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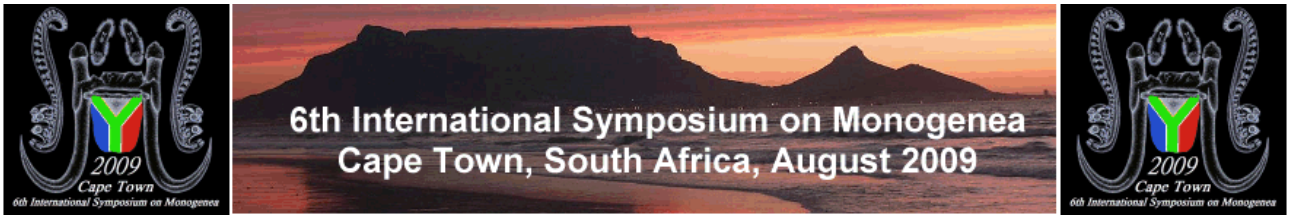
EDITORIAL

I welcome Dr Kate Hutson who has volunteered to be an Associate Editor on the Newsletter. Her background in Marine Parasitology makes her an excellent addition to the editorial team. We didn't hear about the research activities from as many countries as usual in 2008 and we hope next year more of you will provide us with updates.

Anyone wishing to contribute to the next issue of the Newsletter (Number 17) should note that the deadline date for submission is **November 15, 2009**. My contact details are at the end of this Newsletter. This, and future issues will be available on David Gibson's Web Pages at: http://www.diplectanum.dsl.pipex.com/newsletter/

ANNOUNCEMENTS

6TH INTERNATIONAL SYMPOSIUM ON MONOGENEA, CAPE TOWN, SOUTH AFRICA



The organisers are delighted to announce the forthcoming 6th International Symposium on Monogenea, which is to be held in beautiful Cape Town, South Africa in August of 2009. This next meeting, in the series of international symposia on the Monogenea, will be held at the Breakwater Lodge and at the Two Oceans Aquarium, both situated on Cape Town's waterfront with glorious views to the bay and Table Mountain. Researchers and all other interested parties from around the world are welcome to join us there and can read more about the conference and register their interest by visiting http://www.gyrodb.net/ISM6.php

DIGENEAN WORKSHOP

I am planning to conduct a workshop in 2010 to address the systematics and biology of trematodes. The workshop would be similar to existing ones treating cestodes and monogeneans. Since planning is in the earliest stages, I encourage potential participants with a strong interest in digeneans to share their input. I need to hear from those who might be interested in attending. At this time nothing about the venue or schedule is "set in stone" . A number of possibilities exist. (1) To hold the Workshop 3 days prior to the International Congress of Parasitology (ICOPA XII) in Melbourne, Victoria, Australia; ICOPA is scheduled for 15–20 August 2010. (2) Run the workshop on North Stradbroke Island (Moreton Bay Research Station), which is off Brisbane, Queensland. If held in Queensland, Tom Cribb has graciously offered to serve as the head of the local committee and would arrange facilities and accommodation. We would search for funds to help defray some of the participant costs. (3) If a venue in coastal Mississippi, Europe, or elsewhere would seem more accommodating, please let me know the potential locality and date.

A tentative schedule includes a day to treat techniques, perhaps to develop standards or discuss options. The techniques include fixing, staining, examining, and describing specimens; preparing, sequencing, and analyzing molecular preparations; analyzing all data; and establishing, maintaining, and reporting institutional/international databases. The second day would cover taxonomy, systematics, phylogeny, life cycles, biogeography, and ecology. The third day could place participants into working groups discussing a few sub-disciplines, allow the consensus of each group to be reported to the entire group, and have demonstrations or other exhibits. This schedule ultimately would depend on the number of participants and their interests. Consequently, I am encouraging anyone with an interest to contact me, Robin M. Overstreet, Gulf Coast Research Laboratory, The University of Southern Mississippi, Ocean Springs, MS 39564, robin.overstreet@usm.edu. If you do not hear back, please try again, and also cc T.Cribb@uq.edu.au.

Robin Overstreet

ZOOLOGIA

A NEW OPTION FOR PUBLICATIONS IN ANIMAL PARASITOLOGY

Starting January 2009, a new journal is available for the publication of articles in Zoology. ZOOLOGIA (formerly *Revista Brasileira de Zoologia*) publishes articles on all aspects of Zoology and includes a special section for studies on parasites and associations in general (Symbiosis). The journal is published by the Brazilian Society of Zoologists. It is a publication highly respected throughout the world due to its exceptional graphics quality and timely publication. It publishes four issues per volume (per year) and is available online free of charge to all readers (www.scielo.br).

Starting in 2009, ZOOLOGIA will only accept manuscripts in English. All manuscripts are revised by a specialized reviewer prior to publication.

Publication in ZOOLOGIA is free of page charges to members for any number of pages per volume (and as long as the ratio between members and non-members authors is 1:1). Non-members are required to pay a reasonable page charge. It is indexed in Zoological Records, ISI, Biological Abstracts, Scielo, ASFA-FAO, CAB International and Scopus. Impact factor, the first received by the predecessor of ZOOLOGIA (Revista *Brasileira de*

Biologia) was 0.422. All submissions are handled online and the mean publication time varies between 120 and 200 days.

So, join us. We believe that ZOOLOGIA is a great place to publish many of our studies on parasites, from taxonomy to ecology, from short notes to long revisionary manuscripts. As long as you are publishing on animals or protists, there is space for your studies in our journal.

Check our homepage at: http://www.sbzoologia.com.br/categoria.php?idcategoria1=16

Walter Boeger, PhD, Editor

MEETING REPORTS

THE SIXTH WORKSHOP ON CESTODE SYSTEMATICS AND PHYLOGENY

Nearly 60 cestode specialists representing 20 countries throughout Europe, North and South America and Asia attended the Sixth International Workshop on Cestode Systematics and Phylogeny. It was hosted by the Parasitological Institute of the Slovak Academy of Sciences and the Slovak Parasitological Society at the Conference Centre of the SAS in Smolenice (southern Slovakia) during July 15–20, 2008. The meeting brought together experts and students to evaluate progress in the field of tapeworm systematics and phylogeny over the last three years and to engage in informal discussions on the prospects and co-ordination of the research in the field. The scientific programme also addressed problems, some of which were partially considered at the previous workshop in České Budějovice (Czech Republic) in 2005.

The meeting was essentially based on panel discussions and short lectures within smaller, thus more effective specialized, workgroups. Moreover, 15 invited plenary lectures on taxonomy, phylogeny and ultrastructure of ambiguous tapeworm groups, their life cycles, molecular phylogeny and databasing were presented mostly by the world's leading specialists, including **Janine Caira** (University of Connecticut, Storrs, CT, U.S.A.), **Bruce Conn (**School of Mathematical and Natural Sciences, Mount Berry, GA, U.S.A.), **Boyko Georgiev** (Central Laboratory of General Ecology, BAS, Sofia, Bulgaria), **Vadym Kornyushyn** (Institute of Zoology, UAS, Kiev, Ukraine), **Tim Littlewood** (Natural History Museum, London, UK), **Tomáš Scholz** (Institute of Parasitology AS CR, České Budějovice, Czech Republic, and others.

Discussions within the 'Ultrastructure' workgroup covered a wide spectrum of cestode microstructure problems (tegument, structures of the scolex, protonephridial, nervous and sensory systems, reproductive and somatic cells). The dubious terminology of the tapeworm embryo structure and egg envelopes has finally been resolved. Using hymenolepids as a test case, a new life-cycle database (http://www.nhm.ac.uk/research-curation/research/projects/cestode-life-cycle/index.html) with a comprehensive glossary of terms relating to cestode biology and both developmental and life history terminology was demonstrated in the 'Cestode Life Cycle' workgroup. Phylogenetic approaches to life-cycle studies based on morphological examinations, molecular markers, characteristics of larval evolution, host-parasite associations and host ecology, presented in several talks, showed how systematics can bring ecological and evolutionary studies together. A brief update on new technologies and the need for developing reliable molecular tools for identifying cestodes (larval or adult) were strongly emphasized.

Managed by Florian Reyda, State University of New York, Cooperstown, NY, USA in co-operation with workshop participants and many other cestodologists from around the world, the 'Methodology' workgroup achieved remarkable progress in compiling a manual of laboratory techniques of tapeworm processing. The standardization of methodologies should, in the future, allow comparisons of material collected by different researchers from diverse areas and hosts, which until now, has not been possible. The manual will comprise not only traditional collection methods, fixation and processing of fixed material for all types of microscopy techniques (including SEM and TEM) but also methods for processing and storing cestode material designed for molecular analyses. Instructions for treating live adult and larval tapeworms in life-cycle experimental studies will form further substantial chapters of this manual.

The 'Databasing' workgroup embarked on discussion of the current status, updating and practical use of the Fauna Europaea database (www.faunaeur.org), which was constructed within the 5th Framework Programme of the EU between 2000–2004. Updating the Fauna Europea database commenced at the workshop. The other talks concerned the future running of the Global Cestode Database (www.cestode-database.org), which comprises original descriptions, drawings and photographs of type preparations and data on their deposition worldwide. To date, the database allows searches within several tapeworm groups (e.g. Lecanicephalidea, Proteocephalidea, Tetrabothriidea) and Janine Caira presented her ideas how to proceed with the future development of the database.

Finally, the workshop provided an opportunity to meet, clarify the goals and decide on collection procedures for those involved in the new multilateral project entitled 'Planetary Biodiversity Inventory: A survey of the tapeworms (Cestoda: Platyhelminthes) from the

vertebrate bowels of the world', subsidized by the US National Science Foundation and co-ordinated by the University of Connecticut, Storrs, CA, U.S.A.

The 7th workshop will take place in Kansas and will be organised by Kirsten Jensen, Department of Ecology and Evolutionary Biology, University of Kansas, Lawrence, KS, U.S.A.

Vladimíra Hanzelová, Marta Špakulová & Ivica Hromadová

SCOFDA

(Sustainable Control of Fish Diseases in Aquaculture)

The SCOFDA workshop no. XVI entitled "Diagnosis and Control of Fish Diseases" (including such main themes as the Control of Pathogens in Warm Water Aquaculture and Recirculated Model Trout Farms) was run on November 4 and 5, 2008 at the University of Copenhagen, Faculty of Life Sciences, Frederiksberg, Denmark. The workshop was attended by 68 participants from Australia, Denmark, Estonia, Norway, Poland, Portugal, South Africa, Spain, Italy, Turkey and UK. There was a nice relaxed atmosphere in which scientists, students, officials and industrial personnel conducted fruitful discussions for two days. The participants had the opportunity to discuss interactions between various pathogens (not only parasitic diseases) with the hosts and the environment

The lectures covered parasitic, bacterial and viral diseases of fish. The main fish parasitological subjects were addressed by **Barbara Nowak**, University of Tasmania, Australia who examined recent developments in disease control Down Under. Danish scientists from the University of Copenhagen, Frederiksberg C, Denmark (**J. Skov**, **P. W. Kania**, **M. M. Olsen**, J**. H. Lauridsen** and **K. Buchmann**) gave a lecture on a recent study on nematode larvae in wild and cultured fish. No nematode larvae were found in cultured rainbow trout (*Oncorhynchus mykiss* Walbaum). In contrast, wild fish from natural populations were found to be infected. The background for the parasite-free status of the Danish maricultured rainbow trout is due to feeding with parasite-free commercial feed pellets (heat treated, extruded) whereby the cultured fish remain un-exposed to infective parasite larvae. In order to initiate new studies on better immunological control of diseases in farmed fish, **Lars Holten-Andersen** talked about new principles used for vaccines in mammalian hosts and their application for fish vaccines. **Barbara Nowak** also addressed Amoebic Gill Disease (AGD) outbreaks in fish mariculture. The parasites of cultured common dentex (*Dentex dentex* L.) in Turkish marine waters were presented by **Erol Toksen** and **Esat Çilli** from the Ege University, Turkey. **David. W. Verner-Jeffreys** from the Cefas Laboratory, Weymouth, Dorset, UK presented data on coldwater strawberry diseases (CWSD), also known as Red Mark Syndrome, which is a skin disease that has emerged in farmed rainbow trout in the UK. CWSD has a severe commercial impact, as affected fish are downgraded at harvest. Epidemiological investigations and transmission studies in our laboratory have shown this likely has an infectious aetiology. It is, however, still undescribed. Then Dr. Nowak asked the question "How healthy are farmed Southern Bluefin Tuna?" and gave the audience some very good ideas about this topic.

Parasitic infections in new modern and recirculated model trout farms have been studied by **Thomas R. Jørgensen**, **Thomas B. Larsen** and **Kurt Buchmann** from Copenhagen.

Infections in recirculated rainbow trout farms were monitored over 22 months. Due to introduction of rainbow trout from traditional earth ponds into the new systems, all farms were found to be infected with a number of parasitic organisms known from traditional farming. The study has looked at the production advantages of using pathogen-free fish for stocking in modern farms, aiming to achieve pathogen-free production. An abstract book on the Workshop has been prepared and edited by **Kurt Buchman**, Laboratory of Fish Diseases, Department of Veterinary Pathobiology, Faculty of Life Sciences, University of Copenhagen, Stigbøjlen 7, DK-1870, Frederiksberg, Denmark (kub@life.ku.dk). It is available on www.fishnet.dk/SCOFDA. The next meeting will be in April 2009, at the University of Copenhagen in Denmark. You are all heartily welcome.

Kurt Buchmann

AUSTRALIAN SOCIETY FOR PARASITOLOGY

In July 2008, the Australian Society for Parasitology (http://www.parasite.org.au/) in conjunction with the ARC/NHMRC Research Network for Parasitology (http://www.parasite.org.au/arcnet/) held its Annual Scientific Meeting in Glenelg, South Australia. Local ichthyoparasitologists **Ian Whittington** (South Australian Museum [SAM] and University of Adelaide [UA]) and **Kate Hutson** (UA) were part of the Organising Committee, ably assisted by PhD student **Lizzie Perkins** (UA) and **Vanessa Glennon** (UA). The conference was attended by 220 delegates and included a symposium on *Aquaculture* organised by **Ian** and **Nathan Bott** (University of Melbourne [UM]) in which the inventive **Andy Shinn** (University of Stirling) delivered a keynote address about his innovative gadgets to help count capsalids and ward off white spot. **Mehdi Doroudi**, Chief Scientist in Aquatic Sciences at the South Australian Research & Development Institute (SARDI), discussed infectious agents affecting aquatic animal health, including Monogenea and *Uronema* in southern bluefin tuna (SBT) and *Perkinsus* and a viral agent of abalone that causes ganglioneuritis. Contributed studies on *Aquaculture* at the conference included papers by **Matt Nolan** (UM) on the life-cycle of the QX disease agent, *Marteilia sydneyi*, **Barbara Nowak** (University of Tasmania [UTas]) on parasites in farmed SBT, **Craig Hayward** (SARDI) on epizootics of sea lice in Southern Bluefin Tuna, **Melanie Andrews** (UTas) on her PhD work investigating parasites of cultured striped trumpeter, *Latris lineata*, **Kate Hutson** (UA) on her project to survey parasites of 12 fish species of importance to aquaculture and recreational fisheries in south-eastern Australia and PhD student **Neil Young** (Utas) on the immune response by *Salmo salar* to amoebic gill disease in Tasmania. Contributed papers at the conference in a session on *Marine Parasitology* were entirely by PhD students. This reflects the strength in training young ichthyoparasitologists in Australia, which is, unfortunately, not matched by the level of research funding to aquatic parasitology. Student presentations from the University of Queensland (UQ) were by: **Scott Cutmore** on species richness and life-cycles of tetraphyllidean cestodes in Moreton Bay elasmobranchs; **Abi Downie** on trophic transmission of opisthorchioids on the Great Barrier Reef (GBR), **Marissa McNamara** on monorchiids of chaetodontids of the GBR; **Mieke Burger** on the genetic diversity and host-specificity of kudoids of GBR fish; **Ricky Gleeson** on bivalvulidans of elasmobranchs; and a poster by **Nicole Gunter** on *Ceratomyxa* diversity of GBR fishes. **Lizzie Perkins** (UA) presented a paper on how her molecular phylogenetic studies using three nuclear genes from key capsalid taxa questions the value of key morphological characters.

Ian Whittington

CURRENT RESEARCH ACTIVITIES IN VARIOUS COUNTRIES

AUSTRALIA

provided by Ian Whittington, whittington.ian@saugov.sa.gov.au

For a third year in a row, **Leslie Chisholm** returned to Canada following summer weather. She spent four months at the Royal Ontario Museum in Toronto on a variety of monogenean-related projects, including worms from gills and nasal tissues from sharks and rays collected by **Janine Caira** as part of the international, multi-collaborator NSF-funded 'A s*urvey of sharks and rays of Borneo and their metazoan parasites*' (see: http://129.237.147.148/BorneoWeb/frameset.html). Other Australian parasitologists involved in this project are: **Ian Beveridge** (UM), **Tom Cribb** (UQ) and **Ian Whittington** (SAM/UA).

Marcus Domingues from the Laboratório de Parasitologia Evolutiva, Universidade Federal de São Paulo, Brazil will be working in the Marine Parasitology Laboratory at the University of Adelaide from early December 2008 to late March 2009. Marcus has interests in hexabothriid monogeneans and will be investigating specimens that he has collected plus a diversity of material amassed over several years by **Leslie Chisholm** and **Ian Whittington**. It is hoped that new material collected locally will supplement the work that Marcus will do during his visit to Adelaide.

While on the topic of visitors, in September 2008 a rare visitor made an appearance at the northern tip of Spencer Gulf near Port Augusta, a 3-hour drive from Adelaide. A lone specimen of the Ocean Sunfish, *Mola mola* became trapped in a water inlet at a power station. The injured fish was captured by local recreational fishermen, frozen and offered to **Kate Hutson** (UA) for study. **Kate** and **Ian Whittington** (pictured right holding the *Mola mola* gut) dissected the beast and found a treasure trove of parasites including specimens of *Capsala martinierei*.

A newcomer to Australian parasitology is PhD student **Jo Browne** (Griffith School of Environment & the Australian Rivers Institute-Coast & Estuaries, Griffith University, Gold Coast, Queensland; Museum Victoria, Melbourne; Victorian Marine Sciences Consortium, Victoria). She discovered some weird worms in the mesoglea of the bell of *Cassiopea* jellyfish during a fieldtrip to Lizard Island Research Station (LIRS) at the northern end of the GBR in April 2008 [funded by CReefs (see: http://www.creefs.org/)]. At LIRS, **Lizzie Perkins** (UA) was approached to identify the beasts and then started a convoluted trail among Australian and international ichthyoparasitologists to try and determine what the worms were. **Ian Whittington** (UA), **Ian Beveridge**, **Nathan Bott** and **Matt Nolan** (UM) all offered advice, but were baffled. Selected images (pictured above) of the mystery critters were e-mailed to a

variety of authorities globally including **Janine Caira** (University of Connecticut, USA), **James T. Carlton** (Williams College & Mystic Seaport, Massachusetts, USA), **Rob Condon** (Virginia Institute of Marine Science, USA), **Marymegan Daly** (Ohio State University, USA), **Alastair Dove** (Georgia Aquarium, USA), **Ryan Hechinger**, **Armand Kuris** and **Kevin Lafferty** (University of California Santa Barbara, USA), **André C. Morandini** (Universidade Federal do Rio de Janeiro, Brazil) and **Kevin Zelnio** (Pennsylvania State University, USA). Still no consensus or identification! Meanwhile, some images of **Jo**'s worms were distributed around the world by the perplexed people above in an effort to solve the riddle. It's amusing that during a visit to the Natural History Museum (BMNH) in London in mid-2008 after the 10th European Multicolloquium of Parasitology in Paris, someone showed **Ian Beveridge** the images and asked if he knew what they were! By then, he had done some library detective work at the Muséum national d'Histoire naturelle in Paris and unearthed some papers dating back to Wagener (1854) confirming his recollection of a record of a metacestode in jellyfish. With this new information, **Jo** plans to use *in vitro* cultivation techniques to induce maturation of the scolex during her next visit to Lizard Island. She believes this is the first report of metacestodes from jellyfish in Australia. In addition to several larval cestodes, **Jo** has also found many trematode metacercariae in her jellies and is enlisting assistance from **Nathan** to identify them, possibly using molecular data to find a match with adults from the activities of **Tom Cribb** and his group at UQ. An abundant jellyfish in Port Phillip Bay, Victoria, *Catostylus mosaicus*, is also a subject of **Jo**'s studies where she is investigating a parasitic hyperiid amphipod that infects them. With all these exciting discoveries in just 8 months, we'll be watching Jo's progress through conference talks and publications with interest.

BRAZIL

provided by José Luis Luque, jlluque@ufrrj.br

During 2008, the Fish Parasitology Research Group, Universidade Federal Rural do Rio de Janeiro, worked intensely on the collection of freshwater fish parasites from river basins in Brazil. We made three expeditions to the Araguaia River, Mogi-Guaçu River, Guandu River and Pantanal wetland where parasites were collected from approximately 50 fish species. These collections were carried out in collaboration with the staff of CEPTA (Centro Nacional de Pesquisa e Conservação de Peixes Continentais), a specialized centre at the Chico Mendes Institute for Biodiversity and Conservation of Brazil, where the conservation, management and biodiversity of Brazilian freshwater fishes is studied.

Our research with marine fish parasites continues with the publication of papers in collaboration with **Marcelo Oliva** (Universidad de Antofagasta) and **Juan Tomás Timi** (Universidad Nacional de Mar del Plata) who visited our laboratory in 2008, and with **Robert Poulin** (University of Otago).

A checklist of Acanthocephala of Brazilian fishes was published as part of our project of an inventory of fish parasites from Brazil in collaboration with **Claúdia Portes** (FIOCRUZ) and **David Gibson** (Natural History Museum, London). On November of 2008 our lab website was launched. Visit http://www.ufrrj.br/laboratorio/parasitologia to find out more about us and our current research projects, or to download recent publications and datasets.

provided by Anna Kohn, annakohn@ioc.fiocruz.br

The Laboratory of Helminth Parasites of Fishes, Instituto Oswaldo Cruz, FIOCRUZ, Rio de Janeiro, Brazil, headed by **Anna Kohn** (annakohn@ioc.fiocruz.br), includes the researchers **Berenice M.M. Fernandes** (berenice@ioc.fiocruz.br), **Simone C. Cohen** (scohen@ioc.fiocruz.br) **, Marcia C.N. Justo** (marciajusto@ioc.fiocruz.br) and **Melissa Q. Cárdenas** (melissaq@ioc.fiocruz.br). "All women"!

The projects developed by the group comprise the study of the fish parasites of the reservoir of the Hydroelectric Power Station of Itaipu, Paraná State and dams in Ceará State. **Simone C. Cohen** is focusing on dactylogyrid parasites with data on new species, hosts and geographical distribution. **Anna Kohn** and **Berenice M.M.Fernandes** are providing data on Digenea, Nematoda, Cestoda and Acanthocephala from these localities. Continuing studies of fish parasites of tuna and new data on the taxonomy and pathology of Digenea (including didymozoids) and Monogenea are being reported by **Marcia C.N. Justo** and **Anna Kohn**.

Melissa Q. Cárdenas joined the group in 2007 and works on nematodes. **Berenice M.M. Fernandes**, **Simone C. Cohen** and **Melissa Q. Cárdenas** are studying helminths from marine fishes caught along the Rio de Janeiro coastline. Next December, **Marcia C.N. Justo** will present her PhD thesis on the taxonomy and a parasitological index of the Digenea, Monogenea and Cestoda from tuna. She is supervised by **Anna Kohn**.
The student **Mariana L. Santos** is doing her MSc degree on acanthocephalan parasites of freshwater fishes under the supervision of **Anna Kohn** and **Simone C. Cohen**

Recently, a checklist of South American monogenean records for 1997–2008 was published by **Simone C. Cohen** and **Anna Kohn**, updating the first publication; a PDF copy is available from the authors. The book "South American Trematodes Parasites of Fishes", published by **Kohn, Fernandes & Cohen** in 2007 is available, free, upon request to the authors.

IRAQ

provided by Prof Dr Z.I.F. Rahemo, zohair_rahemo@yahoo.com

Work on fish parasites continues in four laboratories in Iraq as follows.

(1) Department of Biology, College of Science, University of Mosul

Prof Dr Zohair I.F. Rahemo is very interested in fish parasites and is now preparing a checklist of protozoan, digenean and nematode parasites in addition to the previously prepared list on crustacean parasites.

Since the early 1970s, much work has been done on parasites of fishes from the River Tigris in Iraq. Several new species of protozoans were described along with some new host records. Among these were six species of trypanosomes (*Trypanosoma acanthobramae*, *T. neinavana*, *T. mystuii*, *T. garae*, *T. carasobarbi*, and *Trypanosoma* sp.) from numerous fish hosts. Seven species of ciliates (*Apiosoma amoebae*, *A. cylindriformis*, *A. piscicola*, *A. poteriformis*, *Chilodonella cyprinid*, *Trichodina domerguuei*, *Ichthyophthirus multifilis*) and four species of sporozoans (*Unicauda lumae*, *Myxobolus pfefferri*, *M. iranicus* and *M. koi*). Some of these protozoans cause distinct pathology to

fishes, and histopathological changes to the fish organs, such as necrosis, infiltration and inflammation of the gills, liver, skin, and other organs.

Several species of digeneans were recorded from freshwater fishes from different localities in Iraq. These included *Pseudochetosoma salmonicola,* which was recovered for the first time from the gall bladder of *Acanthobrama marmid* in the River Tigris near Mosul, Iraq. Also examined were fish caught from the River Tigris at Baghdad: *Allocreadium isoporum* was recovered for the first time in the intestine of *Mystus halepensis*; metacercariae of *Ascocotyle coleostoma* were found encysted in the gills of *M. halepensis* and *Heteropneustus fossilis*; and metacercariae of *Clinistomum dasi* were found encysted in the liver, muscles and body wall of *H. fossilis.*

A total 18 species of nematode parasites were reported from different freshwater fishes in Iraq. These worms belong to seven families, 11 genera and 16 species. We concluded that *Contracaecum* sp. larva was the most abundant nematode among Iraqi fishes. Histopathological studies were carried out for some of these nematodes, such as *Contracaecum* sp. larvae and *Spiroxys* larvae, in different organs and in different hosts. The main histopathological changes recorded are necrosis, fibrosis and the destruction of epithelial tissues, hypertrophy of hepatocytes, congestion and proliferation of lining cells.

(2) University of Baghdad

Prof Dr Farhan T. Mhasien in is preparing more generalized index-catalogue for all fish parasites in Iraq, including records from pioneer workers to the present.

(3) College of Agriculture, Basrah University

Prof Dr Najim R. Khamees will be running a conference in March, 2009 on fish biology, including research on fish parasites.

(4) College of Veterinary Studies, University of Mosul

Yaser A.S.Mustafa completed an MSc thesis entitled “Intestinal Parasites of Mugilid Fish *Liza abu* in Mosul and Study of Experimental Infection with *Goussia carpelli* in Common Carp *Cyprinus carpio* and the effect of Methionine on the Infection”. **Mohammed G.M.A. Zangana** also completed an MSc thesis entitled “Survey Study of Parasites of Freshwater Fishes from Al-Khazir River in Nineveh Province”.

MÉXICO

provided by Miguel Rubio-Godoy, miguel.rubio@inecol.edu.mx

Miguel Rubio-Godoy, Instituto de Ecología, Xalapa, Veracruz and his students have continued studying the monogenean parasites of native and introduced freshwater fishes in Veracruz, México. MSc student **Daniel Aguirre-Fey** is writing up his thesis, which describes the population dynamics and microhabitat selection of *Cichlidogyrus sclerosus*, *C. dossoui* and *Scutogyrus* sp. on farmed tilapia. BSc student **Emanuel Mimila-Herrera**, also nearing his thesis write-up, has followed *Gyrodactylus xalapensis* infection levels on wild *Heterandria bimaculata* for a year and performed experimental infections at different temperatures in the lab. Keen *Gyrodactylus*-aficionados will note that *G. xalapensis* is not a valid species. This beast, however, will soon be described, as **Miguel** has continued

working on the taxonomy of Mexican gyrodactylids with **Andy Shinn** and **Adriana García-Vásquez** at the University of Stirling, UK. **Miguel** also started working at the Acuario de Veracruz, in the port of Veracruz, where tilapia grown in seawater were killed within days by *Neobenedenia* sp; he's busy with **Germán Muñoz-Córdova**, **Mario Garduño-Lugo**, **Antonio Martínez-Hernández** and **Adriana Montiel-Leyva** describing the dynamics of infection and attempting to immunize the fish against the worm. In order to determine which *Neobenedenia* species they are dealing with, they sent some specimens to **Ian Whittington** in Australia.

NORWAY

provided by Ken Mackenzie, k.mackenzie@abdn.ac.uk

The CODPAR project was described and reported on in the two previous International Ichthyoparasitology Newsletters. Fieldwork for this project was completed in June 2008 and a report is currently being prepared for the funding bodies – the Norwegian Research Council and Innovation Norway. A total of 731 cod were examined from four main sites along the Norwegian coast from Ålesund in the south to Øksfjord in the north. Forty-nine parasite taxa, including 35 named species, were recorded. The nematode *Hysterothylacium cornutum* and the digenean *Lampritrema miescheri* were new host records for cod and a new species of the ciliate genus *Trichodina* was found. Those parasites that are proven or potential threats to farmed cod are highlighted in the report, and the results of the study will be published in due course.

PORTUGAL

provided by Maria João Santos, mjsantos@fc.up.pt

Lisbon will be hosting the XI Iberian Meeting of Parasitology in July, 2009.

The Animal Pathology Group of the Department of Zoology-Anthropology / CIIMAR, University of Oporto, headed by **Jorge Eiras** (jceiras@fc.up.pt), includes senior researcher team members **Aurélia Saraiva** (amsaraiv@fc.up.pt), **Cristina Cruz** (cfcruz@fc.up.pt) and **Maria João Santos**. Several students are also currently working on their theses in fish parasitology: **Claire Francisco** (PhD), **Daniella Duarte** (MSc), **Ricardo Severino** (MSc), **Margarida Hermida**, **Francisca Cavaleiro** and **Luis Rangel.** We have recently moved to a new building and the laboratory was reorganized.

Various studies on the fish and annelid parasites are being carried out. The following project is just finished in our laboratory: "Black scabbardfish in the Portuguese waters: conservation measures and fish quality control", a project on the use of parasites as possible biological tags, supported by the National Science Foundation – **J. Eiras**, **A. Saraiva**, **C. Cruz** and **M.J. Santos**. Meanwhile, collaborative projects with other Portuguese universities and with institutions from other countries are also being carried out. More detailed information about our previous work and publications can be seen at the web page: http://www.fc.up.pt/zoo-ant/seccoes/patol/patol.html.

VIETNAM

provided by tranthibinhs@yahoo.com

Our fish parasitology group belongs to the Institute of Ecology and Biological Resources at the Vietnamese Academy of Sciences and Technology. We investigate the infection rate and distribution of the metazoan parasites in various ecosystems (estuary, island, mangrove forest, freshwater, coastal). Pictured left are wild fish (*Spinibarbus sinensis*) that we have examined from a local stream. Vietnamese scientists have for the first time carried out detailed parasitological investigations on the fauna of coastal marine and estuarine fishes. Current projects include a study entitled "Investigations on the parasites of coast fishes in Tonkin Gulf, Northern Vietnam" and a collaborative project with other Institutes in Vietnam entitled "Survey on fish parasites (monogeneans, digeneans, nematodes, acanthocephalans and copepods) of sea ecosystems in Vietnam (Phase I: 2008-2010 from Quang Ngai – Binh Thuan Provinces).

More detailed information about our previous work can be viewed at: http://www.iebr.ac.vn

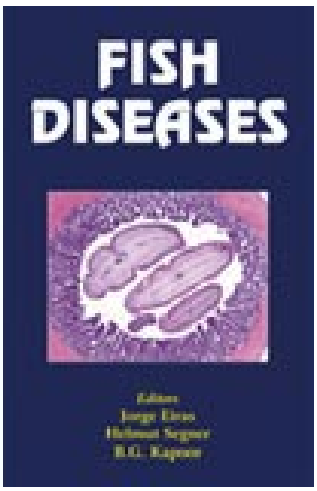
NEW BOOKS

Fish Diseases

Editors : Jorge C. Eiras, Helmut Segner, Thomas Wahli & B.G. Kapoor

ISBN 978-1-57808-438-8; May 2008; ca. 1300 pages (2 volumes.), hard cover; $149.00/ £83.40/ €121.40

Available from Science Publishers: *Email: sales@scipub.net*

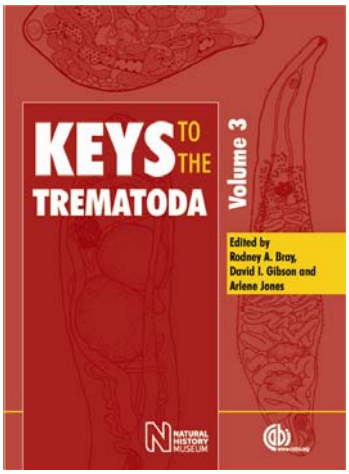


Diseases are a major threat to both wild and farmed fish. Pathogen-induced alterations in viability and growth of wild fish stocks can have implications on diversity and ecological status of aquatic ecosystems, as fish are main components of aquatic communities, and they can directly affect the exploitation of wild and farmed fish as a protein source for human consumption. Fish diseases can be a major factor influencing abundance and distribution of wild fish. Disease-related reduction of reproduction and/or age-specific survival can strongly affect wild stocks as it has been demonstrated for several species in distinct geographical locations. The book will be useful for fish farmers, managers, researchers and graduate students interested in fish diseases.

VOLUME 1
General Fish Histology: Renate Reimschussel
Diseases Caused by Virus: Diseases in Salmonids: D. Fichtner and S. Bergmann
Virus Diseases of Cyprinids: P.F. Dixon
Viral Diseases of Cultured Marine Fish: G. Bovo and D. Florio
Bacterial Diseases of Fish: Øivind Bergh
Fungal Diseases of Fish: D.J. Alderman
Microsporidia: Jirí Lom
Amoeboid Protists as Parasites of Fish: Iva Dyková
Diseases Caused by Flagellates: Pilar Alvarez-Pellitero
Diseases Caused by Apicomplexans: Dieter Steinhagen
Diseases Caused by Ciliophora: Angelo Colorni

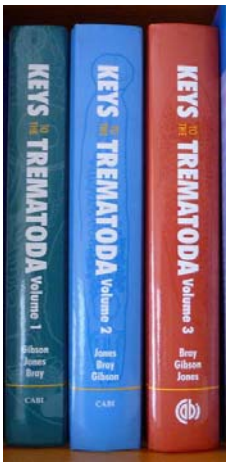
VOLUME 2
Myxozoan Diseases: Stephen W. Feist
Diseases Caused by Monogenea: Ian D. Whittington and Leslie A. Chisholm
Digeneans as Enemies of Fishes: Stephen A. Bullard and Robin M. Overstreet
Diseases Caused by Cestoda: Joanna Danuta Borucinska
Acanthocephala: Horst Taraschewski
Phylum Nematoda: Anindo Choudhury and Rebecca A. Cole
Diseases Caused by Crustacea: Wojciech Piasecki and Annemarié Avenant-Oldewage
Non-infectious Diseases: Nutritional Factors: Delbert M. Gatlin III
Environmental Diseases of Intensively Reared Fish: David J. Speare
A Brief Guide for Aquaculture Veterinarians Attending a (Continental Water) Fish Rearing and Producing Facility. What should be Considered? What Steps should be Envisaged?: H.J. Schlotfeldt

Keys to the Trematoda, Volume 3



Editors: Rod Bray, David Gibson & Arlene Jones
2008. CAB International. Hardback, 824 pp.
ISBN 978-0-85199-588-5
Price: £165.00/ $330.00/ €265.00
Available from CABI (http://www.cabi.org/bk_BookDisplay.asp?PID=1944), Amazon (often discounted) and all good book dealers.

This third volume completes the series of keys to the trematodes down to the generic level. Among the 60 families dealt with in this volume, important groups for fish parasitologists include the Cryptogonimidae, Monorchiidae, Zoogonidae and Didymozoidae.



Previous volumes are:

Keys to the Trematoda, Volume 1
Editors: David Gibson, Arlene Jones & Rod Bray
2002. CAB International. Hardback, 544 pp.
ISBN 978-0-85199-547-2
Price: £105.00/ $210.00/ €170.00
Available from CABI (http://www.cabi.org/bk_BookDisplay.asp?PID=1540), Amazon (often discounted) and all good book dealers.

Keys to the Trematoda, Volume 2
Editors: Arlene Jones, Rod Bray & David Gibson
2004. CAB International. Hardback, 768 pp.
ISBN 978-0-85199-587-8
Price: £150.00/ $300.00/ €240.00
Available from CABI (http://www.cabi.org/bk_BookDisplay.asp?PID=1820), Amazon (often discounted) and all good book dealers.

EDITORIAL POLICY

Please note that material for the next issue should be sent to the Editor, Dr Leslie Chisholm [e-mail: chisholm.leslie@saugov.sa.gov.au], Parasitology Section, The Science Centre, South Australian Museum, North Terrace, Adelaide 5000, South Australia, Australia: Fax: +61 8 8207 7222, before November 15, 2009.

The Newsletter is issued once a year and the persons listed on the cover page act as regional representatives. Each representative may write or collect information from the members of their country or region. Naturally, direct contributions from any recipient to the Newsletter are also welcome. The Newsletter is intended for any news, notices, comments, etc. that you feel would be of interest to the world's ichthyoparasitologists. Please note that publication lists are not accepted. The editor would be grateful if submissions would follow the format similar to that of the present Newsletter. Images are welcome. Please send images as separate JPG files (do not incorporate them in your text file).

National representatives are asked to download a copy of each issue of the Newsletter and make this available (photocopies, e-mail, URL, etc) to his or her domestic members, where necessary. When it is impossible to download a copy, please advise the editor. In addition, the information in the Newsletter can be made available via E-mail.

Thank you

Leslie Chisholm

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Previous Issues

Parasitological URLs

Fish Parasitologist of the Month