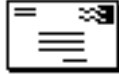


Acarology Bulletin

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A Newsletter of the **SYSTEMATIC AND APPLIED ACAROLOGY SOCIETY**

President's message



Dear colleagues:

I am pleased to announce that volume 3 of *Systematic and Applied Acarology* and number 2 of *Systematic and Applied Acarology Special Publications* are now in print. You may be pleased to know that I set up a SAAS home page at

http://www.nhm.ac.uk/hosted_sites/acarology/saas/

from where you can get information about SAAS including the contents of SAA and SAASP. I am especially delighted to inform you that *Acarology Bulletin* is now available online from our home page. Please have a visit and let me have your comments.

Zhi-Qiang Zhang
1 July 1998
London, UK



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Acarology and Member News

The 4th International Symposium on Population Dynamics of Plant-Inhabiting Mites will be held in Kyoto, Japan, May 10-14, 1999, in a small conference hall (Shiran Kaikan), close to Kyoto University. The Symposium consists of three types of sessions: (1) morning sessions composed of lectures on selected topics presented by invited speakers, (2) afternoon sessions by oral presentations, and (3) poster sessions.

Main Symposium Topics (morning sessions) and the Tentative Invited Speakers:

1. Life-history evolution, D. Margolies (USA)
2. Behavior and plant-herbivore-predator interactions, A. Janssen (The Netherlands), M. A. Sabelis (The Netherlands)
3. Biological control and IPM, to be announced
4. Genetic systems and molecular biology, M. A. Hoy (USA), M. Navajas (France)
5. Acarology in Asia, Z. Y. Xuan (China), C.-C. Ho (Taiwan)

If you would like to receive further information, please contact:
 Akio Takafuji (The Symposium Secretariat)
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Information about the Symposium is also available from:
<http://www.affrc.go.jp:8001/acari/danigaku.html> or
http://www.affrc.go.jp:8001/acari/Population_Dynamics/second_announcement.html

The 1998 Acarology Summer Program at Ohio State University will offer the following workshops:

INTRODUCTORY ACAROLOGY, August 3 - 8: This intensive one-week workshop presents an overview of the identification, systematics, and biology of the major groups of Acari. A second emphasis is techniques (study, collecting, preservation) used in acarology. The course is designed as either a stand alone course or as an introduction for the novice to prepare for the other, more specialized workshop units (Klompen).

ORIBATID, August 10-16: This intensive one-week workshop will review one of the largest radiations in the Acari. The main emphasis is on identification and systematics of both adults and immatures, but this course will have a strong secondary emphasis on ecology and life-history. (Norton).

MEDICAL - VETERINARY ACAROLOGY, August 10-21: During these intensive two weeks experts will review Acari that are important parasites or associates of man, domesticated animals, and other vertebrates. Identification of important forms to the specific level will be stressed in lab. Week One deals with the ticks. Discussions of tick systematics, morphology, physiology, and epidemiology will be presented. Dr. Burgdorfer will discuss the current status of Lyme disease and *Ixodes* ticks, and spotted fever group rickettsiae. (Burgdorfer, Demaree, Durden, Needham, Robbins). Week Two deals with mites, excluding ticks. This array includes parasitic dermanyssoid Mesostigmata, eleutherengone Prostigmata, chiggers, and Astigmata. Specific attention is paid to collection,

ecology and allergies associated with house dust and scabies mites. Generalized collection methods for bird and mammal parasites will be demonstrated. (Arlian, Klompen, OConnor, Welbourn)

AGRICULTURAL ACAROLOGY, August 10-21: This intensive two-week course reviews the mites, pests and predators, associated with crops, ornamental plants, and stored products with an emphasis on identification and classification. These mites are of major importance in agriculture worldwide. Problems associated with the frequent development of acaricide resistance and the options for use of mites in biocontrol will be discussed. Discussed groups will be the Phytoseiidae (Welbourn, McMurtry), Eriophyoidea (Amrine), Tetranychoida (Welbourn, Wrensch, Yehling), Parasitengona, Tarsonemida and miscellaneous Prostigmata (Welbourn) and stored product mites (OConnor).

SCHOLARSHIP-HOOGSTRAAL FUND AT OSU Family and friends of the late Harry Hoogstraal have established an endowed fund at OSU to honor his outstanding career, which included five years of teaching in the Workshop (1977-81). This \$600 scholarship is to encourage participation by young scholars, who also have financial need. Applicants bring the following to OSU: 1) A letter by the student giving background, interests and accomplishments (publications, presentations, grants) with a description of how attending the Acarology Summer Program will augment their career in Acarology. 2) The student's advisor should send a letter that relates the scholarly potential of the applicant in Acarology, and document the financial need. The student should turn in these materials upon arrival at the workshop. Announcement of the

recipient will be made at the conclusion of the Workshop.

JOHNSTON FUND AT OSU Limited financial assistance may be available to graduate students or international participants from the D.E. Johnston Memorial Fund. Assistance will be in the form of partial waiver of registration only. Travel or per diem funds are not available. A written statement of need and how the workshop will augment their career is required for consideration.

HISTORY AND COLLECTIONS The Acarology Laboratory has been associated with The Ohio State University since 1961, and is part of the Department of Entomology in the College of Biological Sciences and the College of Food, Agricultural and Environmental Sciences. The laboratory was founded by the late George W. Wharton as the Institute of Acarology at Duke University in 1951, and was continued at the University of Maryland from 1954 to 1961. Many of the world's acarologists received their first serious exposure to the Acari while taking the intensive Acarology Summer Program. More than 20 outstanding lecturers now take part in teaching the workshop. The Laboratory staff at Ohio State University includes Hans Klompen, Rodger Mitchell, Glen Needham, Dana Wrensch and Don Yehling. Hans Klompen is interested in morphology and molecular based systematics of Acari, and in the use of systematics in studying the evolution of ontogenetic patterns and host associations. Current projects focus on the evolution of Ixodida, Holothyrida, and basal Mesostigmata. Glen Needham's interests include the physiology and control of ticks, house dust mites and bee

mites. Dana Wrensch works on the population genetics of the acari. Rodger Mitchell is devoting his time to water mite ecology and identification.

The Acarology Collection has outstanding representations of the soil fauna from North America, Europe, and the Neotropics. Other special strengths are collections of chiggers and water mites, and of parasitic mites on mammals. You are very welcome to visit the collection at the Museum of Biological Diversity and/or the Acarine Physiology Laboratory on the OSU campus.

INVITED STAFF Jim Amrine, West Virginia University; Larry Arlian, Wright State University; Willy Burgdorfer, National Institutes of Health, Rocky Mountain Laboratory; Herald Demaree, Jr., Indiana Department of Natural Resources; Lance Durden, Georgia Southern University; James McMurtry, Oregon State University; Roy Norton, State University of New York at Syracuse; Barry OConnor, University of Michigan; Richard Robbins, Walter Reed Army Medical Center; Cal Welbourn, Florida Department of Agriculture

REGISTRATION Send by E-mail, fax, or regular mail register early as space is limited!

Name _____
Address _____

Phone _____
Fax _____
E-mail _____

Check Course Desired: (SEE DATES BELOW)

- ___ Introductory Acarology (1 wk)
- ___ Oribatida (1 wk)
- ___ Med.-Vet. Acarology (2 wks)
- ___ Agricultural Acarology (2 wks)

Status: student / non-student
Gender: male / female
(information used for housing assignment)

COURSE FEES:

- * Introductory Acarology (1 wk) \$500
- * Oribatida (1 wk) \$500
- * Medical - Veterinary Acarology (2 wks) or Agricultural Acarology (2 wks) \$1000
- * Graduate Student Rate: \$400 - Introductory Acarology or Oribatida \$800 - Med./Vet. or Ag.
- * Fee includes double or triple occupancy in an efficiency apartment & course costs. Fees are paid in U.S. funds before the workshop unless other arrangements are made.

Return via e-mail, regular mail or fax to:
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Prof. Huiqin Dong and Ms. Yanxuan Zhang were awarded travel grants from the Australian Aid Agency through the efforts of Dr. Bruce Haliday (President of the Xth International Congress of Acarology) to attend the Congress in Australia in early July.

New Books

The Widening Circle: A Lyme Disease Pioneer Tells Her Story. by P. Murray, (1996) St. Martin Press Inc. 321 pp. ISBN 0-312-14068-1.

Hydrachnellae - Morphology, Systematics. A Primary Study of Chinese Fauna. by Daochao Jin, (1997) Guiyang: Guizhou Science and Technology Publishing House. 356 pp. ISBN: 7-80584-549-2/S.100. RMB 48.00 or US\$20.00 (including postage).

To order the above book, please contact:
Mr Maofa Yang
Institute of Entomology
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Guizhou University
Guiyang 550025, China
or
Beijian Su
Guizhou Science and Technology Publishing House
289 Zhonghua Beilu
Guiyang 550001, China.

Book Review

Hydrachnellae - Morphology, Systematics. A Primary Study of Chinese Fauna. By Daochao Jin 1997. Guiyang: Guizhou Science and Technology Publishing House. 356 pp. ISBN: 7-80584-549-2/S.100.

The water mites or Hydrachnellae (also known in the literature as Hydrachnida or Hydracarina) are a large group of mites living in streams, rivers, wells, pools or lakes. This book is the result of nearly ten years of study by the author and is divided into five chapters, an appendix and reference list and 149 plates of illustrations. Although the book is published in Chinese, there is a section titled Abstract of Taxonomy in English, which provides a summary for the book and, more importantly, information on types and diagnostic character states for the new taxa.

Chapter 1 (Research history of water-mite systematics) includes three parts. The first part reviews the brief history of international water-mite systematics in three phases: an early phase (before 1800), a middle phase (1800-1910) and a recent phase (1910-present). The key authors are mentioned with their contributions to water-mite systematics in each phase, and tables are used to list their country, academic positions or professions, the number and period of their main publications and their research area and/or groups; and the main contributors are mainly from Europe before the 1950s. The second part discusses the history of Chinese water-mite systematics and lists the names of water mites reported by overseas people in scattered literature before the 1950s. Seventy-five names are listed but the author suggests that this may actually represent about 42 species, as many of them are synonyms. There was almost no taxonomic research on water mites in China since the 1950s until the author published his first taxonomic paper on Chinese water mites in 1990. Since then, he and co-workers have published a series of papers on this group. The third part reviews the research situation and discusses the characteristics of modern water-mite systematics, including phylogenetic and biogeographic studies as well as morphological and taxonomic descriptions.

Chapter 2 (Basic morphology and body evolution of water mites) provides a definition of the terminology used to describe the morphology of the gnathosoma, idiosoma and legs, including a proposal for a new hypothesis on the origin of water mites called eighteen-segment theory. This hypothesis suggests

that water mites are descended from worm-like ancestor with 18 segments and a precheliceral lobe, based on the examination of their glandularia (Jin 1997).

Chapter 3 (Phylogeny and family classification of water mites) reviews the position of Hydrachnellae in Acari and discusses the relationships among the seven superfamilies. Note that the dendrogram (Jin's fig. 3-1) does not actually indicate relationships among the superfamilies which are illustrated in its original source (Krantz 1978). The author proposed the relationships between the seven superfamilies based on a cladistic analysis (Jin and Li 1996, missing in the book's reference list). A key to adults of all 46 reported families of Hydrachnellae worldwide is provided. Diagnosis and distribution information are given for every superfamily and family.

Chapter 4 (Descriptions of currently known genera and species of water mites from China) provides keys to and descriptions of the 27 families or subfamilies, 45 genera or subgenera and 112 species (51 new to science), currently known from China.

Chapter 5 (Application of cladistics in water-mite species level systematics) reports the results of cladistic analyses on the relationships between the species of each of the seven genera. The analyses were performed by Hennig86 and results are discussed in relation to the implication for their classification and evolution. However, the monophyletic status of each genus was not tested as only one outgroup was included in each analysis. Note that some references cited in this chapter are

not listed (e.g. Kethley 1982; OConnor 1984) and Jin (1995, 1996) should be Jin Daochao (1995), which is the authors PhD thesis titled "Study on Morphology, Taxonomy and Cladistics of Hydrachnellae" (Jin Daochao, personal communication 1998).

The appendix provides collecting and slide-making techniques. Three hundred and seventy-three references are listed, but some cited in the text are missing in the list (see above). (I have not checked every cited reference in the text against the reference list.)

The quality of the illustrations needs to be improved. The use of space for the plates is not economical and most plates only occupy two-thirds of the page (e.g. pp.179-186) and some only half of the page (e.g. pp. 185, 193, 254, 267,272, 296). Overall, the book is well written and well presented. Another aspect of the book which I like is that, for the non-Chinese authors, the author uses the original names of those authors, as there are different translations for a given foreign name, which has sometimes caused confusion for acarological students. For readers who can read in English but not Chinese, the English text (pp. 325-338) will be very helpful. It is very pleasing to see another ignored group of mites being studied in China. This book contributes to our knowledge on water mites not only for the Chinese but also for the world fauna.

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**Kim, J.-S., Qin, T.-K. &
Lindquist, E. E.** Description of
Tarsonemus parawaitei, a new species of
Tarsonemidae (Acari: Heterostigmata)
associated with orchard and ornamental
plants in Europe, Australia and New
Zealand. 1-28

New Member

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Systematic & Applied Acarology Society

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ACAROLOGY BULLETIN (ISSN 1361-8091) is a newsletter of the Systematic and Applied Acarology Society (c/o Dr. Z.-Q. Zhang, Dept. of Entomology, The Natural History Museum, London SW7 5BD, UK). It is published in four issues in 1998 (January, April, July and October) and is distributed free to members of SAAS. All correspondence should be sent to the Editor Dr. Renjie HU, Institute of Arthropodology and Parasitology, Georgia Southern University, P.O. Box 8056, Statesboro, GA 30460, USA. (FAX 912 681-0559; E-mail renjieh@gasou.edu). Non-member subscribers should order the journal from Magnolia Press (P.O.Box 8773, London SW7 4ZF, UK). Subscription rate for vol. 3 in 1998 is £6 or \$10 plus £4 or \$6 for post by air.