

# International Ichthyoparasitology Newsletter No. 17 January 2010

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## EDITORIAL

I welcome Dr David Marcogliese who has volunteered to be the Canadian representative on the Newsletter.

Anyone wishing to contribute to the next issue of the Newsletter (Number 18) should note that the deadline date for submission is **November 15, 2010**. 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.talktalk.net/newsletter/>

## ANNOUNCEMENTS

### ICOPA XII



The XII<sup>th</sup> International Congress of Parasitology (ICOPA) will be held in Melbourne, Australia, from August 15–20<sup>th</sup>, 2010 at the new Exhibition and Convention Centre. All are invited to join the parasitology community at this exceptional facility that lies in the heart of Melbourne in close proximity to the scenic Yarra River, accommodation, associated parks, multicultural restaurants, cafes and bars.

Parasites have an enormous impact not only in the environment but also on human and animal health. This conference will be an important forum for the dissemination and discussion of new findings in this rapidly expanding field. The theme of the congress is “Understanding the global impact of parasites-from genomes to function and disease” around which we are developing an exciting scientific program that will provide a dynamic platform for the vibrant and fruitful exchange of your new findings, research questions and state-of-the-art techniques. We are confident the diversity of themes that will be covered in this conference will encourage positive collaborations and abstracts will be solicited on all topics that span the enormous range of parasitology. The conference will provide the scientific depth required by including a range of plenary talks that will complement a larger

number of oral presentations in parallel thematic sessions. The poster sessions will be a particularly important aspect of ICOPA XII, with all presentations being displayed throughout the conference period and thematic oral sessions for selected posters. There will be several social programmes around the poster displays to encourage discussion and collaborations. Competitive travel awards for students and postdoctoral scientists from developing countries are offered.

We urge you to make this a must attend premier conference, not only for the excellence of the science that will be on display but also the ambience and charm of one of the most liveable cities in the world. We look forward to welcoming you to our country in 2010. Australia, a land of excitement and scientific innovation, awaits you! For further information go to <http://www.asnevents.com.au/icopa>

## 8<sup>th</sup> International Symposium on Fish Parasites September 26–30, 2011 Viña del Mar Chile

Ichthyoparasitologists from around the world are invited to attend the 8<sup>th</sup> ISFP (International Symposium on Fish Parasites) to be held in Viña del Mar, Chile, September, 26–30<sup>th</sup>, 2011. Viña del Mar is a beautiful city with exceptional facilities, stunning beaches, excellent seafood, cafes, bars and is less than half an hour from Valle de Casablanca, one of Chile's finest and world renowned wine-producing regions.

Fish parasites have an enormous impact not only in the wild but also on important economic activities such as fish farming and fisheries. This symposium will be an important forum for the discussion and distribution of new findings in this rapidly expanding field. The theme of the conference is "***Fish parasitology: from classical taxonomy to holistic approach***". We hope to develop an exciting scientific program that will provide an update in our field of research. We are sure that the diversity of themes will be the most favourable platform for strong and positive collaborations between fish parasitologists. We are planning an intense program including preliminary talks, mini symposiums and oral presentations. Poster sessions will be an important aspect of the 8<sup>th</sup> ISFP. Competitive awards for students and postdoctoral scientists from developing countries will be offered. In addition, we will have a diverse and enjoyable programme of social activities to showcase the best of our traditions and culture. More details will be provided in the near future. We look forward to welcoming you to our country in 2011. Chile and South America are waiting for you.

On behalf of the South American Ichthyoparasitologist Consortium

Dr. Marcelo E. Oliva ([meoliva@uantof.cl](mailto:meoliva@uantof.cl))

South American Ichthyoparasitologist Consortium (Organising Committee):

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Mario George-Nascimento (Universidad Católica de la Sma. Concepción, Chile)  
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Ricardo Takemoto (Universidade Estadual de Maringá, Brazil)  
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## MEETING REPORTS

### 6<sup>th</sup> International Symposium on Monogenea, Cape Town, South Africa

provided by David Vaughan, [David.Vaughan@aquarium.co.za](mailto:David.Vaughan@aquarium.co.za)

The 6<sup>th</sup> International Symposium on Monogenea was held at the Marine and Coastal Management Research Aquarium in Cape Town, South Africa from August 2–7, 2009. The meet and greet function was hosted by the Two Oceans Aquarium at the nearby Victoria & Alfred Waterfront. Approximately 80 delegates representing 14 countries attended the proceedings. There were 68 oral presentations including 6 by invited speakers and 17 by students. Of the 41 posters presented, 16 were by students.

The best student presentation, awarded jointly to Elizabeth Perkins and Matthias Vignon, was named in memory of Professor Ilan Paperna and in honour of his many contributions to monogenean science in Africa. Guiseppe Paladini and Matthiew Badets were awarded the best student posters prize.



Hosting ISM6 in Cape Town gave South African students the opportunity to attend and present at an international symposium and to meet many well-known scientists. Delegates were treated to a mid-symposium tour to an abalone farm in Hermanus and a truly South African eating experience at a local wine farm. Accompanying persons were given the opportunity to visit the National Botanical Gardens at Kirstenbosch and a trip up the West coast. The bid for the 7<sup>th</sup> International Symposium on Monogenea was won by Brazil, possibly because Scotland is too cold.

# CURRENT RESEARCH ACTIVITIES IN VARIOUS COUNTRIES

## AUSTRALIA

provided by Kate Hutson, [kate.hutson@adelaide.edu.au](mailto:kate.hutson@adelaide.edu.au)

In July 2009, 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 at The University of New South Wales, Sydney. Contributed studies on fish parasitology at the conference included papers by **Shokoofeh Shamsi** on genetic and morphological characterisation of *Anisakis* (Royal Melbourne Institute of Technology University), **Ricky Gleeson** on kudoids of sharks and rays, **Abigail Downie** on trophic transmission of opecoelid digeneans, **Holy Heiniger** on *Myxidium* and *Zschokkella*, **Mieke Burger** on phenotypic variation in kudoids (University of Queensland), **Joanna Browne** on digenean parasites of gelatinous zooplankton (Griffith University) and **Leonie Barnett** on cercariae from gastropods (Central Queensland University). **Kate Hutson** and **Sarah Catalano** (University of Adelaide) gave oral poster presentations on parasite assemblages of commercial and recreationally important fishes.

**Sarah Catalano** (Honours student at the University of Adelaide; pictured right) made the most of being in Sydney with a 4am visit to the Sydney fish market. She was assisted by surprisingly eager volunteers **Kate**, **Mieke** and **Leonie**. Listed as an official buyer, **Sarah** won the bid for the first case of *Arripis trutta* for a bargain and spent the rest of the day dissecting fish! She went on complete her thesis 'Parasite assemblages of the Arripidae in southern Australia' with First Class Honours. She recently secured an Australian postgraduate award to begin her PhD in 2010.



**Emma Brock** (pictured left) joins the Marine Parasitology Laboratory at the University of Adelaide for her Honours project in 2010. A keen Summer Scholarship Student, full time third year Marine Biology student and casual Research Assistant, **Emma** also presented at the biannual Fisheries Research and Development Corporation Aquatic Animal Health Subprogram Scientific Conference in Cairns, in July this year. Among the presenters in the finfish parasites and other related sessions were **Kate Hutson** on potentially problematic parasites for sea-cage aquaculture, **Barbara Novak** on an overview of amoebic gill disease, **Benita Vincent** on *Neoparamoeba* spp., **Emma Brock** on parasites as indicators of population structure, **Melanie Leef** on immunostimulant use in southern bluefin tuna, **Hamish Aiken** on tuna antibody response to blood fluke infection, **Richard**

**Morrison** on vaccine development for salmonid culture, **Fran Stephens** on kingfish mortalities, **Victoria Valdenegro** on mortality causes in southern bluefin tuna and **Craig Hayward** on epizootics of sea lice and blood flukes in ranched tuna.

The Marine Parasitology Laboratory at the University of Adelaide has been industrious throughout 2009. From December 2008 to April 2009, **Marcus Domingues** from the Universidade Federal de São Paulo-Campus Diadema, Brasil, worked with **Ian Whittington** and **Leslie Chisholm** on hexabothriid monogeneans. The whole lab was sorry to see Marcus leave. As well as working incredibly hard, Marcus developed a taste for South Australian beer and wine! Three students in the lab have successfully submitted their PhD theses. In June, **Rissa Williams** handed in her thesis on 'Oral treatments for monogenean parasites of farmed yellowtails, *Seriola* spp. (Carangidae)', supervised by **Ian** and also **Marty Deveney** (SARDI Aquatic Sciences). In July, **Allan Mooney** submitted his thesis on 'Life history of *Zeuxapta seriolae* (Monogenea: Heteraxinidae), a gill parasite of *Seriola lalandi* (Pisces: Carangidae)' supervised by **Ian** and **Leslie**. In October, **Elizabeth Perkins** completed and handed up her thesis entitled 'Family ties: molecular phylogenetics, evolution and radiation of flatworm parasites (Monogenea: Capsalidae)', supervised by **Ian** and **Steve Donnellan** (South Australian Museum). Congratulations to all! The productivity should continue into 2010 with a number of publications resulting from each thesis.

**Ian Whittington** and **Elizabeth Perkins** headed to the 6<sup>th</sup> International Symposium on Monogenea, which was held in Cape Town, South Africa in early August 2009. **Elizabeth** presented a 30 minute talk about her molecular phylogenetic studies on the Capsalidae, unleashed her trees of capsalid and host fish relationships and has concluded that there is no significant signal of coevolution. Instead, capsalid radiation has likely been driven by host switching constrained by shared host ecology, biology and plasticity in morphological adaptations by the parasites. **Ian** presented 3 talks: 1) trying to make sense of 'the good, the bad and the ugly' clades of **Elizabeth's** capsalid trees; 2) monogeneans affecting kingfish aquaculture in South Australia; 3) how dynamic nomenclature demands different procedures about how we lodge type and voucher material in museums in the future. **Marty Deveney** also attended the conference and presented an invited talk about the role of oral therapeutants in controlling monogeneans in finfish aquaculture, in collaboration with **Rissa Williams** and **Ian**. **Marty** also attended the 14<sup>th</sup> European Association of Fish Pathology Conference in Prague in September where he reviewed treatments for monogeneans of *Seriola* spp. in collaboration with **Rissa**, **Ian**, **Ingo Ernst** and **Clinton Chambers**.

**Kate Hutson** (pictured right) traded the Australian winter for a UK summer working with **Geoff Boxshall** and **Rod Bray** at the Natural History Museum on parasitic copepods and trematodes of southern Australian fishes, respectively. In the evenings she met up with **Ian Beveridge** (University of Melbourne; in London on sabbatical) for English pub grub and the BBC Proms at the Royal Albert Hall. Her new website on the parasites of southern Australian fishes ([www.marineparasites.com](http://www.marineparasites.com)) has proved popular with 875 unique visitors to the site from 64 countries to date.



provided by Tom Cribb, [t.cribb@uq.edu.au](mailto:t.cribb@uq.edu.au)

### **Mission to French Polynesia**

In November and December 2009 **Pierre Sasal** (CNRS) led a group comprising **Rob Adlard** (Queensland Museum), **Rod Bray** (Natural History Museum, London), **Tom Cribb** (University of Queensland) and **Harry Palm** (University of Düsseldorf) for three weeks work on the **BIOCODE** project in Moorea, French Polynesia. The brief of the Biocode project is to collect and "biocode" (not necessarily "barcode") all the life (marine, freshwater and terrestrial) on the gorgeous French Polynesian island of Moorea (very close to Tahiti). We worked out of the French **CRIOBE Station** in Oponohu Bay and were also supported and interacted with the American (Berkeley) **Gump Station**. Our group made a start on the parasites of fishes with emphases on cestodes (especially trypanorhynchs), monogeneans, myxosporeans, nematodes and trematodes. We also collected other parasitic groups as they arose. In three weeks we examined about 60 fish species. Given that there are about 600 fish species in the area, we will have only scratched the surface of this fauna which means we will have to go back again and again! Our impressions are that some groups of parasites are far less rich than they are in comparable fishes elsewhere (perhaps especially the Myxosporea), but this may not be true for all the groups (perhaps the Monogenea). We now have to do some real work back at the lab to find out if our impressions are correct. Below you can see the various members (left to right: Pierre, Rod, Harry; Rob, Tom) of the team about to get busy in Paradise.



### **DENMARK**

provided by Kurt Buchmann, [kub@life.ku.dk](mailto:kub@life.ku.dk)

On January 1, 2009 a new research centre, DAFINET (Danish Fish Immunology Research Network), was established in Denmark. The primary aim of the centre is to explore the ontogeny of the fish immune system. This will be done by producing new immunological tools, such as antibodies against central immune components in fish whereby the investigation of responses in fish against parasitic infections can be initiated. The research centre will organise a series of workshops every year in collaboration with the research school SCOFDA (Sustainable Control of Fish Diseases in Aquaculture). Two international workshops, attended by 120 participants, were held in 2009. The next meeting, entitled "Vaccination of early life cycle stages of fish", will be held at the University of Copenhagen on April 7 and 8, 2010. The topics will span from infections

(parasitic, viral and bacterial) in fish to basic studies on the immune responses in both larval and adult fish. Invited lecturers include: **Dr Scott LaPatra**, USA, **Dr Barbara Nowak**, Australia, **Dr Chris Secombes**, Scotland and **Dr Oystein Evensen**, Norway. Registration is free of charge and the deadline for registration is March 10, 2010. Register by writing to [pwk@life.ku.dk](mailto:pwk@life.ku.dk). Abstracts should be submitted to [lhoa@life.ku.dk](mailto:lhoa@life.ku.dk) before March 10, 2010

Please visit our website ([www.dafinet.dk](http://www.dafinet.dk)) for further information and abstracts from previous meetings.

## IRAQ

provided by Prof Dr Z.I.F. Rahemo, [zohair\\_rahemo@yahoo.com](mailto:zohair_rahemo@yahoo.com)

Work on fish parasites is continuing in Iraq at four different universities.

At the **University of Mosul** two species of nematodes were described recently from Iraqi fishes by Moravec et al. (2009), one of them was collected from two cyprinid fish species (*Varicorhinus trutta* and *Cyprinion macrostomus*) in the Mosul region. This nematode was known as *Rhabdochona tigræ* but **Professor Moravec** redescribed it using scanning electron microscopy and designated it as *R. tigridis* Rahemo, 1978 (emend).

At the **University of Salahaddin**, **Dr Shamall M.A. Abdulla** supervised an MSc thesis submitted by **Mr Abdulkarim Abdulaziz Abdulkarim Shwani** entitled "The parasitic fauna of Asian Catfish – *Silurus triostegus* (Heckel, 1843) from the Greater Zab River- Kurdistan Region- Iraq". The study revealed the presence of 22 species of parasites including: nine protozoa, one monogenean, three cestode, two nematode and two crustacean species. Two new species of protozoa were also described in this study. **Dr Shamall** has also been involved in two other major research projects, including: the first record of *Dactylogyrus fallax* (Monogenea) from *Chalcalburnus mossulensis* in the Greater Zab River, Kurdistan region, Iraq and an experimental study of the life cycles of the anchor worm *Lernaea cyprinacea* and the acanthocephalan *Neoechinorhynchus zabensis* in *Capoeta damascina* and *C. trutta* (Osteichthyes: Cyprinidae) from Dokan Lake and the Greater Zab River, northern Iraq.

Two theses on fish parasites were submitted at the **University of Al-Qadisiya**, College of Education. These included a PhD thesis by **Najim Abdul-Wahed Al-Jadoaa** entitled "The parasitic infections and pathological changes of local culture fishes from Al-Qadisiya and Babylon Provinces" and an MSc thesis by **Ali Bustan M. Al-Waaly** entitled "A comparative study for parasites of *Barbus luteus* fishes in the Al-Daghara River and drainage water".

Much work on fish parasites is also being carried out at **Basrah University**, southern Iraq.

## NORWAY

provided by Tor Bakke, [t.a.bakke@nhm.uio.no](mailto:t.a.bakke@nhm.uio.no), Lutz Bachmann, [bachmann@nhm.uio.no](mailto:bachmann@nhm.uio.no), and Phil Harris, [p.d.harris@nhm.uio.no](mailto:p.d.harris@nhm.uio.no)

The *Gyrodactylus* group at the Natural History Museum (Department of Research and Collections) of the University of Oslo, Norway, addresses taxonomic, systematic and



ecological issues of gyrodactylid monogeneans, particularly those that parasitise salmonid hosts in Scandinavian rivers and lakes. The pathogenic *Gyrodactylus salaris*, infecting Atlantic salmon, causes significant ecological and economic damage and is the main target of our attention, but we also work on closely related and non-pathogenic species, such as *G. thymalli*. Current projects focus on (i) mitochondrial haplotype diversity in *G. salaris* and *G. thymalli*, (ii) the phylogeography of *G. salaris* and *G. thymalli*, (iii) next-generation sequencing of the *G. salaris* genome, and (iv) the gyrodactylid fauna of Norwegian Arctic charr (*Salvelinus alpinus*), grayling (*Thymallus thymallus*) and brown trout (*Salmo trutta*). Recently, we have attracted funding to study the role of the environment in determining the outcome of *Gyrodactylus* infections on salmonid hosts. Other parasitological research activities of the group include (i) the phylogeography and ecology of the digenean *Phyllodistomum* and the parasites and pathogens of woodland rodents.

The group consists of Profs. **Tor A. Bakke** and **Lutz Bachmann**, plus Prof. **Phil D. Harris**, who moved to Oslo in June 2009, and we expect three PhD fellows to begin work on *Gyrodactylus* related research in 2010. Furthermore, professor emeritus **Odd Halvorsen**, who retired in 2006, is still actively researching in our group. We would warmly welcome foreign research fellows and students who wish to join our research group, either for a short while or an extended visit. In summer 2011 the Natural History Museum will host the 4th Symposium of the Scandinavian Baltic Society for Parasitology (SBSP4) and we are looking forward to welcoming ichthyoparasitologists from all around the globe to Oslo (<http://www3.hi.is/pub/sbsp>)

## PERU

provided by José Iannacone, [aphia2008@gmail.com](mailto:aphia2008@gmail.com)

The Peruvian Helminthologist Day and the 4th Anniversary of the signing of the founding of the Peruvian Association of Helminthology and Associated Invertebrates (APHIA) was commemorated on February 12, 2009 in the auditorium of the Ricardo Palma University, Lima, Peru ([www.aphiaperu.com](http://www.aphiaperu.com)). In addition, two days before Helminthologist Day, a short International Course entitled “Ichthyoparasitology: Histology, Treatment, Pathology, Taxonomy and Methods of Research” was given by **Mauricio Laterca Martins** PhD from the Department of Aquaculture, Federal University of Santa Catarina, Florianopolis, Brazil. A two-day International Symposium entitled “Biology and Ecology of Host-Parasite Relationships” was also held in 2009. There were brief speeches on ichthyoparasitology, including: “Metazoan parasites of *Sciaena deliciosa* (Tschudi, 1846) (Perciformes: Sciaenidae) captured by artisanal fishery on Chorrillos, Lima, Peru” by **José Iannacone** PhD; “Parasite communities from Nile tilapia cultured in South Brazil” and “Trichodinids in the Brazilian cultivated fish”, by **Mauricio Laterca Martins** PhD. These events were organised by **Jose Iannacone**, **Jorge Manuel Cárdenas-Callirgos** and **Christian Paredes-Espinal**, Directive Council of APHIA 2008-2009.

An International Symposium entitled “Neotropical Wildlife Parasitology and Zoonotic Infections” was held August 27–29, 2009. Some of the presentations highlighted infections by the fish cestode *Diphyllbothrium pacificum* and also by the fish nematodes *Anisakis* spp. and explained the close relationship between humans, helminths and the environment. The impact of these helminths on human health was emphasised. This meeting was run under the auspices of Ricardo Palma University.

On October 27 and 28, 2009, APHIA hosted the last Symposium of the year entitled: "Aquatic Environment Parasitology Symposium". This event was run under the auspices of the School of Biology, Federico Villarreal University. The first invited talk "Unusual features in the acanthocephalans as revealed by SEM and TEM", mainly from freshwater fishes, was given by **Omar M. Amin** PhD (Institute of Parasitic Diseases – USA) and was received with enthusiasm by the entire audience. Other invited plenary lectures included "Infections by protists on ornamental and food fish of Peru", by **César Peña-Domínguez** and **Teresa Castro-Barrientos** from Federico Villarreal University, Lima, Peru, "Variation of hematological parameters originated by fish diseases" by **Dra. Gabriela Tomas Jerônimo** (Universidade Federal de Santa Catarina- Brasil). Additional talks were given on the "Ecology of marine helminthiasis in Peru" by **Jorge- Manuel Cárdena-Callirgos**, (from APHIA – Peru) and "Parasitic metazoans from *Mugil cephalus* Linnaeus, 1758 (Mugilidae: Perciformes) captured off Chorrillos, Lima, Peru", by **José Iannacone-Oliver** and **Lorena Alvariño-Flores**, both associates of APHIA- Peru. **Julio González-Fernández** (University – Peru), spoke about the "Presence of two species of protozoa and monogeneans causing high mortalities in two cultures of red tilapia, Lima-Peru, 2009". Finally, **Dr Nieves Sandoval Chaupe** (UNMSM – Peru) gave a presentation on the "Infectious pathology of continental fish culture in Peru".

During 2009, the Fish Parasitology Research Group headed by **Jose Iannacone** ([mjoseiannacone@gmail.com](mailto:mjoseiannacone@gmail.com)), Federico Villarreal University and Ricardo Palma University, worked intensely on the collection of marine fish parasites from Lima, Peru focusing on host-parasite relationships. Recently Federico Villarreal University moved to a new building and the laboratory was reorganised.

Neotropical Helminthology (*Neotrop. Helminthol.*) ISSN 1995-1043, is an electronic peer-reviewed journal published bi-annually by APHIA. This is an Open Access Journal dedicated to improving and expanding upon scientific research in the field of neotropical helminthology. It provides an alternative avenue to publish in animal parasitology. For information on this journal contact: [neotrophelminthol@gmail.com](mailto:neotrophelminthol@gmail.com)

## PORTUGAL

provided by Maria João Santos, [mjsantos@fc.up.pt](mailto:mjsantos@fc.up.pt)

Oporto will be hosting the XIV Portuguese Parasitology Meeting September 8–10, 2010 (<http://www.fc.up.pt/zoo-ant/XIVCPP/XIV%20CPP%20Circular.htm>).

The **Animal Pathology Group** of the Department of Zoology-Anthropology / CIIMAR, University of Oporto, headed by **Jorge Eiras** ([jeiras@fc.up.pt](mailto:jeiras@fc.up.pt)) and **Aurélia Saraiva** ([amsaraiv@fc.up.pt](mailto:amsaraiv@fc.up.pt)), includes other senior researcher team members, **Cristina Cruz** ([cfcruz@fc.up.pt](mailto:cfcruz@fc.up.pt)) and **Maria João Santos**. Several students are also currently working on their theses or other projects in fish parasitology: **Claire Francisco** (PhD), **Margarida Hermida** (PhD), **Francisca Cavaleiro** (PhD), **Luis Rangel**, **Ana Mafalda Correia**, **Joana Brito**, **Ricardo Castro** (BSc) and **Ana Silva** (BSc).

The main objectives of this research team are to contribute to the knowledge of fish parasites and especially ones with greater impact in fisheries, aquaculture and public health. The use of parasites for discriminating fish stocks of black scabbard fish *Aphanopus carbo* from Portuguese waters was evaluated. The characterisation of *Anisakis* spp. larvae (parasites which constitutes a potential risk for human health)

infection in *A. carbo* was also undertaken. 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/seccoos/patol/patol.html>

The **Fish Immunity and Health Laboratory** of the Department of Aquatic Production, Abel Salazar Institute for the Biomedical Sciences / IBMC - CIIMAR and University of Porto, headed by **Pedro Rodrigues** (MSc, PhD) ([prodrigu@ibmc.up.pt](mailto:prodrigu@ibmc.up.pt)), includes another senior researcher, **Fernanda Russell Pinto** (PhD) ([russell@icbas.up.pt](mailto:russell@icbas.up.pt)), and a PhD student **Susana Pina** (MSc). Their research includes the study of several aspects of trematode biology from the Portuguese ichthyofauna, namely the identification of parasitic larval stages by morphological and molecular features and the characterisation of their life cycles. Moreover, they contribute to the digenean molecular database. Currently this group has active collaborations with other Portuguese laboratories and international research groups based at several research institutions.

The **Madeira Archipelago Parasitological Research Group**, from CEM, Centre for Macaronesian Studies, University of Madeira, is headed by **Graça Costa** ([mg.costa@sapo.ptailto](mailto:mg.costa@sapo.ptailto)). Several students are working on their theses in fish parasitology: **Joana Vasconcelos** (PhD) and **Tomas Chada** (MSc). Their present research includes parasitological surveys of two pelagic fish species: Atlantic chub mackerel, *Scomber japonicus* (*S. colias*), and oceanic horse mackerel, *Trachurus picturatus*, and one species of deep-water shark, *Centrophorus squamosus*. On-going research on parasites of chub mackerel has now be extended to the Canary archipelago, with the aim of identifying possible parasites as indicators of the fish population structure. Previous work was carried out on chub mackerel from the Madeira Archipelago and from the southwestern Atlantic. Following the theme of fish population structure, this group is also investigating the parasites of the oceanic horse-mackerel from the Madeira and Canary Archipelagos, as well as continental Portugal. This research is done in collaboration with **Dr Teresa Garcia Santamaria** (IEO, Tenerife, Spain) and **Dr Leonel Gordo** (FCUL, Portugal). Furthermore, a research project was submitted to the Portuguese Foundation of Science and Technology (FCT), including partners from the Fisheries Institute at Lisbon (**Dr A. Murta** and **P. Ramos**) and colleagues from CIIMAR, University of Porto (**Dr M.J. Santos**). Cestodes of the deep-water shark *C. squamosus* are being studied, expanding our knowledge of the parasites in the deep sea. This research is being conducted with the collaboration of **Professor Janine Caira** from the University of Connecticut (US).

## NEW BOOKS

### Fish Diseases – An Introduction

**Authors: K. Buchmann, J. Bresciani, K. Pederson, E. Ariel, I. Dalsgaard & L. Madsen**

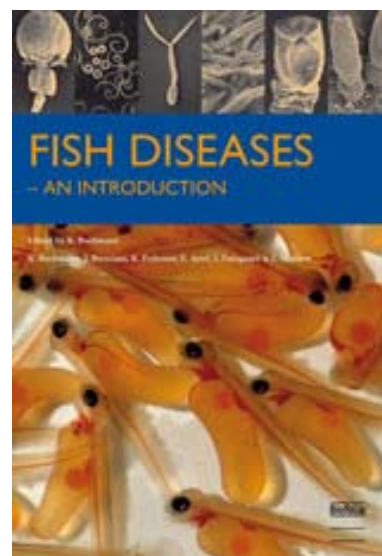
ISBN: 978-87-913-1943-3; Published 2009; Pages: 175; Price: 198 kr

Available from Biofolia, Denmark: [www.biofolia.dk](http://www.biofolia.dk)

Fish diseases play a major role in aquatic ecosystems. Both wild and cultured fish suffer from a number of parasitic, bacterial, fungal, and viral diseases. Their impact can most clearly be seen among aquacultured fish. However, wild fish also suffer from a range of diseases that affect their survival. Infections may even influence quality parameters (texture, edibility) and thereby affect industrial exploitation.

The present book outlines important aspects of the diagnosis, life cycles, symptoms, prophylaxis, and control of fish pathogens. Because many fish pathogens are species specific, the authors do not attempt to catalogue all fish diseases, rather, the text should be regarded as an introduction to the main areas by providing a series of relevant examples of host-pathogen systems.

This text will be useful for a range of professionals and students working with the aquatic environment. Readers interested in aquaculture, the biology of fish, fisheries biology and education may find it useful as an introduction to the field. The authors are educators, researchers and trainers who have been working with fish disease at the University of Copenhagen for over 25 years.



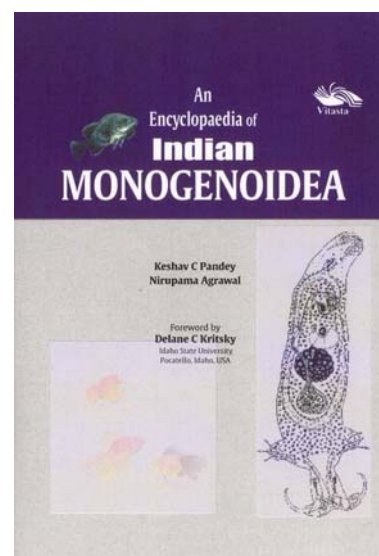
### An Encyclopaedia of Indian Monogenoidea

**Authors: K.C. Pandey & N. Agrawal**

ISBN: 81-89766-22-8; Pages: 534; Hardbound Price: USD 87.95

Available from Vitasta Publishing: [www.vitastapublishing.com.au](http://www.vitastapublishing.com.au)

An Encyclopaedia of Indian Monogenoidea is the result of the authors' involvement with the study of parasites for over 30 years. Based on the review of original Indian literature, the book gives a taxonomic description of all the species of Monogenoidea described from India so far. It aims to be a comprehensive source for identification of any representative of this group of parasitic worms from order to species level. The book begins with an introduction mentioning the start of studies on Monogenoidea, its morphology, biology, physiology and mode of attachment, and also prescribes guidelines and



suggestions for the proper fixation and handling of material.

An outline classification of the Monogenoidea along with the history of the taxonomic work done in India from 1891 to 2007 makes it the most updated document on Indian Monogenoidea. This work is not a mere compilation of references on Monogenoidea, but an authentic account of current status of the group. This book will serve as a source of information on Indian Monogenoidea for university students, teachers, parasitologists and fishery scientists. It is a 'must-have' identification tool for specialists and young helminthologists.

## EDITORIAL POLICY

Please note that material for the next issue should be sent to the Editor, Dr Leslie Chisholm [e-mail: [leslie.chisholm@samuseum.sa.gov.au](mailto:leslie.chisholm@samuseum.sa.gov.au): NOTE NEW EMAIL ADDRESS], Parasitology Section, The Science Centre, South Australian Museum, North Terrace, Adelaide 5000, South Australia, Australia; **before** November 15, 2010.

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 and do not send image files as PDFs).

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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