

MONOCULUS

Copepod Newsletter



Nr. 39

bis

APRIL 2000

Bibliotheks- und Informationssystem der Universität Oldenburg
North American Edition distributed by National Museums of Canada

MONOCULUS

Copepod Newsletter

Number 39

April 2000

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Produced by: Bibliotheks- und Informationssystem (BIS) der Universität Oldenburg, Ammerländer Heerstr. 67/99, D-26111 Oldenburg, Germany.

Distributed in Canada by: E.J. Maly, Concordia University, Biology Dept. 1455 de Maisonneuve Blvd. W, Quebec H3G 1M8 Montreal, Canada.

Distributed in Europe and overseas by: H.-U. Dahms, Universität Oldenburg, Fachbereich Biologie, D-26111 Oldenburg, Germany.

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Distributed in the U.S. by: T. Chad Walter, Smithsonian Institution, MRC-163, Washington, DC 20560-0163

The following colleagues are acknowledged for substantial help in providing literature sources: Anna F. Pasternak (Russia), Shin-ichi Uye (Japan), Chad Walter (U.S.A.).

This issue has been typed by: Herta Sauerbrey. Cartoons by M. Pottek (Fachbereich 7, Universität Oldenburg).

Cover: Traces of copepods – fecal pellets. From: Juro HIROMI, Hiroaki HIYAMA & Sadami KADOTA (1988). Morphological observations of fecal pellets produced by inlet water copepods under experimental conditions. Bull. Coll. Agr. & Vet. Med., Nihon Univ. 45: 219-226.

Birthdays in 2000:	90:	Helmut Kunz	
	85:	Siegfried Husmann	
	75:	Tagea Kristina Simon Björnberg	
	70:	Roger Cressey	Ai-yun Dai
		Kenzo Furuhashi	Robert Hamond
		Thomas L. Hopkins	Guy Lacroix
		Bernard S. McAlice	Gloria Soares Moreira
		T. Nemoto	Takashi Onbé
		Elizabet Pavlova	Eve C. Southward

The MONOCULUS homepage is available from the www-server under:

<http://www.hrz.uni-oldenburg.de/monoculus>.

Deadline for the next issue of MONOCULUS: 30th September 2000.

EDITORIAL

Last years' autumn issue of MONOCULUS showed some calanoid resting eggs – embryonic stages in arrested development in this case. These are products and intermediate stages at the same time on their way to become reproducing adult semaphoronts *via* a series of naupliar and copepodid stages. But there are other "products" of copepods: such as fecal pellets (cf. the cover of the present spring issue of MONOCULUS which are subjected together with their deadly remains to physical and biological decomposition and mineralisation. They may sink down to the sea-bottom and may become the desired food of benthic suspension – and deposit feeders – hence, linking the pelagic with the benthic realm.

We acknowledge in particular the contributions of J.A. Fornshell, J.-s. Hwang, Garry C.B. Poore and Shigeko Ooishi.

Herta Sauerbrey, but also Angelika Sievers and Hilde Juhl are thanked for substantial help with the text, and Mark Pottek for garnishing it with caricatures.

As readers of the MONOCULUS newsletter, please, don't hesitate to send us all information that you consider as interesting. Candidate members – without further notice – are requested to send a short biography.

For some time MONOCULUS has been gathering reprints in the MONOCULUS library. You will find these here under "LITERATURE" marked by an asterisk. Therefore, keep or put MONOCULUS as well as the Wilson Library on your mailing list.



Annual Financial Report of the WAC

Beginning balance January 1, 1999	\$14,740.03
Membership dues paid	\$ 6,922.97
Banking fees	\$ 91.00
Interest earned	\$ 96.63
End of year balance December 31, 1999	\$21,668.63

The year of 1999 was a very good year for the financial status of the World Association of Copepodologists. A large number of individuals paid their dues in US dollars at the meeting in Curitiba, Brasil as well as many others who paid their dues by mail.

From March of 1997 until November of 1999 the WAC bank account was a special non-profit organization account with the First Union Bank. This bank's fee structure changed significantly during 1999 making it impossible to accept foreign checks for deposit in our account. As a result the WAC account has been moved to the Burke and Herbert Bank and Trust Company.

The Burke and Herbert Bank and Trust Company account has several advantages for the Association. The account pays a modest interest rate of 2.79% which will help to cover the banking charges. Also it is now possible for me to accept checks drawn on foreign banks in foreign currency. The charge for such a deposit is \$3.00 Dollars by our new bank and any additional charge from the bank of origin for the check. In most cases this charge is relatively small or non existent. It is, however, best for the WAC, if dues payments are made in US Dollars at the meetings or in Dollars drawn on a United States Bank. The Association must assume responsibility for any charges on a foreign bank deposit. If it is not possible to pay in US Dollars, please make sure that the foreign currency is equivalent to the dues owed. I must also ask foreign currency checks be for a minimum of three years dues, \$60.00 US Dollars.

John A. Fornshell (Alexandria, U.S.A.)
(treasurer of the WAC)



... ANNOUNCEMENTS ANNOUNCEMENTS ANNOUNCEMENTS ...
... CONFERENCES ...

Melbourne Victoria Australia

Fifth International Crustacean Congress

and

'Summer' 2001 meeting of The Crustacean Society

9-13 July 2001

University of Melbourne

The website is now open for registration of expressions of interest.

<http://www.unihouse.org.au/ICC5/index.htm>

For those of you with limited access to the web here is a summary of the contents.

A week has been scheduled for the meeting, enough time to share ideas, meet colleagues and explore parts of Melbourne. The Congress will incorporate the annual 'Summer' meeting of The Crustacean Society. I urge you to think early about coming to Australia. It may be on the other side of the Earth from you and although flights are frequent many cheap fares go early.

Between now and July 2001 the Congress website will be updated at frequent intervals. I invite you to register an interest in the congress.

Program

The committee already has offers of special symposia but more are possible. These have been mooted so far: The Third Crustacean Larval Conference (convenor Paul Clark, pfc@nhm.ac.uk) Symposium on the systematics and biology of the Anomura (convenors Rafael Lemaitre, lemaitre.rafael@nmnh.si.edu, and Christopher C. Tudge, tudge.christopher@nmnh.si.edu).

Copepods as colonizers and invaders (convenor Geoff Boxshall, g.boxshall@nhm.ac.uk)
Ecotoxicology of crustaceans (convenor Malcolm Jones, M.Jones@plymouth.ac.uk)
The impact of fishing on communities (convenor Les Watling, watling@maine.maine.edu)
Burrowing crustaceans (convenor Fiona Bird, f.bird@zoo.latrobe.edu.au)
Biology of crustacean symbioses (convenor Peter Castro, pcastro@csupomona.edu)
The unity of the Peracarida (convenor Buz Wilson, buzw@amsg.austmus.gov.au)
Molecular systematics and taxonomy (convenor Chris Austin, cherax@deakin.edu.au)
The biology and management of

exploited crustaceans (convenors Brad Mitchell and Andrew Levings, bradm@deakin.edu.au & ahl@deakin.edu.au).

Tours

Pre-Conference Tour to Lizard Island, Great Barrier Reef (contact Dr Penny Berents, pennyb@austmus.gov.au). Post Conference Tour (4 days) - Grampians National Park, Victoria's Lake District and Great Ocean Road Accommodation University of Melbourne's student residential college, close to the campus. Breakfast included in the A\$50 (US\$32) daily cost. Hotels and B&Bs in the area also provide accommodation of all standards.

Fee

A\$400 (about US\$260) will include a reception, book of abstracts, congress proceedings, plus tea and coffee and lunches during the sessions. A reduced price for students of two-thirds of regular fee will be offered.

Organising Committee

Gary Poore, Environment Program, Museum Victoria, Melbourne (Chairman) Chris Austin, School of Aquatic Sciences and Natural Resources, Deakin University, Warrnambool Fiona Bird, Department of Zoology, La Trobe University, Bundoora David Hobday, Marine and Freshwater Resources Laboratory, Queenscliff David Macmillan, Department of Zoology, University of Melbourne, Parkville Richard Marchant, Environment Program, Museum Victoria, Melbourne.

Expressions of interest

If you need a paper copy of the expression of interest form write to :
The Fifth International Crustacean Congress University Conference Management Service
University House, The University of Melbourne Victoria 3010 Australia

Dr Gary C. B. Poore
Chairman, Organising Committee
Fifth International Crustacean Congress
c/o Museum
Victoria

GPO Box 666E
Melbourne Vic. 3001 Australia
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phone (61-3) 9284 0215
fax (61-3) 9416 0475
email icc5@mov.vic.gov.au

Congress website :
<http://www.unihouse.org.au/ICC5/index.htm>



**NATIONAL TAIWAN OCEAN UNIVERSITY
NATIONAL MUSEUM OF MARINE BIOLOGY/AQUARIUM**

NEW ANNOUNCEMENTS ... NEW ANNOUNCEMENTS

The 8th International Conference on Copepoda (ICOC) will be held in National Taiwan Ocean University (Taiwan)

A Message to Members and Friends of WAC

The World Association of Copepodologists (WAC) officially decided in its business meeting during the 7th International Conference on Copepoda in Curitiba, Brazil to hold the 8th Conference in Taiwan in 2002. It is the pleasure of the Local Organizing Committee for the 8th International Conference on Copepoda to extend its invitation to you all, members and non-members, to attend the Conference. Members of the Committee (in alphabetical order) are

Drs. Tin-Yam Chan, Wen-Been Chang, Shin-Hong Cheng, Jiang-Shiou Hwang (Chairman and Local Secretary of the International Organizing Committee), Wen-Tseng Lo, Chang-tai Shih, and J. Rudi Strickler

The Local Organizing Committee has been raising funds to support Executive Members of the WAC, invited speakers of the Conference, and a selection of graduate students (based on the evaluation of their presentation at the Conference by a special committee) with roundtrip economic air fares. A logo for the 8th ICOC has been designed and a web site will soon (hopefully no later than October, 2000) be established. The address of the web site will be announced in the next issue of MONOCULUS. All future announcements will be available from the web site as well as from MONOCULUS. We look forward to meeting you at the 8th ICOC in 2002 in Taiwan.

Jiang-Shiou Hwang

Chairman of the Local Committee and the Local Secretary of the International Committee of the 8th ICOC

First Circular

8th International Conference on Copepoda

Period: 25-31 July 2002

National Taiwan Ocean University, Taiwan

Dear Members and Friends of WAC:

The severe earthquake that shook Taiwan on September 21, 1999 has once again enhanced people in Taiwan to display their solidarity. They have quickly recovered from that tremendous disaster. Damages to uncountable numbers of buildings and public facilities in the central part of Taiwan, where the epicenter was located, were quickly recovered and life is virtually back to normal. Fortunately, other parts of Taiwan were largely untouched by the earthquake. Many international activities have been taken place in Taiwan as usual. Tours in all parts of the island are considered safe, comfortable, and convenient. Economy is operating as usual. Our preparation for the 8th ICOC in Taiwan has been progressing well according to our plans.

About Taiwan

Taiwan is located in the subtropical western North Pacific. It has been a natural gateway lying midway between Korea and Japan to the north and Hong Kong and the Philippines to the south. The total area is about 36,000 sq. km (214,400 sq. miles).

The island is shaped roughly like a sweet potato, and divided into east and west by a Central Mountain Range. About two-thirds of the island are mountainous. Yu Shan (Jade Mountain), the highest mountain in Taiwan, towers 3,952 meters (12,966 feet) above the sea. The Tropic of Cancer crosses the southern part of the island. The so-called Taiwan includes also many islands such as the Penghu Archipelago (a group of 64 islands) and 21 other isolated islands. The Penghu, located in the Taiwan Strait, is also known as Pescadores (Fishermen's Isles), which was given by Portuguese mariners. Most of the isolated islands are of volcanic origins, while some are formed by coral reefs.

For several centuries Taiwan was known to the Western countries as *Formosa*, a name derived from the 16th century Portuguese mariners who, on sighting the island, named it "Ilha Formosa" (Beautiful Island).

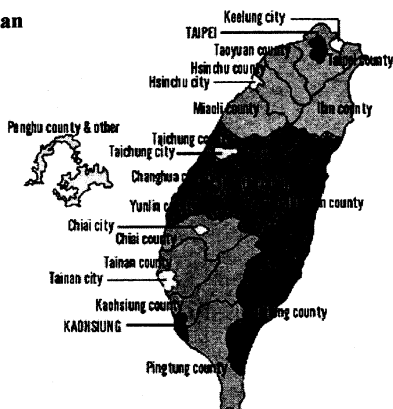
Population

The population of Taiwan is about 23 million. Its density, estimated to be over 600 per square kilometer, is the second highest in the world after Bangladesh. Taipei and Kaohsiung are the two major metropolises of Taiwan with population of about 6.5 million and 2.7 million, respectively. The conference site of the 8th ICOC, located in Keelung, is just 30 km northeast to Taipei, which is the capital and the largest city of Taiwan.

Climate

Taiwan enjoys a subtropical climate. The weather is warm and humid. The mean temperature is above 25°C between June and September and over 15°C between November and March. Nevertheless, there is occasional snowfall on higher mountains in the winter. Although typhoons visit Taiwan during the summer, they only have a short-term impact on the islands.

The map of Taiwan



Economy

Owing to the rarity of natural resources and very high population density of Taiwan, agriculture played a major role in the early years of Taiwan economic development. However, with the rapid and significant growth of the economy initiated in 1950, the focus of Taiwan's industry was shifted to the manufacturing, financial sectors and computer technology. Consequently, Taiwan has become the world's 15th largest trading country in 1999. In 1998, it was also the world's largest producer of computers. Currently, Taiwan's GDP stands at 261,400 million. Due to a steadily increasing per capita GNP, which reached over US\$12000, Taiwan maintains a living standard, which is among the highest in Asia. In spite of the trade surplus, inflation remains relatively low.

Politics

According to the Constitution, Taiwan is a democratic republic of the people, to be governed by the people and for the people. The president, county governor, congressman, and people's representatives of all levels are directly elected by the people. Among the many political parties, the Kuomintang (KMT), Democratic Progressive Party (DPP), New Party (NP) and Chin-ming party (CMP) are the predominant. On March 18, 2000, the new president of Taiwan was elected. The DPP won the presidential election. After fifty years of KMT governing, this is the first time that DPP won the presidential election.

Although Taiwan has the world's second densest populations but only one-quarter of its land is arable. Due to the continuous growth of exports, Taiwan has more than enough foreign exchange to import everything it needs. Basically, local transportation and communication services are very good, even in small villages. Most people live in modern housing with all the standard conveniences. Currently, most people are wealthy enough to travel abroad.

Education

A majority of the Taiwanese receives a higher education. At present, the national literacy rate is nearly 100%. The educational options range from preschools (3 years), primary schools (6 years), junior high schools (3 years), senior high schools and vocational schools (3 years), and colleges and universities (4 years), among which primary school and junior high school education are compulsory. Schools of various levels totaled 7,731 in 1998, with 5.21 million students. About half million students were registered in Taiwan's nearly 100 universities. Because Taiwan has traditionally placed a high priority on education, competition for higher learning is stressful. Progress through the senior high school and college systems requires passing strict entrance examinations.

In 2002, we sincerely invite you all, members or non-members of WAC, to visit Taiwan, participate in 8th ICOC and enjoy your experience in Taiwan.

Jiang-Shiou Hwang, Ph. D.
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Fax. 886-2-24629464
e-mail: Jshwang@mail.ntou.edu.tw

... LETTERS LETTERS LETTERS ...**... MEMORIAL SERVICE ...**

Three copepodologists (Drs.J.-S. Ho, C. Walter, S. Ooishi) attended the memorial service for Dr. Humes on 19th November at Woods Hole. We were able to visit his office and house on the 18th. Mrs. Ho and Dr. Tom Danken (Dr. Humes' student, organized the memorial service). I was so impressed with that his office and house were so cleanly organized by himself.

Shigeko Ooishi (Friday Harbor)

... SEEKING LITERATURE ...

I am postgraduate student, doing my research project on the effect of Pb and Hg on the life history of freshwater Copepoda (Cyclopoida).

Due to the block enforced against my country since 1990, I am unable to get recent scientific information for my project. This letter is to ask you for providing me with any related article. Your effort will be always appreciated.

Thank you very much, best wishes and regards.

Nibrass Lafta
Department of Biology
College of Education (Ibn-Al-Haitham)
University of Baghdad
Baghdad
Iraq

New web site

A new web page: "Threatened Groundwater Copepods of Italy" at the following address:

Best wishes for Christmas and 2000!

Prof. Giuseppe L. Pesce

University of L'Aquila

Dipartimento di Scienze Ambientali

Via Vetoio 67100 L'Aquila – Italy

phone: ++39-0862-433232; fax: ++39-0862-433205

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Giuseppe L. Pesce (Italy)

... LITERATURE LITERATURE LITERATURE ...

(Sources marked by an asterisk* have been donated to the MONOCULUS library)

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Short Biography

I am working as a lecturer in the Research & Post-Graduate Dept. of Zoology, St. Thomas College, (affiliated to the University of Calicut, Kerala) Trichur, Kerala, India. My research interests are the study of the Biodiversity Freshwater Copepoda from this region, Kerala (a tropical area with many freshwater bodies) and the biology & culture of the same. I have discovered one Calanoid genus from this region, *Keraladiaptomus rangareddy*, (*Hydrobiologia* 288: 119-128, 1994).

I was born on 31st July 1963, Post graduated in M.Sc. Zoology and M. Phil. in Aquatic Biology. I have attended the Zooplankton Course (for six months) at the Institute of Animal Ecology, University of Gent, Belgium. 1992-'93.

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Short Biography

I'm working on parasitic copepods of benthic and demersal fishes in Santa Monica Bay, California. I'm looking to see if the effluent outfall of the city of Los Angeles is influencing the number of parasites on the fishes living in the vicinity of the discharge. So far it looks like the prevalence is not influenced by site but the mean intensity is. It depends on what fish I look at because the parasites are VERY host specific. But fish with parasites seem to have more on their body near the outfall than away from it.

I'm hoping to finish my thesis this summer and will be looking into Ph.D. programs in the fall. I'm currently working for SCCWRP (Southern California Coastal Water Research Project). We do water toxicity testing of storm runoff in the area.

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The World Association of Copepodologists (W.A.C.)
Application for Membership

I, _____, hereby apply for membership in the
Last Name (Family name) First

World Association of Copepodologists (WAC), recommended by the following two Active or Founder Members:

1. _____
Last Name (Family Name) First (Signature)

2. _____
Last Name (Family Name) First (Signature)

Mailing address: _____

Telephone: _____ Fax: _____

E-mail address(es): _____

Date of Birth: _____ Highest Academic Degree: _____

Field(s) of interest: _____

I authorize my name, address, and data regarding my research interests to be entered in the database maintained by the WAC and made available to interested colleagues.

Signature and Date: _____

Nominations: Mail this form to:

Dr. Eduardo Suárez-Morales
General Secretary, WAC
ECOSUR-Chetumal. A.P. 424.
Chetumal, Q.Roo 77000. MEXICO

Upon receipt of this form, payment of one or more year's dues, and approval by the Executive Council, each applicant will be considered a Candidate Member and will begin receiving the *MONOCULUS*-Newsletter. A list of Candidate Members will be presented to the general membership at the next regular business meeting (at the Seventh International Conference on Copepoda). Candidates approved by the general membership become Active Members.

Dues: Dues (US \$20.00 per annum) payable by Founder, Active and Candidate Members may be paid up to two years in advance. Dues may be paid in person at WAC conferences, or by mail to :

Dr. John Fornshell
Treasurer, WAC
Thomas Jefferson High School for Science &
Technology. 6560 Braddock Rd., VA 22312
Alexandria, USA.

Europeans may send their personal Euro-Cheques in US dollars. Americans and Canadians should send their personal checks payable to WAC, while all others should use international money orders or bank drafts (cash) in US \$ and make these payable to an account to be set in the United States.

Updated March, 1997