

What's new in Aquaculture

News, products and announcements

Book reviews

NACA publications

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Please note that most recent NACA publications are available for FREE download from our website (given below).

Asia Diagnostic Guide to Aquatic Animal Diseases

Bondad-Reantaso, M.G., McGladdery, S.E., East, I., and Subasinghe, R.P. (eds.)

The Asia Diagnostic Guide to Aquatic Animal Diseases is a comprehensive, up-datable diagnostic guide for the pathogens and diseases listed in the NACA/FAO and OIE Quarterly Aquatic Animal Disease (QAAD) Reporting System including a number of other diseases which are significant in the Asia region.

This 240 page volume is divided into four sections, with Section 1 on Introduction, Background, Scope and Purpose, Guide for Users, Health and Aquatic Animals, Role of Diagnostics and Levels of Diagnostics; and Section 2 to 4 covers three different host groups, i.e. Finfish Diseases (Section 2), Molluscan Diseases (Section 3) and Crustacean Diseases (Section 4). Each host section commences with a chapter on "General techniques" which covers essential starting points that will enable prompt and effective response(s) to disease situations in aquatic animal production. These chapters are not disease specific and emphasizes the importance of gross observations (Level 1), and how and when they should be made, including information on environmental parameters worth recording, general procedures for

sampling and fixation and the importance of record-keeping. The "General Techniques" section is followed by specific diseases for each host group with information on the following: causative agents, host range, geographic distribution, clinical aspects, screening methods, diagnostic methods, modes of transmission and control measures.

The chapters for each host group also include three Annexes that provide information of the (a) list of OIE Reference Laboratories, (b) list of regional disease experts who can provide information and valuable health advice, and (c) useful guides/manuals. A glossary is also included. The manual is printed in water resistant material, contains more than 160 colour photos. Sections are colour coded for quick and easy reference and ring-bound so it can lay flat during use. Limited hard copies and a CD-version are available. An electronic (PDF) version is available for free download from the NACA website (<http://www.enaca.org/aapqis/> - visit the publications link).

Technical Proceedings of the Conference on Aquaculture in the Third Millennium.

Subasinghe, R.P., Bueno, P.B., Phillips, M.J., Hough, C., McGladdery, S.E., and Arthur, J.R. (eds.)

The Technical Proceedings represent the most comprehensive and authoritative review assembled to date of the status of aquaculture development in the world. This volume addresses discussion of sustainable aquaculture development. Several papers in this Technical Proceedings may be useful for mariculture, including the following:

1. Technologies for Sustainable Aquaculture Development, Patrick Sorgeloos;
2. Current Status of Aquaculture in the Pacific Islands, Tim Adams, John Bell and Pierre Labrosse;
3. Review of Status of Aquaculture Genetics, Rex Dunham et. al;

4. Aquaculture Development, Health and Wealth, Rohana P. Subasinghe, Melba -Reantaso & Sharon E. McGladdery; and

5. Nutrition and Feeding for Sustainable Aquaculture Development in the Third Millennium, M.R. Hasan.

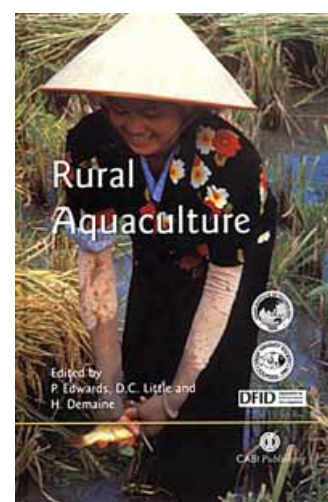
An electronic version of this Technical Proceedings can be viewed for free from the NACA website (<http://203.101.155.227:9000/>). Hard copies and a CD version are available from NACA Secretariat.

Rural Aquaculture

P. Edwards, D.C. Little & H. Demaine eds.

Aquaculture for both finfish and shellfish is expanding rapidly throughout the world. It is regarded as having the potential to provide a valuable source of high quality food in less developed countries and to be integrated into the farming systems and livelihoods of the rural poor.

This book addresses key issues in aquaculture and rural development, with case studies drawn from several countries in South and South-East Asia. Papers cover topics ranging from production and technical issues (such as pond culture and rice field fisheries) to social aspects and research and development methodology. The book



has been developed from a meeting of the Asian Fisheries Society. It is aimed at all concerned with aquaculture and rural development. The book is 328 pages and costs £49.95. Contact Polly Douglas, Institute of Aquaculture, University of Stirling, Stirling FK9 4LA, Scotland, email afgrp@stir.ac.uk.

Other Publications

Prawns & Prawn Fisheries of India

Dr S.V. Kurian and Dr V.O. Sebastian, Cochin University

The 5th edition of this popular book has been further enlarged with updated description of species based on their most recent international nomenclature. From 1976 this study has evolved from its marine origin to include freshwater culture. Available from Hindustan Publishing Corporation, 4805/24 Bharat Ram Road, Darya Ganj, New Delhi-110002, India. Ph +91 (11) 325 4401, fax +91 (11) 6193511, email hpcpd@vsnl.com or visit www.hpc.cc.

Proceedings of the First International Symposium on Cage Aquaculture in Asia, 2000

Editors – Chiu Lio and C. Kwei Lin

The proceedings comprise abstracts and full papers of diverse topics presented by speakers from Asia, Australia, Europe and North America. The papers review the status of cage culture in Asian countries, identify problems and opportunities, assess research needs and discuss sustainable culture technologies and their management.

Topics include discussion of the Norwegian regulatory system, Australia perspectives on cage culture and integrated aquaculture development in inland waters, offshore systems, automated feeding systems, solid waste modeling, diets, socio-economics, cage culture in ponds and much more.

A collection of photographs showing the evolution of cage development is also included. This publication provides a wealth of information useful for fish culturists, scientists, traders and planners in private and public institutions.

Price: US\$30 for WAS/AFS members and US\$35 for non WAS/AFS members, plus US\$5/volume shipping and handling (for parcel post/international surface mail delivery) or US\$25/volume for international airmail delivery.

Contact: World Aquaculture Society, 143 J.M. Parker Coliseum Louisiana State University, Baton Rouge, LA 70803, USA, Fax: +1-224-388-3493, E-mail: WASMAS@aol.com

CD Database on Complete Genome and Proteins of White Spot Syndrome Virus of Shrimp

Bioinformatics Center, College of Fisheries, Mangalore

This CD contains a database on the complete genome and proteins of whitespot syndrome virus of shrimp has been released. Price: Rs 1,000 (Scientists in India), Rs 500 (Students in India) or



US\$ 200 for overseas institutions. Available from The Coordinator, Bioinformatics Centre, Dept. of Fishery Microbiology, College of Fisheries, Mangalore 575 002, India. Email mircen@sancharnet.in.

New from the Fauna Sinica series

The following publications are available from the Hanyu Nature Book Trade Co. Ltd., Jiannaidajie Youju, P.O.Box 4088, Beijing 100001, China. Ph+86 10 68472697, fax +86-10-88510673, email hceis@263.net.cn or visit <http://www.hceis.com/product/index/Fishes.htm>.

Fauna Sinica Ostichthyes: Myctophiformes, Cetomimiformes, Osteoglossiformes

Chen Suzhi

This book describes the 116 species in these groups found in China up to 1996. The book has two parts. The first is a general account of each species including history, systematic and evolutionary review, distribution, morphological character and biology.

The second part is systematic lists. This book provides valuable scientific and systematic taxa summaries for these species. The book is written in Chinese with an English key to species. ISBN: 7-03-009020-9/Q.1027, 349 pages, hardcover. Price:US\$45+\$7 by sea mail.

Fauna Sinica Invertebrata Vol.29 Phylum Mollusca, Class Gastropoda: Order Archaeogastropoda: Superfamily Trochacea

Dong Zhengzhi

In Chinese language with English key to species. This book describes the living trochacean (trochus) gastropods collected from the Chinese waters. A total of 105 species are described, belonging to 45 genera in 8 families. Of these, 5 species are new to science. Part one describes the historical review, morphology, systematics, chorology, biology and importance of trochacean gastropods. Part two is a detailed account of the morphological features, biological characteristics, geographical distribution and economic uses of species. The scientific names for a few species are discussed and revised, and the keys to all taxonomic categories are given. The main research of trochacean gastropods published in China is summarized and the book also includes new biological data on economically important species. ISBN: 7-03-009509X/Q.1065, hardcover, 210 pages With 119 inserted figures, 57 distributed maps and 2 color plates. Price: US\$38+\$6 by sea mail.

The Fishes of Fujian Province

Editorial Sub Committee

Two volumes in Chinese language, first published in 1984 and 1985. These two volumes describe 815 species belonging to 38 orders, 180 families, 360 genera. 528 pages (Vol 1) + 700 pages (Vol 2) with 813 figures, hardback. Price US\$80+\$12 by seamount.

The Fishes of Shanghai Area

East China Sea Fisheries Research Institute

In Chinese language. First Published in 1990 this book describes 250 species belonging to 88 families. The book covers the geographical and climatic features of the region, hydrology, and a description of the fish fauna including diet, fishery biology, and resource assessments of commercially important species. The book also discusses the

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Training

Shrimp Health Management Training Workshop, 17 – 22 June 2002, Bangkok, Thailand

Co-organized by the Aquatic Animal Health Research Institute, and NACA.

The training course will last for six days and will include lectures, practical, case studies, visits to farms and adequate time for discussion. The course will emphasize the benefits of maintaining healthy stock and preventing disease through management of the pond. The use of chemical treatments will be covered but only as part of an integrated management system.

Course outline

Topics covered in the course include:

1. Update on shrimp culture systems - the rapidly changing nature of shrimp farming with reference to both intensive and less intensive systems.
2. Pond Environment - the theory behind the pond environment, which is essential to understanding pond preparation and water management.
3. Pond preparation - the preparation of the pond from site selection to stocking.
4. Water management - the management including monitoring and manipulation for a variety of systems from high water exchange to closed re-circulation.
5. Farm records - real farm data will be presented to emphasize the need for accurate records and the use of such records to identify and prevent problems.
6. Disease - the theory of disease and a description of the major diseases of farmed shrimp. The emphasis will be on improved production through disease control.
7. Larval assessments - a method for evaluating the health of post larvae.
8. Chemical treatments - the use of chemical treatments as part of an integrated management strategy.
9. Current situation in Thailand - the current disease problems faced by the industry and the very latest techniques employed to overcome these problems.
10. Field trip - this is an opportunity for participants to visit a hatchery and

New Australian species of brine shrimp may be farmed

An Australian company, Para Tech (WA) Pty. Ltd., has developed technology to farm species of brine shrimp *Parartemia* that are found only in Australia.

The eggs (cysts) of the brine shrimp *Artemia* underpin a large part of global aquaculture production as they are an important feed source for the larvae and juvenile stages of many cultured species.

The world supply of *Artemia* cysts comes mainly from wild capture fisheries in salt lakes. The annual harvest is highly variable from year to year as it is affected by climate and other factors. During years when the wild harvest is poor, shortages of *Artemia* can cause the price of cysts to rise substantially.

Commercial farming of *Artemia* has never been carried out on a large scale, leaving the aquaculture industry without certainty of supply and creating a major opportunity for farmed product.

Para Tech has established that an Australian brine shrimp, *Parartemia*, has outstanding potential for intensive cultivation under laboratory conditions and on a large scale. This has not been achieved before.

Exploratory research into the fifteen species of *Parartemia* (found exclusively in Australia) has shown that their biology differs from *Artemia* in ways that indicate that their cysts and biomass (adult animals) may be commercially cultivated and harvested in quantities. The company has established the base nutritional requirements, aquaculture techniques and equipment designs to achieve this. *Parartemia* is rich in protein and provides opportunities for use as a feed supplement in many industries including for human nutrition.

Para Tech is now evaluating finance options to continue its research to the stage of a pilot plant on which would be based a full commercial operation, set to take a share of an industry presently estimated to be worth many hundreds of millions of dollars per annum globally. Preliminary projections indicate that significant revenues and profits could be generated from a core business of cyst

production based on the technology that has been developed, with further opportunities in the application of the product for commercial purposes.

The company will continue its research at a dedicated laboratory and has secured a site and permits suitable for research and ultimate commercial production, in Jurien Bay Western Australia. A Memorandum of



Parartemia spp. adult male



Parartemia cysts

Understanding with the University of Western Australia is expected to provide the basis for an ongoing research relationship and certification of research and productivity outcomes.

A full scale operation will bring regional benefits in the form of nutrition supply and employment. Nationally it will provide Australia with a guaranteed feed supply to underpin its aquaculture growth and a significant source of export earnings.

For further information contact Mr Gavin Wright, Para Tech (WA) Pty. Ltd., Level 3 Gledden Building, 731 Hay Street, Perth WA 6000, Australia. Ph +61 (8) 93241695, fax +61 (8) 93224558, email parartemia@lycos.com.

grow-out sites. The farms to visit are extremely co-operative and will provide a great deal of practical information.

11. Case studies - problems based on real farm data. Participants are asked to attempt to solve these problems as a working group and present their findings for further discussion.

Lectures will be presented by internationally-recognized experts in the field. These include Dr. Pornlerd Chanratchakool from the Aquatic Animal Health Research Institute; Dr. Chalor Limsuwan from the Faculty of Fisheries at Kasetsart University; Dr. Jimmy Turnbull from the Institute of Aquaculture, University of Stirling; and Dr. Dan Fegan from the Shrimp Biotechnology Programme at the



National Center for Genetic Engineering and Biotechnology.

The registration fee is US\$ 750: The registration fee covers the cost of tuition, a copy of "Health Management in Shrimp Ponds" and the workshop dinner. Participants will be responsible for the cost of hotel accommodation and subsistence during the workshop.

For further information, download the course brochure from the training section of www.enaca.org or contact the Training Officer, NACA, PO Box 1040, Kasetsart Post Office, Bangkok 10903, Thailand, ph +66-2 561 1728, fax +66-2 561 1727, training@enaca.org.



Top to bottom (column 2):

- Dr. Pornlerd Chanratchakool is shown at one of his lectures at a recently held shrimp health management course;
- Participants visiting a Thai shrimp farm;
- The NACA Secretariat office at the Kasetsart University Campus where the course is held; and
- A visit to a Thai shrimp farm.