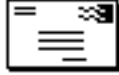


# Acarology Bulletin

Online at: [www.nhm.ac.uk/hosted\\_sites/acarology/saas/ab.html](http://www.nhm.ac.uk/hosted_sites/acarology/saas/ab.html)

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

## President's message



Dear colleagues:

It is my great pleasure to present you this concluding issue of *Acarology Bulletin* in 1999. As a member service newsletter, *Acarology Bulletin* has brought you acarological news and information four times a year for the last four years. We thank the editors and other members who have helped the production of this newsletter.

*Acarology Bulletin* is now online on the World Wide Web. It is the first acarological journal made available online free to everyone on the internet. Some members are not aware of its web presence yet. Please check out:

[www.nhm.ac.uk/hosted\\_sites/acarology/saas/ab.html](http://www.nhm.ac.uk/hosted_sites/acarology/saas/ab.html)

Zhi-Qiang Zhang



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SAAS Officers & Executive Committee	
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## Acarology and Member News

**SAAS meeting: An informal meeting of SAAS officers** was held on 18 October 1999 at Fudan University, Shanghai, China. Dr. **Zhi-Qiang Zhang**, Prof **Lairong Liang**, Prof **Tinghuan Wen** and Prof **Huiqin Dong** attended the meeting and discussed several SAAS and SAA matters, especially the procedure for organizing the preparation of the Check List of Chinese Acari and the addition of new members to the Executive Committee.

**Dr Zhi-Qiang Zhang** visited Fujian Academy of Agricultural Sciences (Fuzhou) during 3-14 October for collaborative projects with Yanxuan Zhang and Jianzhen Lin on the biology and control of mites on agricultural and forestry crops. While in Fuzhou, Dr Zhang also met Dr Qinghai Fan of Fujian Agricultural University and discussed matters relating to the production of *Systematic and Applied Acarology*.

**Dr. Xiao-Yue HONG** of Nanjing Agricultural University, China is now at the Faculty of Agriculture, Ibaraki University, Japan on a two-year post-doctoral research program sponsored by the Japanese Ministry of Education, Science, Sports and Culture (Monbusho). He is working with **Dr. Tetsuo Gotoh** on the spider mites. Dr. Gotoh worked on plant mites and natural enemies, especially those in Tetranychoida, and has published more than 60 high-quality articles on the subjects. He is on the editorial board of several internationally

influential journals including *Applied Entomology and Zoology*, and *Japanese Journal of Applied Entomology and Zoology*. He is also one of the three SAAS Japanese members. The other two Japanese SAAS members are **Shozo Ehara** (Tottori) and **Akio Takafuji** (Kyoto University).

The Acarological Society of Japan was founded in January 1992, replacing the Japanese Association for Acarology which was established in 1973. There are three honorable Japanese members, 8 formal members from USA, Korea and Turkey, and 238 formal members in Japan, as of the end of 1998. The Society now publishes the *Journal of the Acarological Society of Japan*. The president and vice-president of the Society (1998-2000) are Professors Yasuo Chinzei and Akio Takafuji, respectively. The SAAS has exchanged its journal SAA with *Journal of the Acarological Society of Japan* since 1997.

**Generous Japanese acarologists:** a severe earthquake hit Taiwan in September 1999. The center of the quake was in Nantou County and Taichung city in which the Taiwan Provincial Agricultural Research Experiment Station, National Chung Hsing University and the Natural Science Museum are located. These units are well-known for acarological research in Taiwan. Some famous Japanese acarologists are now sponsoring a fundraising movement among acarological arena in Japan to support the acarological research in Taiwan. These people include Akio

Takafuji (Kyoto University), Hiroshi Amano (Chiba University), Tetsuo Gotoh (Ibaraki University), Yasumasa Kuwahara (Kyoto University), Yutaka Saito (Hokkaido University), and Masaru Osakabe (Agricultural Research Center of Japanese Ministry of Agriculture).

**Predacious phytoseiid mites research in Japan reviewed:** A review on the biology of predacious phytoseiid mites in Japan was conducted by Hiroshi Amano. According to the author, at least 135 research papers were published by Japanese acarologists between 1974 and 1997, which constitutes 15.6% of all studies in the field of agricultural acarology. Most research on Japanese species has been focusing on their biological capacity and efficiency as natural enemies of spider mites. However, no species was successfully mass-produced and commercially available. The author suggested that both basic and applied studies of Japanese species are currently needed because of the public interest in phytoseiid mites as biocontrol agents.

***Tetranychus kanzawai*** Kishida: The mode of diapause inheritance in the kanzawa spider mite, *Tetranychus kanzawai* (Acari: Tetranychidae) was investigated by Akio Takafuji and Kouichi Goka. The results showed that the "diapause" of *T. kanzawai* is a dominant character over "non-diapause" and that the diapause character is controlled by simple Mendelian inheritance. This inheritance mode is different from that of *T.urticae*, in which the diapause is under polygenic control

with a strong maternal effect involved. (Akio Takafuji and Kouichi Goka, 1999. *App. Entomol. Zool.*, 34(3): 299-302). In addition, the life cycle and inter-plant movement of *T. kanzawai* Kishida between crop hosts and border vegetation in pea-watermelon fields were studied by Masahiko Morishita and Akio Takafuji (*Jpn. J. Appl. Entomol. Zool.*, 1999, 43(3): 129-134).

***Tetranychus urticae*:** A high rate of abnormally-stained fruits was caused by introducing the two-spotted mite into bagged fruits of the Japanese pear cv. Nijisseiki, especially during July and August. According to Hiroki Izawa, this is a new type of damage called "gray stain". Many punctures made by the spider mites were observed on the stained lesions using scanning electron microscopy (Hiroki Izawa, 1999. *Jpn. J. Appl. Entomol. Zool.*, 43(2): 97-99.)

***Oligonychus ununguis*** (Jacobi): Six populations of *Oligonychus ununguis* (Jacobi) collected in China and Japan were investigated for host plant range and reproductive compatibility by Xugen Sun and Hiroshi Amano. They found that the populations collected from conifers had limited survival on leaves of deciduous broad-leaved trees and vice versa. Furthermore, populations collected on chestnut in China and Japan had some degree of reproductive incompatibility in both directions, producing male-biased sex ratios in progeny. (Xugen Sun and Hiroshi Amano, 1999. *Jpn. J. Appl. Entomol. Zool.*, 43 (3): 123-127.)

**Mounting methods and mite body**

**characters:** Several body characteristics of flattened and non-flattened specimens of *Schizotetranychus longus* Saito and *S. miscanthi* Saito were investigated to identify characters that accurately reflect mite body size regardless of mounting methods. According to the authors, the distance (DL1) between the bases of P1 (dorsal propodosomal seta) and CL (clunal seta) was a relatively stable character reflecting body size under both mounting methods, and appears to be the best character to estimate body length. Body width was reflected by DW1 alone, the distance between the bases of paired P3 setae (dorsal propodosomal seta). DW1 is a stable character under both mounting conditions and is suitable for estimating the body width. (Yutaka Saito, Kotaro Mori and Anthony R. Chittenden, 1999, *Appl. Entomol. Zool.*, 34: 383-386.) (X.-Y. Hong)

The office of the journal, *Acarologia*, has moved to Montpellier, after 39 years at the Natural History Museum in Paris. The new director is Michel Bertrand and the editors are:

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acarolog@.mnhn.fr

Subscriptions are now handled by:  
Service des publications  
Université Montpellier III  
Route de Mende  
34199 Montpellier cedex 05  
France  
(serpub@alor.univ-montp3.fr)

**The 5th International Conference on Pest in Agriculture** (organized by Association Nationale de Protection des Plantes ANPP) will be held Agricultural College in Montpellier (South of France) during December 7-9, 1999. All information and forms for paper and poster proposals will be found on the Website: <http://www.anpp.asso.fr>

For more information, e-mail [anpp@anpp.asso.fr](mailto:anpp@anpp.asso.fr), or contact: Serge KREITER, Campus ENSA-M / INRA, Département d'Ecologie et Protection des Plantes, UFR d'Ecologie animale et de Zoologie agricole, Unité d'Acarologie, 2, Place Pierre VIALA, 34060 MONTPELLIER cedex 01, FRANCE  
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**The 4<sup>th</sup> EURAAC Symposium,** "*Acarid Phylogeny and Evolution: Adaptations in mites and ticks*" will be held in Siena, Italy, from July 24-29, 2000. For more information, check out the www page or contact Fabio Bernini, EURAAC President.  
(e-mail: bernini@unisi.it).

This year's **Annual Meeting of the Acarological Society of America** will be jointly held with the Annual Meeting of the Entomological Society of America to be held in Atlanta, Georgia, during December 12-16. The following are the programs for both Informal and Formal Conference:

*Informal Conference*  
*Acarology, Submitted Papers*  
*Sunday morning, December 12, 1999*

Exact times to be arranged (all papers 10 minutes with 2 minutes for questions)

**Moderators: Hans Klompen,** Department of Entomology, Ohio State University, Columbus, Ohio 43212-1192  
**H. Joel Hutcheson,** Department of Microbiology, Colorado State University, Fort Collins, Colorado 30523

**ASA Student Competition Papers**  
Cytokine responses of C3H/HeN mice infested with *Ixodes scapularis* or *Ixodes pacificus* nymphs.

**George B. Schoeler,** LT, MSC, USN, Department of Entomology and Plant

Pathology, Oklahoma State University, Stillwater, OK 74078; Stephen A. Manweiler, Metropolitan Mosquito Control District, St. Paul, MN; Stephen K. Wikel, Department of Entomology and Plant Pathology, Oklahoma State University.

Phylogenetics of Trigynaspida: Morphology, molecules, classification, hosts, and biogeography. BY **Cheol-Min Kim** & Hans Klompen, Department of Entomology, Ohio State University, Columbus, OH 43212

Oribatid mites (Acari: Oribatei) as vectors of *Anoplocephala manubriata*, cestode of the asian elephant (*Elephas maximus*) in Kerala, India. BY **F. Michael McAloon,** Department of Biology, Georgia Southern University, Statesboro, GA 30460, M.A. Haq, Department of Zoology, Calicut University, Kerala, India, and Daniel V. Hagan, Georgia Southern University, GA.

Immunomodulation of BALB/c mice by *Amblyomma americanum* feeding. BY **Katya Ledin,** Swarnjit Singh & Don Champagne, Department of Entomology, University of Georgia, Athens, GA 30602.

Potential for *Wolbachia* as a drive mechanism in genetic improvement programs. BY **Lisa E. Olsen** & Marjorie A. Hoy, Department of Entomology & Nematology, University of Florida, Gainesville, FL 32611.

Phylogenetic relationships of neo-tropical Atopomelidae (Acari: Listro-phoroidea) BY **Ashley Dowling** & Barry M. OConnor, Museum of Zoology, University of Michigan, Ann Arbor, MI 48109.

### Submitted Papers

Predation on bamboo spider mite nests by the phytoseiid, *Neoseiulus fallacis*: Feces attraction and nest door entry or random break-in burglary? BY **Paul D. Pratt** & Brian A. Croft, Department of Entomology, Oregon State University, Corvallis, OR 97331.

Systematic relationships of the Lohmanniidae (Acari: Oribatida). BY **Roy A. Norton**, SUNY College of Environmental Science & Forestry, 1 Forestry Drive, Syracuse, NY 13210.

Phylogeny and historical ecology of the genus *Rhizoglyphus* (Acari: Acaridae). BY **OConnor, B.M.** & A. Diaz, Museum of Zoology, University of Michigan, Ann Arbor, MI 48109.

Status of *Rhizoglyphus* mites (Acari: Acaridae) as agricultural pests. BY **Diaz, A.** & B.M. OConnor, Museum of Zoology, University of Michigan, Ann Arbor, MI 48109; C.J. Eckenrode, Department of Entomology, New York State Agricultural Experiment Station, Cornell University, Geneva, NY 14456.

Mate-guarding behavior in *Naiadacarus arboricola* (Acari: Astigmata: Acaridae), a

mite restricted to water-filled treeholes. BY **Norman J. Fashing**, Department of Biology, College of William and Mary, Williamsburg, VA 23187.

Molecular systematics of the *Ixodes ricinus* species complex. BY **H. Joel Hutcheson** & William C. Black IV, Department of Microbiology, Colorado State University, Fort Collins, CO 30523.

Infection of Connecticut white-footed mice with the agents of Ehrlichiosis, Babesiosis, and Lyme Disease. BY **Kirby C. Stafford III**, Louis A. Magnarelli, & John F. Anderson, Connecticut Agricultural Experiment Station, P.O. Box 1106, New Haven, CT 06504; Robert F. Massung, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, GA 30333; Jacob W. Ijdo, Department of Medicine, Yale University School of Medicine, New Haven, CT 06520.

Genetic diversity of *Borrelia burgdorferi* sensu lato in California. BY **R.S. Lane** and M.A. Peot, Division of Insect Biology, 201 Wellman Hall, University of California, Berkeley, CA 94720.

A fossil argasid tick from New Jersey amber. BY **Hans Klompen**, Department of Entomology, Ohio State University, Columbus, OH 43212.

*Formal Conference*

*Acarology Symposium*

*Sunday Afternoon, December 12, 1999*

*"Emerging Diseases Associated with  
Ticks and Mites"*

**Organizers and Moderators: Lance A. Durden and James E. Keirans**, Inst. of Arthropodology & Parasitology, P. O. Box 8056, Georgia Southern University, Statesboro, GA 30460

12:30 p.m. Human ehrlichiosis. BY **W. L. Nicholson**, Viral & Rickettsial Zoonoses Branch, Centers for Disease Control & Prevention, 1600 Clifton Rd., Atlanta, GA 30333.

1:00 p.m. Ticks and spotted fever group rickettsiae: New findings throughout the world. BY **L. Beati**, Viral & Rickettsial Zoonoses Branch, Centers for Disease Control & Prevention, 1600 Clifton Rd., Atlanta, GA.

1:30 p.m. Transmission of the agent of canine hepatozoonosis by ticks. BY **S. A. Ewing**, J. S. Mathew, A. A. Kocan & R. J. Panciera, Dept. of Infectious Diseases & Physiology, College of Veterinary Medicine, Oklahoma State University, Stillwater, OK 74078.

2:00 p.m. Drug resistant scrub typhus in northern Thailand. BY **K.J. Linthicum**, International Affairs (Army), Dept. of Defense - Global Emerging Infections System, Division of Preventive Medicine, Walter Reed Army Inst. of Research, Washington DC 20307-5100.

2:30 p.m. BREAK.

2:45 p.m. Mites and the millenium: Emerging infectious diseases. BY **M. A. Houck**, Dept. of Biological Sciences, Texas Tech. University, Lubbock, TX 79409.

3:15 p.m. Serologic evidence of rickettsialpox infection among intravenous drug users in inner-city Baltimore. BY **J. A. Comer**, Viral & Rickettsial Zoonoses Branch, Centers for Disease Control & Prevention, 1600 Clifton Rd., Atlanta, GA.

3:45 p.m. House dust mites: Allergic disease and asthma. BY **G. R. Needham**, E. Glass, Z. Bu, Acarology Laboratory, Dept. of Entomology, The Ohio State University, 484 W. 12th Ave., Columbus, OH 43210 and D. McNeill, Dept. of Internal Medicine, College of Medicine & Public Health, The Ohio State University, Columbus, OH 43210.

4:15 p.m. ASA BUSINESS MEETING

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## New Book

David E. Walter (1999) **Mites: Ecology, Evolution and Behaviour**. Sydney, University of New South Wales Press and Wallingford, CABI Publishing. 322 pp. Hard cover. ISBN 0-86840-529-9 (UNSW Press) ISBN 0-85199-375-3 (CABI)

Further information: [cabi@cabi.org](mailto:cabi@cabi.org)

## Contents of Journals

### Experimental & Applied Acarology

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Badii, M.H., McMurtry, J.A. and Flores, A.E. Rates of Development, survival and predation of immature stages of *Phytoseiulus longipes* (Acari: Mesostigmata: Phytoseiidae). pp. 611-621.

Bonato, O. and Gutierrez, J. Effect of mating status on the fecundity and longevity of four spider mite species (Acari: Tetranychidae). pp. 623-632.

Leite, G.L.D., Picanço, M., Guedes, R.N.C., and Zanuncio, J.C. Influence of canopy height and fertilization levels on the resistance of *Lycopersicon hirsutum* to *Aculops lycopersici* (Acari: Eriophyidae). pp. 633-642.

Mori, H., Saito, Y, and Tho, Y.P. Co-operative group predation in a sit-and-wait Cheyletid mite. pp. 643-651.

Okabe, K. Vectoring of *Hypocrea nigricans* (Hypocreales: Hypocreaceae) by three fungivorous mite species (Acari: Acaridae). pp. 653-658.

Medina, L.M. and Martin, S.J. A comparative study of *Varroa jacobsoni* reproduction in worker cells of honey bees (*Apis mellifera*) in

England and Africanized bees in Yucatan, Mexico. pp. 659-667.

Koveos, D.S. and Broufas, G.D. Diapause induction and termination in eggs of the fruit tree red spider mite *Panonychus ulmi* in northern Greece. pp. 669-679

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Estrada-Peña, A. and Jongejan, F. Ticks feeding on human: A review of records on human-biting Ixodoidea with special reference to pathogen transmission. pp. 685-715

Gray, J.S., Kirstein, F., Robertson, J.N., Stein, J., and Kahl, O. *Borrelia burgdorferi* sensu lato in *Ixodes ricinus* ticks and rodents in a recreational park in south-western Ireland. pp. 717-729

Tälleklint-Eisen, L. and Eisen, R.J. Abundance of ticks (Acari: Ixodidae) infesting the western fence lizard *Sceloporus occidentalis*, in relation to environmental factors. pp. 731-740

Duso, C. and Vettorazzo, E. Mite population dynamics on different grape varieties with or without Phytoseiids released (Acari: Phytoseiidae). pp. 741-763

Finney, S.K. and Elston, D.A. Natural attachment duration of adult female ticks *Ixodes uriae* (Acari: Ixodidae) on free-living adult black-legged

kittiwakes *Rissa tridactyla*. pp. 765-769

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**Childers, C.C. and Abou-Setta, M.** Yield reduction in "Tahiti" lime from *Panonychus citri* feeding injury following different pesticide treatment regimes and impact on the associated predacious mites. pp. 771-783

**Van Rijn, P.C.J. and Tanigoshi, L.K.** Pollen as food for the predatory mites *Iphiseius degenerans* and *Neoseiulus cucumeris* (Acari: Phytoseiidae): Dietary range and life history. pp. 785-802

**Pallini, A., Janssen, A., and Sabelis, M.W.** Spider mites avoid plants with predators. pp. 803-815

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**Redondo, M., Fragoso, H., Ortíz, M., Montero, C., Lona, J., Medellín, J.A., Fría, R., Hernández, V., Franco, R., Machado, H., Rodríguez, M., and**

**De La Fuente, J.** Integrated control of acaricide-resistant *Boophilus microplus* populations on grazing cattle in Mexico using vaccination with Gavac TM and Amidine treatments. pp. 841-849

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**Radovsky, F.J. and Gettinger, D.** Acanthochelinae, new subfamily (Acari: Parasitiformes: Laelapidae), with redescription of *Acanthochela chilensis* Ewing and description of a new genus and species from Argentina. pp. 77-90

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**Castagnoli, M., Liguori, M. and Simoni, S.** Effect of two different host plants on biological features of *Neoseiulus californicus* (McGregor). pp. 145-150

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### **Journal of the Acarological Society of Japan.**

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**Fujita, H., S. Yamamoto, S. Noda and Y. Watanabe.** Survey of tick fauna and tick-borne microorganisms in the mainland of

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**Ashfaq, M. M., Sarwar and S. Akbar.** Two new species of the genus *Glyphanoetus* Oudemans (Acari: Histiostomatidae). pp.21-26

**Kuriki, G. and S. Yoshida.** Faunal study of oribatid mites in Ozegahara in central Japan in relation to vegetation type and soil moisture. pp.27-40

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**Fujimoto, K.** The seasonal change of the host-feeding activity of *Haemaphysalis longicornis* adults (Acari: Ixodidae) observed under experimental conditions. pp.47-50

**Takafuji A. and T. Gotoh.** Diapause characteristics of some *Tetranychus* (Acari: Tetranychidae) mites of Okinawa Island. pp.51-54

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### **New members**

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### Acarology Bulletin

Help needed in distribution in 2000

Each issue of *Acarology Bulletin* was distributed by Dr Renjie Hu for members outside China in last year and the first half of this year. From next year, we need assistance in the distribution of *Acarology Bulletin* to members outside China. If you can distribute some copies (5, 10, 20 or more) to other members in your country or region, please inform

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### Acknowledgements

*SAAS thanks the following members  
 for their financial contributions  
 of \$10 or more to SAAS:*

R. Haitlinger (Poland)  
 Zhi-Qiang Zhang (New Zealand)

# Systematic & Applied Acarology Society

Application for membership

*Systematic and Applied Acarology Society* (SAAS) aims at promoting the development of acarology in China and fostering cooperation among acarologists in China and other parts of the world. Anyone interested in the study of mites and ticks is welcome to join SAAS. There is no membership fee. A voluntary contribution of US\$10 is welcome. Members receive free of charge SAAS newsletter (*Acarology Bulletin*) and can publish free of charge in the journal *Systematic and Applied Acarology* (SAA). Members are advised to subscribe to SAA.

Name: \_\_\_\_\_ Title (Prof / Dr / Mr / Mrs / Miss /Ms) \_\_\_\_\_

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Research Interest: \_\_\_\_\_  
 \_\_\_\_\_

Please send the completed application form to :

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