease Laboratory is organizing activities which will be held at the Student Union on the Auburn Campus. A 1½ day program is being planned with an outdoor fish fry scheduled for the evening of the 23rd. A \$5.00 registration fee will be levied to help defray expenses. Anyone interested in obtaining additional information please contact either W. A. Rogers or J. A. Plumb, Dept. of Fisheries and Allied Aquacultures, Auburn University, Auburn, AL 36830, (205) 826-4786.

1978 FISH HEALTH SECTION FEES DUE

If you are currently a member in good standing of the FHS/AFS you have probably already received, or shortly will receive notices from Ms. Diane Elliott concerning 1978 FHS/AFS annual dues. If you are not now a member of our Section please read on.

Membership in the Fish Health Section of the American Fisheries Society is available to and encouraged for all persons interested in aquatic animal health and furthering the stated objectives of the Section. By charter, individual membership in the Section is open only to those individuals who are members in good standing of the parent American Fisheries Society. AFS membership applications are available from the Secretary-Treasurer or Chairman of the Membership and Balloting Committee. A special library subscription rate for the FHS/AFS NEWSLETTER is available to qualified institutions at an annual rate equal to the current annual membership fee.

Please fill out the attached blank for new membership today. Annual dues in the amount of \$5.00 are payable by personal check or money order made out to the Fish Health Section/AFS. Mail your completed application and payment to:

Ms. Diane Godsey Elliott, Chairman
FHS/AFS Membership and Balloting Committee
Tavolek Laboratories, Inc.
2779 152 Avenue, N.E.
Redmond, Washington 98052

APPLICATION FOR MEMBERSHIP
IN THE FISH HEALTH SECTION OF THE AMERICAN FISHERIES SOCIETY
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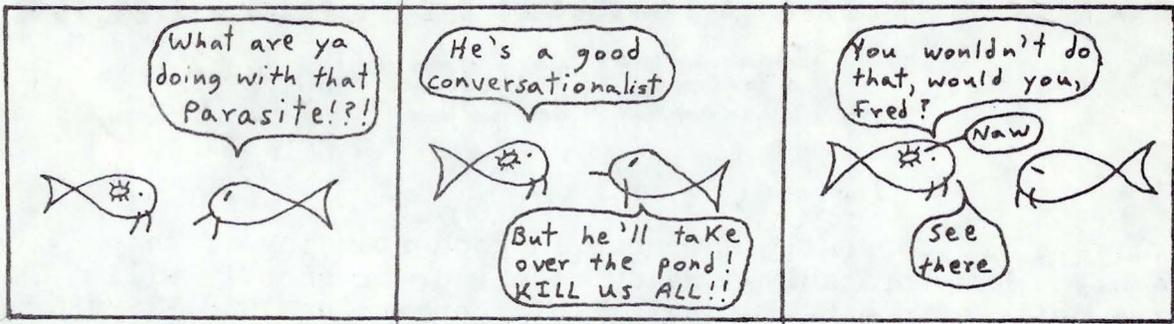
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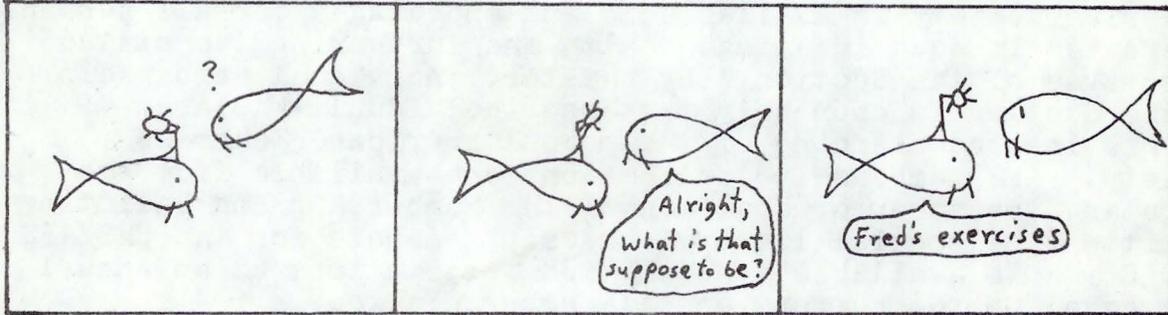
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