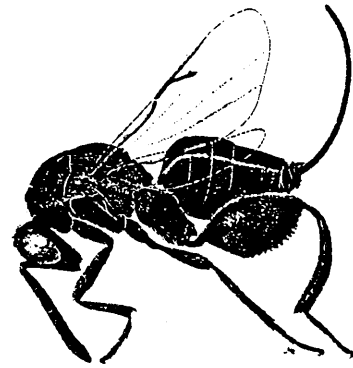


Chalcid Forum

A Newsletter to Promote Communication Among Chalcid Workers

No. 17 - October 1994



Chalcimerus borceai Steffan & Andriescu

Editors of this Issue:

E. E. Grissell and M. E. Schauff
Systematic Entomology Lab., USDA
U. S. National Museum NHB 168
Washington, D.C. 20560

Alternate Editors

Gary Gibson and John Huber
BRD/CLBRR
K. W. Neatby Bldg., CEF
Ottawa, Ontario K1A 0C6 Canada

Editors' Notes

After a somewhat lengthy delay, we are happy to report that *Chalcid Forum* is back in business, at least for another year. Because a great amount of time has elapsed since the last issue (nearly a year and a half), much of the news we have is somewhat (out)dated. Sorry about that, but we are doing the best we can. What do you expect for free? If more people sent more news we would send the issue out earlier, but hardly anyone tells us anything and so we sit here waiting for your exciting input while we make no output. That can be reversed, of course, but only if you have more input. The drawing for the masthead was done by Mary Lou Cooley of the Systematic Entomology Laboratory (retired).

Research News

Don Horning [Wyllella, RMB 902, Loomberah via Tamworth NSW 2340, Australia]: "Arnold's article on notauli [*Chalcid Forum* 16:5-7] was most interesting, especially the references to William Sharp Macleay. We have a lot of *Chalcis* and *Leucospis* from Cuba, with labels in his handwriting. We also have *Polistes* from there, also labeled by him. So the identity of the *Polistes* could be checked, if needed. Interestingly, the paper was published in the middle of Macleay's stay in Cuba - 1826 - 1835."

K. Surekha [Division of Entomology, Indian Agricultural Research Institute, New Delhi, India]: In addition to a change of address, Dr. Surekha informs us: "I am continuing my postdoctoral research on

"Biosystematic studies on the Eulophidae of the Indian subcontinent."

P. M. Sureshan [Zoological Survey of India, Kerala, India]: In addition to a change of address, Dr. Sureshan informs us: "I have submitted my Ph.D. thesis recently on the systematics of Pteromalidae (Pteromalinae) from Kerala, India. Officially I am now concentrating on the identification of chalcidoid collections available in our station brought from various surveys and at the same time selected Pteromalidae for detailed systematic studies. In this connection I am ready to send Indian chalcids for comparison on request in future."

Felix Manuel Fontal Cazalla

[Museo Nacional de Ciencias Naturales, Madrid, Spain]: "I'm a student who has started doing research on the Encyrtidae at the Museo Nacional de Ciencias Naturales in Madrid helped by Dr. Jose Luis Nieves Aldrey."

David Rivers [Department of Entomology, University of Wisconsin-Madison, Wisconsin, USA]: "My research interests deal with the biology of pteromalids, specifically those that parasitize cyclorrhaphs. Thus, I am very interested in the work of anyone who works with the Pteromalidae and closely related species."

R. R. Askew [Cheshire, England]: "In September 1993 I am retiring from the University of Manchester. Whilst I will continue to work part-time at the University for some time after that date, most of my entomological work will be done at home." (See new address in directory.)

Izumi Ohta [Laboratory of Insect Pest Control, Chugoku National Agri-

cultural Experiment Station, Hiroshima, Japan]: "I am now investigating the egg parasitoid *Trichogramma chilonis* Ishii."

Eiji Ikeda [Entomological Institute, Hokkaido University, Sapporo, Japan]: According to John Huber, "Mr. Ikeda will be in Ottawa for at least 6 months (July-December, and perhaps longer). He did an M.Sc. in Japan on *Chryso-charis* and wants to start a Ph.D. on Tetrastichinae of Japan when he returns to Hokkaido. He has published on *Dimmockia* and his main interest is Eulophidae. While in Ottawa he is beginning to learn the genera in various other chalcid families as well as the Eulophidae."

Scott Digweed [Department of Entomology, University of Alberta, Edmonton, Alberta, Canada]: According to John Huber, Mr. Digweed "... is doing an M.Sc. in biological control of leafmining sawflies on birch."

Sudhir Singh [Plant Protection Division, Institute of Rain and Moist Deciduous Forests Research, Assam, India]: In addition to a change of address Dr. Singh informs us: "I am working on chalcid taxonomy since 1985 under the guidance of Prof. Man Mohan Agarwal. The topic of this work is "Taxonomic studies on parasitic micro-Hymenoptera (Chalcidoidea). This work has been published under the series: Aligarh Muslim University Zoological publication on Indian insect types, vol. XIV. Title of monograph is "Taxonomic studies on Indian encyrtid parasites from north-eastern region." Copies are ready to be dispatched to regular receivers of this publication series, but those interested in getting the

copy may write to Prof. Man Mohan Agarwal, Dept. of Zoology, A.M.U., Aligarh-202002, India. The monograph incorporates 20 new species along with some already described elsewhere (with SEM and photomicrograph illustrations). It is regretted that expected quality of the plates could not be produced (due to financial constraints), anyway they are quite discernible."

Jan-Marc Anga [Department of Entomology, The Natural History Museum, London]: "Hi, I am Jean-Marc Anga, from the Ivory-Coast, in West Africa. I am currently working on my Ph.D. thesis, investigating the phylogenetic systematics of anagyrines (Hymenoptera: Encyrtidae), parasitoids of mealybugs (Homoptera: Pseudococcidae) of economic importance. Before coming to Great-Britain, I was working on a biological control programme in my home country, with the assistance of the International Institute of Tropical Agriculture, Nigeria. I am presently at The Natural History Museum, in London, working with my supervisor Dr. John Noyes and also benefiting from the knowledge of Drs. Zdenek Bouček, John LaSalle, Andy Polaszek etc. If I can fathom the intricacies and controversies surrounding the concept of phylogenetic analysis and understand the esoteric computer programmes (Hennig86, PAUP and MacClade), I shall complete my thesis and undertake the revision of the African species of the genus *Lepitomastix* or *Anagyrus* and include it in the thesis. I am planning to remain in London until June 1995. After my Ph.D., I intend to go back home and pursue a career in insect taxonomy."

Jian Huang [Department of Plant protection, Fujian, People's Republic of China]: I received my Ph.D. in August of 1991 [This is obviously very old news, and the Editors' fault for which they apologize abjectly. Still, the information may be of some interest. Eds.] with my thesis entitled "Systematic studies of Aphelinidae of China," in which 93 species and 17 genera of Aphelinidae are described, including 42 new species, 1 new combination, and 4 genera and 14 species which are recorded for the first time from China. Now I am

studying on biological control of citrus pests such as the citrus scales and citrus red mite, and on parasites of the scale insects, as well as systematics of the family Aphelinidae and other families of Chalcidoidea."

John M. Heraty [Systematic Entomology Laboratory, National Museum of Natural History, NHB-168, Washington, DC 20560, (202) 357-1856, fax: (202) 786-9422, e-mail:mnhen136@sivm.si.edu: "Yes, I have moved again. I have just finished a one year fellowship with the Smithsonian Institution where I was working on a generic revision of the Eucharitidae. This past June I transferred to a USDA/APHIS postdoctoral position with Mike Schauff looking at the systematics of the *Encarsia strenua* group. Here I get to try my hand with traditional morphological characters and am also delving into the world of molecular techniques. At least for the moment I will be trying some sequencing to see if there is any truth to some of the concepts of species groups in *Encarsia*. For this I would be glad to receive any specimens of *Encarsia* (live, dead or pickled) for study (especially the *strenua* group but other species will do). One comment: I am appalled at how little mounted material (especially in good condition) exists for species of *Encarsia* and the poor condition of those slides that do exist! I know they are hard to collect, and a pain to mount, but we (the chalcid community) are doing a poor job of developing collections for such an economically important group. There are vastly superior collections of eucharitids, which let's face it, are not a group that has been recognized for its economic value! Just being cute should not be the sole criterion for building our collections.

At last, there is light at the end of the rainbow. As of next July I will be assuming a position as Assistant Professor of Systematic Entomology at the University of California, Riverside. This is essentially Gordon Gordh's old position, and thankfully the department decided to continue with their tradition of chalcid workers. I will be continuing my studies of Eucharitidae, Aphelinidae, and Galapagos Chalcidoidea in the southern California sunshine. It will be a great pleasure to work with the new Col-

lection Manager at Riverside, Ser-guey Trjapitzin, who is already making great progress on cleaning up the collection.

Victor Fursov [Institute of Zoology, Ukrainian Academy of Sciences]: "I think it would be interesting to arrange something like a discussion about computer programmes of new computer advantages which can be used in chalcidology. I know that many entomologists use various software programmes for their special purposes, so it would be a good idea to discuss some problems and tasks." Dr. Fursov sent the following article, from which much specific data was edited out. If you wish more specific information you will have to contact Dr. Fursov as indicated at the end of the article.

NEW TAXONOMIC COMPUTER DATABASE "ZOO-CATALOGUE" (version 2.20.1992)

by V. N. Fursov and N. B.
Narolsky

One of the main tasks for all zoologists is the conservation and rapid use of various materials belonging to different taxa of animals. The work with modern computer database is the most effective way of dealing with the information which allows us to solve this problem. All current databases were created for specific requests of users. They are relatively complicated to used by other specialists. The software programme "ZOO-CATALOGUE" provides a wide range of special useful functions and opportunities especially for zoologists. The programme is easy to use and requires no prior computer experience.

Using the programme you can create an unlimited number of working catalogues, each of which contains generic data in alphabetical order and within each genus specific data are included in alphabetical order. The programme will automatically sort the information and create 11 separate files. All created dbf-files are comparable by "dBASE" or "FoxPro" programmes. The programme "ZOO-CATALOGUE" (without documentation) includes about 330 Kbytes.

Generic and specific data are kept in 14 Memo-areas: *Synonymia* (synonyms, bibliography, etc.); *Diagnosis* (taxonomic diagnosis, relations to other taxa); *Descriptio* (full description of taxon); *Systematic* (notes on systematics, keys); *Phylogenia* (data on phylogeny); *Oecologia* (data on ecology); *Biologia* (data on biology; larva (data on larval stage, developmental data); *Hospes* (relations with other animals); *Plantae* (relations with plants); *Oeconomic* (importance for human activity); *Type Mater* (type material); *Materiae* (material studied); *Distribut* (data on distribution, zoogeography). In each Memo-area it is possible to input 65535 bytes of information (about 34 pages of text). "SEARCH" allows searching of key words in each of the 14 names Memo-areas and the choice of a specific taxon. All data can be printed or exported to separate ASCII files by 45 main types of enquiries, which may also be combined in different order. In obtaining information for your uses you may print the data from either one, several, or all Memo-areas. You may choose to print the information for either one, several, or all taxa or for taxa chosen by key word. You may also print a list of Latin names of taxa without any data.

Anyone interested in more information about this should contact us at Department of Entomology, Institute of Zoology of Ukrainian Academy of Sciences, Kiev, Lenin Street, 15, 252601, Ukraine. FAX (044) 224-1569. FAX-modem (044) 224-8372. Tel. (044) 224-9333. We may be able to arrange to supply the copies of this programme on request if you are interested (with a reasonable cost). The programme "ZOO-CATALOGUE" (= catalog.exe on disk) without documentation takes the place of one 360K, 5.25-inch floppy disk. System requirements: IBM PC/XT/AT and clones, 360K, 720K, 1.2MB or 1.4MB disk drive or hard disk, CGA, EGA, or VGA adaptor and colour monitor, almost any printer.

Obituary

An obituary written by David Rosen for Paul DeBach appeared in the *Israel Journal of Entomology*, vol. 27:125-127 in 1993.

Museum Reports

THE CANADIAN NATIONAL COLLECTION by John Huber

The Canadian National Collection of Insects contains a large collection of chalcidoids in 70% ethanol stored in a cold room at +2°C to retard deterioration. My report is to let the chalcidological community know that this source of material exists and to encourage taxonomists to visit the CNC to extract taxa of interest for revisionary work. The collection was mainly amassed since 1985 and represents material that, for the most part, has never been stored for any length of time at room temperature. The specimens are therefore in excellent condition. Gary Gibson and I have removed specimens of most of the families for study by various specialists so the chalcidoid alcohol collection actually contains only the families Eulophidae, Pteromalidae, Eurytomidae, Chalcididae and relatively few members of the remaining families.

In addition to pure chalcidoids, the CNC has a large collection of unsorted Hymenoptera in ethanol, most of which had been stored at room temperature for up to 15 years before being placed in cold storage in 1986. Most of those specimens are quite faded but, nevertheless, there are many chalcids still useful for taxonomic study in that part of the collection. We have had the chalcids extracted from vials representing all but the Nearctic region. The Nearctic miscellaneous Hymenoptera vials have not yet been counted but there are two cabinets full, arranged by U.S. state and Canadian province.

Although many of the vials may have only 1-5 specimens many others have hundreds. A rough and probably conservative guess of 10 specimens per vial on average would give about 50,000 specimens in alcohol.

A separate article on CNC dried (pinned, pointed, or card-mounted) chalcids will be given in future, once we have some idea of their numbers and composition. The ethanol collection of pure chalcids is as follows (the number of vials follows the country):

Neotropical. Argentina - 38, Be-

lize - 21, Bolivia - 15, Brazil - 118, Chile - 176, Columbia - 32, Costa Rica - 120, Dominican Republic - 47, Ecuador - 219, Guatemala - 79, Panama and Honduras - 49, Jamaica - 59, Mexico - 297, Paraguay - 38, Peru - 49, Trinidad - 256, Suriname - 17, Venezuela - 98, West Indies - 105. **Total vials:** 1833.

Nearctic. Canada. Alberta - 93, British Columbia - 144, Manitoba - 40, Maritimes - 64, Ontario - 408, Saskatchewan - 8, Yukon - 19. **Total vials:** 776. United States. Alaska - 2, Arizona - 56, California - 183, Colorado - 14, Florida - 323, Georgia - 63, Illinois - 5, Maryland - 56, Missouri - 30, New Mexico - 21, North Carolina - 22, Oklahoma - 9, Oregon - 17, South Carolina - 77, Tennessee - 5, Texas - 337, Washington - 30, Virginia - 37, Wyoming - 6, other states - 71. **Total Vials:** 1364

Palaearctic. Czech Republic - 22, Italy and Spain - 67, Japan - 16, Sweden - 48, Oman - 33, other countries - usually fewer than 5 vials for each - 126. **Total vials:** 312.

Afrotropical (Ethiopian). Cameroun - 18, Ivory Coast - 7, Nigeria - 68, South Africa - 17, Somalia - 10, Tanzania - 3, Uganda - 18, other countries - usually fewer than 5 vials for each - 46. **Total vials:** 187.

Oriental. Malaysia (Sabah) + Indonesia (mostly Borneo) - 122, Nepal - 78, India - 30, Taiwan - 8, Thailand-Singapore - 40, other countries - usually fewer than 5 vials for each - 11. **Total vials:** 289.

Australian. Australia - 101, New Guinea - 302, other countries - usually fewer than 5 vials each - 35. **Total vials:** 438.

Total vials of pure Chalcidoidea: about 5200.

In addition there are numerous jars of old (1960's) reared material, mostly Eulophidae and Encyrtidae.

People sorting out our ethanol chalcids for particular groups to revise are welcome to keep part of the material in payment for the sorting, mounting and labeling of the specimens borrowed, but we expect primary types to be deposited in the CNC together with a certain proportion of the non-type specimens.

DOUTT TYPE MATERIAL by Mike Schauff

The following type material is now

housed in the United States National Museum: MYMARIDAE: *Arescon clarkei* Doutt 1955, female holotype; *Barypolynema medicae* Annecke & Doutt 1961, female and male paratypes; *Dahmsia australiensis* Doutt 1975, 2 female paratypes; *Lymaenon saipanensis* Doutt 1955, female holotype and male allotype; *Nesetaerus gressitti* Doutt 1955, female holotype; *Stethynium annulatum* Doutt 1947, female paratype.

TRICHOGRAMMATIDAE:
Chaetogramma occidentalis Doutt 1974, female paratype; *Epoligosita pallida* Doutt (in Doutt & Viggiani 1968), 2 female paratypes; *Lathromeris pacifica* Doutt 1955, female holotype; *Oligosita kusaiensis* Doutt 1955, female holotype; *Oligosita oceanica* Doutt 1955, ?female holotype; *Xiphogramma annecke* Doutt 1974, 2 female paratypes.

**SURVEY OF CHALCIDOIDEA IN
 COLLECTION OF
 DENVER MUSEUM
 OF NATURAL HISTORY
 AS OF FEBRUARY 1994**

Compiled by Richard S. Peigler,
 Curator of Entomology

Our collection is not very large, but it is growing at a moderate rate. I am a lepidopterist interested in parasitoids of Saturniidae moths, and have reared some of these or had them sent to me by colleagues. I also collect at light, sweeping, and with mailase trap on a small scale, so have other material from these sources. I am very interested in offering loans to other researchers. All material below is pinned or pointed, unless otherwise stated. An asterisk (*) indicates host remains are pinned with the specimen. [Ed. note: The nomenclature of these species is verbatim.]

PERILAMPIDAE

1. 3 specimens from Iowa
2. Colorado, Arapahoe Co., 30 km east of Denver, 10 July 1988, R. S. Peigler
3. *Perilampus carolinensis** Maryland, Bowie, Patuxent Wildlife Refuge, 11 June 1945, ex *Anisota senatoria* (Saturniidae), Robert T. Mitchell

CHALCIDAE

1. *Spilochalcis albifrons** Maryland, Bowie, Patuxent Wildlife

Refuge, 8 October 1951, ex *Hyposoter fugitivus* (Ichneumonidae) in *Anisota senatoria* (Saturniidae), Robert T. Mitchell

2. black chalcid (3 specimens*): South Carolina, Greenville Co., Greenville, with dates, reared from *Hyposoter fugitivus* in *Anisota peigleri* and *A. pellucida*
3. *Brachymeria ovata* (?) Texas, Burnet Co., Inks Lake State Park, 8 April 1979, R. S. Peigler, collected with Texas Parks permit.
4. *Ceratosticra meteori* 4 specimens, one with host remains, Texas, Walker County, Stubblefield Lake, with dates, reared from *Hyposoter fugitivus* from *Anisota* spp., including *senatoria*.
5. *Spilochalcis mariae*: 1 specimen: South Carolina, Greenville Co., Taylors, spring 1966, emerged from *Callosamia angulifera* cocoon (Saturniidae), R. S. Peigler, remainder of series in Los Angeles County Museum.
6. *Spilochalcis mariae*: 8 specimens, Louisiana, East Baton Rouge Parish, 14 Feb 1966, J. E. Eger, ex *Antheraea polyphemus* (Saturniidae). Others from series in LACM.
7. *Spilochalcis mariae*: 6 specimens*, Mexico, Jalisco, Jocotepec, June 1979, R. L. Halbert, parasite in cocoon of *Rothschildia jorulla* (Saturniidae). More of these in LACM; also in LACM I sent series of this parasitoid reared from cocoons of *Rothschildia lebeau forbesi* from Brownsville, Texas, area.

TORYMIDAE

1. *Monodontomeris minor*: large series from Colorado, reared in 1980s from cocoons of *Hyalophora cecropia*, hyperparasitoids on *Gambrus extrematus* (Ichneumonidae). R. S. Peigler
2. *Monodontomeris montivagus*: California, Contra Costa County, ex gall of *Quercus lobata*, S. E. Stone.
3. *Torymus californicus*: series of 50-60, California, Contra Costa County, reared from gall on *Quercus*, S. E. Stone
4. *Torymus tubicola*, 2 specimens, California, Contra Costa County, reared, S. E. Stone

PTEROMALIDAE

1. *Agiommatius attaci**: Indonesia,

Sumatra, Brastagi, Lake Toba, emerged 8 Oct 1986, ex-egg of *Attacus atlas* (Saturniidae), Ulrich Paukstadt

2. Pteromalid (?): 1 specimen: South Carolina, Greenville, 29 June 1987, R. S. Peigler

EULOPHIDAE

1. *Horismenus floridanus**: Texas, Walker Co., Stubblefield Lake, emerged 15 Oct 1976, hyperparasitoid in *Cotesia anisotae* (Braconidae), R. S. Peigler
2. Eulophids: series of 6*, Florida, Gadsden County, Interstate 10 and Apalachicola River, July 1992, hyperparasitoids in *Cotesia anisotae* (Braconidae) in *Anisota pellucida* (Saturniidae), R. S. Peigler [possibly *Horismenus floridanus*-]
3. 3 specimens, unidentified, Nevada, Clark Co., emerged May 1988 from eggs of *Hemileuca neumoegeni* (Saturniidae), Michael J. Smith
4. series of 8, cocoons attached to leaf pinned below, South Carolina, Greenville, July 1973, possibly ex-*Hemileuca nevadensis* (not native) that was being reared on same branch, R. S. Peigler
5. 1 specimen, South Carolina, Greenville, 24 June 1977, sitting on back of (attacking?) *Automeris zozine* (Saturniidae, native to Mexico) mature larva, R. S. Peigler
6. 2 specimens*-unidentified, maybe not eulophids, Arizona, Ajo, 24 January 1991, reared from eggs of *Eupackardia calleta* (Saturniidae), J. Bruce Duncan
7. Large series of over 50, some in alcohol, some pointed*: South Carolina, Greenville Co., Greenville, emerged indoors February 1994, collected December 1993, from large white egg sac of spider, R. S. Peigler
8. *Tetrastichus* sp.: one from *Anisota* egg from Stubblefield Lake, Walker Co., Texas, Sept. 1976, R. S. Peigler
9. *Tetrastichus gigas*: 15 specimens: California, Contra Costa Co., reared by S. E. Stone

EUPELMIDAE

We have large and small series, mostly with host remains (dried host

eggs pinned below), of many specimens of *Anastatus*, including *reduvii*, *semiflavidus*, and *furnissi*. These include the following localities and hosts (all Saturniidae): Colorado: *Hemileuca nevadensis*; Georgia: *Anisota consularis*; Nevada: *Hemileuca neumoeni*; Arizona: *Eupackardia calleta*; Texas: *Anisota* spp., *Agapema platensis* (host described in 1993); California: *Hemileuca burnsi* (cannot key because series is only males)

EURYTOMIDAE

1. *Eurytoma californica*: series of 14, California, Contra Costa County, reared from *Quercus lobata* gall by S. E. Stone

CYNIPIDAE

Tremendous series of *Andricus californicus*, about 750 specimens, all individually pinned, California, Contra Costa County, reared in 1974 and 1975, all presumably from *Quercus* galls, by S. E. Stone.

The above material from Contra Costa County, California, reared by Stephen E. Stone, is voucher material for his masters thesis. I am in the process now of trying get a copy of that thesis on file here since we have the voucher material. Some of the above chalcidoid host/parasitoid records are published in my papers on Saturniidae. Loan requests are welcome. Please address them to: Dr. Richard S. Peigler, Curator of Entomology, Department of Zoology, Denver Museum of Natural History, 2001 Colorado Boulevard, Denver, CO 80205-5798. Phone 303-370-6442, FAX 303-331-6492.

Book Notice

Torymidae and Eurytomidae (Hymenoptera: Chalcidoidea)

of the Indian Subcontinent, a monograph by Prof. T. C. Narendran, Dept. of Zoology, University of Calicut, Calicut University P.O. 673635, India. 500 pp. (January 1994). An illustrated monograph providing the latest revision of the families Torymidae and Eurytomidae from the Indian subcontinent, including 58 genera and 287 species. Included are taxonomy, brief accounts of biology, morphology and distribution, illustrated dichotomous keys to genera and species along with detailed diagnoses of taxa, new synonyms and

new combinations, and a host parasite catalogue. Not priced; postage, packing and forwarding charges by way of 'International Money Order' only for \$10.00 (U.S.) should be sent to the author. Please do not send cash (currency or cheque or draft. Send only 'International Money Order.'

The following errata to this book have been provided by T. C. Narendran (Continued from page 499 of the book):

Page 15: Paragraph 4, line 4: change 'reclassified the family Toryminae' to 'reclassified the family Torymidae.'

Page 64: Add after line line 19 (from top) 'Holotype: F. INDIA, Kerala, C. U. Campus, T. C. Narendran, 21.x.1988 (DZCU). Paratype: 1M. of same data as that of holotype.'

Page 99: Add under Remarks of *Systolema*: Etymology: Arbitrary combination of letters, feminine gender.

Page 101: Add under Remarks of *Aximogastroma*: Etymology: Arbitrary combination of letters, feminine gender.

Page 105: Add under Remarks of *Fronsoma*: Etymology: Arbitrary combination of letters, feminine gender.

Page 110: Add under line 9 from top: Etymology: *Townesoma*: Named after the late Dr. Henry Townes: masculine gender.

Page 111: Add under Remarks of *Philippinoma*: Etymology: Arbitrary combination of letters, feminine gender.

Page 171: Paragraph 2, line 5, change 'ecarinate' to 'carinate'.
Page 473: Line 18 from top: insert after 'taxonomy of' "the British species of the genus *Eudecatoma* Ashmead'.

Miscellaneous

A Check for Czech Haček Inspired by Bouček: A Primer for the MacChallenged by Eric Grissell

I recently finished my world review of Toryminae and was preparing the camera-ready copy when it became apparent that I could not produce the haček (ˇ) found in the most-often cited author in my manuscript

(Bouček of course). What to do? I use MacWrite Pro word processing (how antediluvian, I know) which has many foreign diacritic marks, but not a true haček that can be placed over a letter. (It has an upside down carrot that you can type, but it will not automatically go over any letter — or at least no one could make it do so.) After consultation with our local MacArtist, a nationwide font supplier, and a local Czech expatriate, the conclusion was that I would have to obtain a special Czech font for the Mac or else pen in each haček by hand. I don't think so! I played with the resident carrot for a while (created by shift-option "t") to no avail. It would not go over any letter at all. Then I discovered a "character spacing" option under the "Style" menu choice. It allows one to designate no space between characters. I spelled out Bouček, highlighted the "c", hit the -100 spacing and — lo and behold — the pseudo-hacek was placed right over the "e" as in Bouěk and the "c" was dropped. Back to the drawing board. I tried every combination I could think of until discovering that the only one that works is "Boucček" with only the first "c" highlighted and -100 selected. Through trial and error, I discovered that any character spacing from -40 to -100 produces the same result. From 0 to -30 will not produce the desired effect. The end result is not absolutely correct, but it apparently comes as close as possible using a Mac without the proper fonts.

Recent Literature

Compiled by John Huber, CNC
[to end July, 1994]

All titles and journal abbreviations should be checked by the reader for accuracy if they are to be quoted in scientific papers. Strictly taxonomic references are marked with an asterisk (*). Though not on chalcids, the morphological papers by Bin et al. (1992) and Gibson (1993) are noteworthy.

Ahlstrom, K.R.: McDonald, R.C. 1993.
A new species of *Pediobius* Walker (Hymenoptera: Eulophidae), associated with tettigoniid eggs. Proceedings of

- the Entomological Society of Washington 95: 527-531.
- Ahmad, M.E. & R. Singh. 1992. New host associations of chalcidoid hyperparasitoids. *J. Adv. Zool.* 13: 66-67.
- Alebeek, Van F.A.N., Rojas-Rousse, D. & Leveque, L. 1993. Interspecific competition between *Eupelmus vuilleti* and *Dinarmus basalis*, two solitary ectoparasitoids of Bruchidae larvae and pupae. *Entomologia Experimentalis et Applicata* 69 (1): 21-31.
- Al-Ghamdi, K.M., R.K. Stewart & G. Boivin. 1993. Note on overwintering of *Polynema pratensiphagum* Walley (Hymenoptera: Mymaridae) in southwestern Quebec. *Can. Ent.* 125: 407-408.
- Anonymous. 1992. New host for *Pseu- dopteromalus calandreae* (Howard) (Hymenoptera: Pteromalidae) in Puerto Rico. *J. agric., U. Puerto Rico* 76(3/4): 209.
- Arifa, N & M.A. Khan. 1991 (1992). Some new chalcid parasitoids (Hymenoptera: Eulophidae) recorded from India. *J. Bombay Nat. Hist. Soc.* 88: 428-438.
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- Address List
- Abdurahiman, V. C.
Department of Zoology
University of Calicut
Calicut University P.O. 673635
Calicut, Kerala, INDIA
- Abraham, Rudolf
Zool. Inst. und Zool. Museum
Universitaet Hamburg
Martin-Luther-King-Platz 3
2000 Hamburg 13, GERMANY
- Acquisitions Section
Department of Library Services
The Natural History Museum
London, SW7 5BD, ENGLAND
- Aeschlimann, Jean-Paul
CSIRO Biological Control Unit
335 Avenue P. Parguel
34100 Montpellier, FRANCE
- Agarwal, Mon Mohan
Department of Zoology
Aligarh Muslim University
Aligarh, UP, 202001, INDIA
- Aguiar, Alexandre Pires
Dept. of Entomology
Purdue University
1158 Entomology Hall
West LaFayette, IN, 47907-1158, USA
- Alam, S. Mashhood
Department of Zoology
Aligarh Muslim University
Aligarh, UP, 202001, INDIA
- Alaya D., P.
Ave. 19 No. 6009
Plaza c/60 y 62, Marianao 13
Ciudad de la Habana, CUBA
- Alvarado Castro, Jose Andres
Escuela Superior de Ecologia
Ap. Postal A-112
Hermosillo, Sonora, MEXICO
- Amador, Ing. Eugenio Quintana
Centro Nacional de Sanidad
Agropecuaria Autopista Nacional
Carretera Tapaste
San Jose de las Lajas
Habana, CUBA
- Andersen, Harry E.
8136 Pawtucket Dr.
Huntington Beach, CA, 92646, USA
- Anga, Jean-Marc
Dept. of Entomology
The Natural History Museum
Cromwell Road
London, SW7 5BD, ENGLAND
- Arreola Vazquez, Concepcion
Apartado Postal 341
Cod. Postal 24000
Campeche, Camp., MEXICO
- Arthur, Alfred P.
2321 Albert Ave.
Saskatoon, Saskatchewan, S7J 1K3,
CANADA
- Askew, Richard R.
5 Beeston Hall Mews
Beeston, Tarporley
Cheshire, CW6 9TZ, ENGLAND
- Assem, J. van den
Zoological Lab. RUL-Ethology
Postbus 9516
2300 RA Leiden
THE NETHERLANDS
- Austin, Andrew D.
University of Adelaide
Waite Agricultural Research Institute
Department of Entomology
Glen Osmond, SA, 5064, AUSTRALIA
- Barrows, Ed
Department of Biology
Georgetown University
Washington, DC, 20057, USA
- Baur, Hans
Attinghouseenstrasse 26
CH-3014 Bern, SWITZERLAND
- Beardsley Jr., John W.
1026 Oak Dale Lane
Arcadia, CA, 91066, USA
- Bennett, Fred D.
Department of Entomology
3103 McCarty Hall
University of Florida
Gainesville, FL, 32611, USA
- Bhuiya, Badrul Amin
Department of Zoology
University of Chittagong
Chittagong, 4331, BANGLADESH
- Bibliotheque/Library
Station de recherches
Direction generale de la recherche
Agriculture Canada
C.P. 457 St.-Jean-Sur-Richelieu
Quebec, J3B 6Z8, CANADA
- Bin, Ferdinando
Istituto di Entomologia
Facolta di Agraria
Universita degli Studi
Borgo XX Giugno
06100 Perugia, ITALY
- Bouček, Zdenek
CAB, IIE
c/o The Natural History Museum
London SW7-5BD, ENGLAND
- Bouletreau, Michel
Genetique des Populations
Universite Lyon I
43 BD du 11/11/1918
69622 Villeurbanne, FRANCE
- Broe, Rose
c/o CSIRO Dept. Entomology
Long Pocket Laboratories
Private Bag #3
Indooropilly 4068, Brisbane
AUSTRALIA
- Caltagirone, Leopoldo E.
Division of Biological Control
University of California
1050 San Pablo Avenue,
Albany, CA, 94706, USA

Cameron, Peter J.
Entomology Division
DSIR
Private Bag
Auckland, NEW ZEALAND

Cardoz Gamboa, Fernando Omar
Calle.-Lazaro de Cebreros #3211
Col. San Rafael
Apartado postal 2353
Culiacan, Sinaloa, MEXICO

Carpenter, James M.
Department of Entomology
American Museum of Natural History
79th at Central Park West
New York, NY, 10024, USA

Carver, Mary
Commonwealth Sci. & Industrial
Research Organization
Div. of Entom. GPO Box 1700
Canberra ACT 2601, AUSTRALIA

Casas, Jerome
Institut fuer Phytomedizin
ETH-Zentrum/CLS
CH-8092 Zurich, SWITZERLAND

Cave, Ronald D.
Escuela Agricola Panamerica
Dept. of Plant Protection
P.O. Box 93
Tegucigalpa, HONDURAS

Cazalla, Félix Manuel Fontal
Consejo Superior de Investigaciones
Cientificas
Museo Nacional de Ciencias Naturales
José Gutieérrez Abascot
2.28006 Madrid, SPAIN

Cazzuoli, Adriano
via Mazzone No. 11B
41037 Mirandola (MO), ITALY

Ceballos Vazquez, Margarita
Centro Nacional de Sanidad Agro.
Apartado Postal 10
San Jose de las Lajas
La Habana, CUBA

Chao, Hsiu-Fu, Director
Biological Control Research Inst.
Fujian Agricultural College
Fuzhou, Fujian
PEOPLE'S REPUBLIC OF CHINA

Charernsom, Kosol
National Biol. Control Res. Center
Kasetsart University
P.O. Box 9-52
Bangkok, 10900, THAILAND

Chassain, Chantal
Genetique des Populations
Universite Lyon I
43 BD du 11/11/1918
69622 Villeurbanne, FRANCE

Chiappini, Elisabetta
Istituto di Entomologia
Facolta di Agraria
Univ. Cattolica del Sacro Cuore
Piacenza, 29100, ITALY

CIRPON
Casilla de Correo (Central) No. 90
4000 San Miguel de Tucuman
ARGENTINA

Claridge, M. F.
Department of Zoology
University College
PO Box 78
Cardiff, CF1 1XL, WALES

Clark, William H.
Museum of Natural History
College of Idaho
Caldwell, ID, 83605, USA

Compton, Steve
Department of Pure & Applied Biology
The University of Leeds
Leeds, LS2 9JT, ENGLAND

Coote, Lonny
Dept. of Entomology
Royal Ontario Museum
100 Queen's Gate
Toronto, Ontario, M5S 2C6, CANADA

Copland, M. J.
Division of Biological Sciences
Wye College
(University of London) Wye
Ashford, Kent, ENGLAND

Coulson, Jack R.
USDA ARS Insect Biocontrol Lab.
Rm. 3 Bldg. 004 BARC-W
10300 Baltimore Ave.
Beltsville, MD, 20705-2350, USA

Cowan, David P.
Dept. of Biological Sciences
Western Michigan Univ.
Kalamazoo, MI, 49008, USA

Crandall, Robert H.
1992 N. Mar Vista Ave.
Altadena, CA, 91001, USA

Dahms, Edward C.
Parliament House

Brisbane, Queensland
AUSTRALIA 4000

Dang, Xin-de
Forest Research Inst. of Shaanxi Prov.
Yangling, Shaanxi
PEOPLE'S REPUBLIC OF CHINA

Darling, D. Christopher
Department of Entomology
Royal Ontario Museum
100 Queen's Park Crescent
Toronto, Ontario, M5S 2C6, CANADA

Davis, Andrew J.
Population Biology Baines Wing
Dept. of Pure & Applied Biology
The University
Leeds, LS2 9JT, ENGLAND

Davis Jr., Lloyd
USDA ARS (Fire Ant Project)
P.O. Box 14565
Gainesville, FL, 32604, USA

Delucchi, V.
Ecole Polytechnique Federal
Universitatstrasse 2
Zurich, SWITZERLAND

Delvare, Gerard
CIRAD
2477 Avenue du Val de Montferrand
BP5035-34032, Montpellier, FRANCE

DeSantis, Luis
Facultad de Ciencias Naturales y Museo
Entomologia
Paseo del Bosque
1900 LaPlata, ARGENTINA

Dessart, Paul
Institut Royal des Sciences Naturelles
de Belgique
Dept. d'Entomologie
Rue Vautier 29
B-1040 Bruxelles, BELGIUM

Diaz-Azpiazu, M.
Dpto. de zoologia
Fac. de Biologia
Universidad de La Habana, CUBA

DiGiulio, Jim
Department of Entomology
Oregon State University
Corvallis, OR, 97331, USA

Digweed, Scott
Dept. of Entomology
2-27 Earth Sciences Bldg.
University of Alberta
Edmonton, Alberta T5N 0M6, CANADA

- Doane, John F., Head IPM Section
Research Station Agric. Canada
107 Science Cr.
Saskatoon, Saskatchewan, S7N OX2,
CANADA
- Doganlar, Miklat
Entomoloji Anabilim Dali Baskanligi
Cumhuriyet Universitesi
Tokat, TURKEY
- Domenichini, G.
Direttore Istituto Di Entomologia
Facolta di Agraria
Univ. Cattolica del Sacro Cuore
Via Emilia Parmense 84
29100 Piacenza, ITALY
- Donev, Atanas
Chair of Zoology
University of Plovdiv
4000-Plovdiv, BULGARIA
- Dzhanokmen, K. A.
Institute of Zoology
Academy of Sciences
Alma-Ata, Kazakhstan, CIS
- Early, Marianne
Plant Pest Control Branch
Hawaii Department of Agriculture
P.O. Box 22159
Honolulu, HI, 96822-0159, USA
- Editorial Manager, BIOSIS
Garforth House
54 Micklegate
York, North Yorkshire, YO1 1LF
ENGLAND
- Ehler, Lester E.
Department of Entomology
University of California
Davis, CA, 95616, USA
- Ejchel, Fulvia
Museu de Zoologia da Univ. de Sao Paulo
Caixa Postal 7172
01051 - Sao Paulo, BRASIL
- Evans, Greg
Entomology and Nematology
Dept.
University of Florida
Gainesville, FL 32611
- Farooqi, S. I.
Division of Entomology
Indian Agricultural Research Institute
New Delhi, 110012, INDIA
- Fernandes, G. Wilson
- Departamento de Biologia Geral
Caixa Postal 2486
ICB/ Univ. Federal de Minas Gerais
30161 Belo Horizonte - MG, BRASIL
- Fidalgo, Dr. Patricio
Fundacion Miguel Lillo
Instituto de Zoolgica
Miguel Lillo 251
4000 S.M. de Tucuman, ARGENTINA
- Finnamore, Albert T.
Provincial Museum of Alberta
12845 102nd. Ave.
Edmonton Alberta T5N OM6, CANADA
- Fischer, Maximilian
Naturhistorisches Museum Wien
Zweite Zoologische Abtl. (Insekten)
A-1014 Wien, AUSTRIA
- Fritz, Manfredo A.
Casilla Correo 539
4400 Salta, ARGENTINA
- Frommer, Saul
Department of Entomology
University of California
Riverside, CA, 92521, USA
- Fursov, Victor N.
Science Academy of the Ukraine
Dept. of Zoology
Lenina Street 15
252601 Kiev, UKRAINE
- Galloway, Ian D.
Entomology Branch
Dept. of Primary Industries
Meiers Road
Indooroopilly, 4068, AUSTRALIA
- George, R. S.
Marris House Nets
54 Richmond Park Avenue
Queen's Park
Bournemouth, BH8 9DR, ENGLAND
- Gerling, Dan
Tel Aviv University
Department of Zoology
Ramat Aviv 69978
Tel Aviv, ISRAEL
- Gibson, Gary
Canadian National Collection
BRD/CLBRR
K.W. Neatby Bldg. CEF
Ottawa, Ontario, K1A OC6, CANADA
- Gijswijt, M. J.
Wessel Ten Damstraat 2
1244 RA Ankeveen
- THE NETHERLANDS
- Glogowski, Stanislaw
Polish Academy of Sciences
Institute of Zoology
ul. Wilcza 64
00-679 Warsaw, POLAND
- Goodman, Tom
120 Sutton Court Road
Chiswick
London, W4 3EQ, ENGLAND
- Gordh, Gordon
University of Queensland
Dept. of Entomology
St. Lucia, Queensland, 4072
AUSTRALIA
- Graham, M. W. R. de V.
5 Salisbury Crescent
Oxford, OX2 7TG, ENGLAND
- Greiler, Hans-Joachim
Fachgebiet Agrarökologie
Georg-Augusts-Universität
Waldweg 26
D-37073 Göttingen, GERMANY
- Grissell, E. Eric
Systematic Entomology Laboratory
c/o U. S. National Museum NHB 168
Washington, DC, 20560, USA
- Gupta, Virendra K.
Dept. of Entomology
University of Florida
Gainesville, FL, 32611-0620, USA
- Habu, A.
1-15-19
Minami-machi
Warabi-shi
Sapporo, JAPAN
- Hagen, Kenneth
Division of Biological Control
University of California
1050 San Pablo Avenue
Albany, CA, 94706, USA
- Halstead, Jeff
Staff Biologist
Kings River Conservation District
4886 E. Jensen Avenue
Fresno, CA, 93725, USA
- Hamerski, Michael R.
103 Botany and Zoology Building
1735 Neil Ave.
Columbus, OH, 43210, USA

- Hanson, Paul E.
Escuela de Biología
Universidad de Costa Rica
San Pedro San Jose, COSTA RICA
- Hansson, Christer D.
Zoological Institute
Dept. of Systematic Zoology
Helgonavagen 3
S-223 62 Lund, SWEDEN
- Harten, Anthony van
Projecto Luta Integrada (GTZ)
Centro de Estudios Agrarios
Caixa Postal 128 - Praia
CABO VERDE (W. AFRICA)
- Hawkins, Bradford A.
Imperial College at Silwood Park
Dept. of Pure & Applied Biology
Ascot, Berkshire, SL5 7TA ,ENGLAND
- Hayat, Mohammad
Aligarh Muslim University
Dept. of Zoology
Aligarh 202 002, INDIA
- Heraty, John M.
Systematic Enomology Lab. USDA
U.S. National Museum, NHB 168
Washington D.C., 20560, USA
- Hernandez Lopez, Luis Roberto
Departamento de Investigaciones
Museo Nacional de Historia Natural
La Habana 2, CUBA
- Herthvtzian, E. K.
Zoological Institute
Academy of Sciences
Erevan 44
Paruyr Sevakstr. 7, Armenia, CIS
- Heydon, Steve L.
Bohart Museum
Department of Entomology
University of California
Davis, CA, 95616, USA
- Hirose, Yoshimi
Institute of Biological Control
Faculty of Agriculture
Kyushu University
Hakozaki Fukuoka, 812, JAPAN
- Hoelmer, Kim Alan
USDA APHIS PPQ
Phoenix Plant Methods Center
c/o Irrigated Desert Res. Sta.
4151 Highway 86
Brawley, CA, 92227, USA
- Horning Jr., Don S.
Wyllella
RMB 902
Loomberah via Tamworth 2304, New
South Wales, AUSTRALIA
- Huang, Da-wei
Institute of Zoology
Academia Sinica
7 Zhongguancun Lu
Haitien, Beijing, 10080
PEOPLE'S REPUBLIC OF CHINA
- Huang, Jian
Department of Plant Protection
Fujian Agricultural College
Fuzhou, Fujian
PEOPLE'S REPUBLIC OF CHINA
- Huber, John
Canadian National Collection
BRD/CLBRR
K.W. Neatby Bldg.
Central Experimental Farm
Ottawa, Ontario, K1A 0C6, CANADA
- Huggert, Lars
Zoological Institute
Department of Systematics
Helgonavagen 3
S-223 62 Lund, SWEDEN
- Ikeda, Eiji
Entomological Institute
Faculty of Agriculture
Hokkaido University
Kita 9 Nisi
Kita-Ku Sapporo 060, JAPAN
- Islam, S. Shahiful
Department of Zoology
Aligarh Muslim University
Aligarh, UP, 202 001, INDIA
- Jarzembowski, A.
Principal Keeper of Natural Sciences
Borough of Brighton
The Booth Museum of Natural History
Dyke Road, Brighton, BN1 5AA
ENGLAND
- Jefa de Seccion Hemeroteca
Centro de Informacion Geo-Biologica
NOA
Fundacion Miguel Lillo
Miguel Lillo 251
S. M. de Tucuman, 4000, ARGENTINA
- Jeerapong, Lanan
Department of Agricultural Extension
Insect Subdivision
Bangkhen, Bangkok, 10900, THAILAND
- Jensen, Peter Bonde
University of Aarhus
Inst. of Zoology & Zoophysiology
Zoological Lab.
Aargus-C DK8000, DENMARK
- Johnson, David W.
USDA/ARS
1700 SW 23 Drive
Gainesville, FL, 32604, USA
- Johnson, Norman F.
Collection of Insects & Spiders
1735 Neil Avenue
Ohio State University
Columbus, OH, 43210, USA
- Jongema, Y.
Dept. Entomology
Agricultural Univ.
Wageningen 6700 EH
THE NETHERLANDS
- Joseph, K. J.
Department of Entomology
College of Horticulture
Kerala Agriculture University
Kerala, 680 654, INDIA
- Kalina, Vladimir
Vyzkumny Ustav Lesnický
Vysoka skola zemedelska
Kostelec n. Cern l. nr. Praha,
CZECHOSLOVAKIA
- Kamijo, Kazuaki
Hokkaido Forest Experiment Station
Koshunai
Bibai Hokkaido 079-01, JAPAN
- Khlopunov, E. N.
Kaluga Paedagogical Institute
Department of Zoology
Stepana Rasina 26
Kaluga, 248023, CIS
- Kling, Richard P.
Dept. Environmental Resources
Div. Forest Pest Management
34 Airport Drive
Middletown, PA, 17057-5080, USA
- Kostadinov, D.
Laboratory of Biological Control
5 Shose Bankja Str.
Sofia, 1731, BULGARIA
- Kostyukov, V. V.
All Union Institute for the Biological
Method of Plant Protection
Kishinev
Moldavia, CIS

- Kretzschmar, Sonia
Fundacion Miguel Lillo
Miguel Lillo 251
4000 San Miguel de Tucuman
ARGENTINA
- Kuhlmann, Michael
Am Stockpiper 1
D-4730 Ahlen, GERMANY
- Kumashiro, Bernarr
Plant Pest Control Branch
State of Hawaii Dept. Agriculture
P.O. Box 22159
Honolulu, HI, 96822-0159, USA
- Lal, Beche
Division of Plant Quarantine
N.B.P.G.R. (I.A.R.I. Campus)
New Delhi, 110012, INDIA
- Larter, N. J.
Imperial College Field Station
Silwood Park
Ascot, Berkshire, SL5 7PY, ENGLAND
- LaSalle, John
CAB International Inst. of Entomology
56 Queen's Gate
London SW7 5JR, ENGLAND
- LeBeck, Lynn M.
Department of Entomology
University of Hawaii at Manoa
3050 Maile Way
Honolulu, HI, 96822, USA
- Li, Chang-fang
Dept. Plant Protection
South China Agr. University
Guangzhou, PEOPLE'S REPUBLIC OF CHINA
- Li, Xueliu
Department of Plant Protection
Zhejiang Agricultural College
Hangzhou, Zhejiang, PEOPLE'S REPUBLIC OF CHINA
- Liao, Ting-shi
Beijing Institute of Zoology
Academia Sinica
7 Zhongguancun
Haitien, Beijing
PEOPLE'S REPUBLIC OF CHINA
- Librarian
Nederlands Entomol. Verenigen
Plantage Meddenlaan 64
1018 DH
Amsterdam, THE NETHERLANDS
- Librarian
- Royal Entomological Society of London
41 Queen's Gate
London, SW7 5HU, ENGLAND
- Librarian
Natural History Museum
Smithsonian Institution
Washington, DC, 20560, USA
- Library
Plant Research Centre
Central Experimental Farm
Ottawa, Ontario, K1A 0C6, CANADA
- Library
Brooklyn Botanic Garden
1000 Washington Ave
Brooklyn, NY, 11225, USA
- Lim, Kiok-Puan
Newfoundland Forestry Centre
Forestry Canada
P.O. Box 6028
St. John's, Newfoundland, A1C 5X8,
CANADA
- Lin, K. S.
Department of Applied Zoology
Taiwan Agricultural Research Institute
189 Chung-cheng Road
Wufeng Taichung Hsien
Taiwan, 431, REPUBLIC OF CHINA
- Lin, Nai-quan
Institute of Biological Control
Fujian Agricultural College
Fuzhou, Fujian, PEOPLE'S REPUBLIC OF CHINA
- Lin, Norman
1487 East 37th Street
Brooklyn, NY, 11234, USA
- Ling, Zuo-Pei
Sichuan Natural Resources Institute
Chengdu, Sichuan, PEOPLE'S REPUBLIC OF CHINA
- Maheshwari, Girish
c/o J. C. Agarwal
F-519 Kamla Nagar
Agra, 282005, INDIA
- Malik, Kulsum F.
Department of Zoology
University of Karachi
Karachi-32, PAKISTAN
- Mani, M. S.
Marine Biology Section
Zoological Survey of India
Off Santhome High Road
Madras, 600 028, INDIA
- Masner, Lubomir
Biosystematics Research Centre
Agriculture Canada
K.W. Neatby Bldg.
Ottawa Ont. K1A 0C6, CANADA
- Menezes Jr., Ayres
Depto. Zoolgia
Univ. Federal do Parana Cx Postal 19020,
81.504 Curitiba PR, BRASIL
- Mihajlovic, Ljubodrag
Faculty of Forestry
Kneza Visaslava 1
11030 Beograd, YUGOSLAVIA
- Miller, Jeffrey C.
Department of Entomology
Oregon State University
Corvallis, OR, 97331, USA
- Miller, Terry D.
Department of Entomology
Washington State University
Pullman, WA, 99164-6432, USA
- Mills, Nick J.
Div. of Biological Control
University of Calif.
1050 San Pablo Ave.
Albany, CA, 94706, USA
- Miura, Kazuki
Entomological Laboratory
Faculty of Agriculture
Kyushu University
Fukuoka, 812, JAPAN
- Monetti, Norma Cristina
Depart. de Patologia Vegetal, (INTA)
Casilla de Correos 25
1712 Castelar
Prov. de Buenos Aires, ARGENTINA
- Moratorio, Mario S.
Dept. Entomology
University of California
Riverside, CA, 92521, USA
- Moser, John C.
USFS Southern Forest Exp. Sta.
2500 Shreveport Highway
Pineville, LA, 71360, USA
- Mukerjee, M. K.
School of Entomology
St. John's College
Agra, 282002, INDIA
- Murakami, Yozo
Faculty of Agriculture
Kyushu Univeristy
Fukuoka, 812, JAPAN

Myartseva, S. N.
Institute of Zoology
Turkemenian Academy of Sciences
Engels Str. 6
Ashkabad, Turkmenistan, 744000, CIS

Nadel, Hannah
Environmental Biology
University of Guelph
Guelph, Ontario, N1G 2W1, CANADA

Nagaraja, Hulikal
No. 233 (Old 51) 8th Main Road
16th Cross Malleswaram
Bangalore, 560 055, INDIA
Nagarkatti, S.
1325 Central Drive
Erie, PA, 16505, USA

Nalepa, Christine A.
Biological Control Laboratory
North Carolina Dept. of Agriculture
P.O. Box 27647
Raleigh, NC, 27611, USA

Napompeth, Banpot
Natl. Biological Control Research Center
Kasetsart University
P.O. Box 9-52
Bangkok, 10900, THAILAND

Narendan, T. C.
Department of Zoology
University of Calicut
Calicut, Kerala, 673 635, INDIA

Nasrollahi, Abbas Ali
Iranian Res. Org. for Science & Technol.
P.O. Box 15815-3538
Tehran, 15815, IRAN

Nichols, Barry S.
7004 Ethan Allen Way
Louisville, KY, 40272, USA

Noort, Simon van
Dept. Zoology & Entomology
Rhodes University
Grahamstown, 6140, SOUTH AFRICA

Nordlander, Goran
Swedish Univ. of Agricultural Sciences
Dept. of Plant & Forest Protection
Div. of Forest Entom. - P.O. Box 7044
S-750 07 Uppsala, SWEDEN

Noyes, John
Dept. of Entomology
The Natural History Museum
Cromwell Road
London, SW7 5BD, ENGLAND

Ohta, Izumi
Laboratory of Insect Pest Control

Chugoku National Agric. Exp.
Nishifukatsu 6-12-1 Fukuyama
Hiroshima 721, JAPAN

Orzack, Steven
Department of Biology
University of Chicago
Chicago, IL, 60637, USA

Paik, Jong Cheol
Dept. Agric. Biology
Suncheon National University
Suncheon, 540-070,
REPUBLIC OF KOREA

Paik, Woon Hah
99-22 Seodun-dong
Suweon, 170,
REPUBLIC OF KOREA

Pang, Xiongfei
Department of Plant Protection
South China Agricultural College
Guangzhou,
PEOPLE'S REPUBLIC OF CHINA

Panis, Andre
Station de Zool. et de Lutte Biol. INRA
Route de Biot
06560 Valbonne, FRANCE

Parkman, J. Patrick
Department of Ent. & Nematol.
3085 McCarty Hall
University of Florida
Gainesville, FL, 32611, USA

Pelov, V.
Laboratory of Biological Control
5 Shose Bankja Str.
Sofia, 1731, BULGARIA

Pendas Martinez, Fernando
CENSA
Apartado Postal 10
San Jose de Las Lajas
La Habana, CUBA

Perez-Lachaud, Gabriela
Universite Paul Sabatier
Centre de Rech. en Biol. du
Comportement
118 route de Narbonne
31062 Toulouse Cedex, FRANCE

Pilipyuk, V. I.
Lazarevskaja Experimental Station
All-Union Inst. of Plant Protection
354100 Sochi L-101, Russia, CIS

Pinto, John D.
University of California
Department of Entomology

Div. Bio. Control
Riverside, CA, 92521-0314, USA

Pintureau, Bernard
Inst. Nacional des Sciences
Appl. de Lyon - Dept. of Biologie
20 Ave. Albert Einstein
69621 Villeurbanne Cedex, FRANCE

Polaszek, Andrew
Institute of Entomology
56 Queen's Gate
London SW7 5JR, ENGLAND

Prinsloo, Gerhard L.
Plant Protection Research Institute
Dept. of Agriculture & Water Supply
Private Bag X134
Pretoria 0001, SOUTH AFRICA

Qiu, Shibang
Chief, Biological Control Laboratory
Chinese Academy of Agricultural
Sciences
30 Bai Shi Qiao Road
Beijing
PEOPLE'S REPUBLIC OF CHINA

Rasnitsyn, Alexander P.
Palaeontological Institute
Profsoyuzna ul. 113
117321 Moscow, Russia, CIS

Rasplus, Jean-Yves
CNRS, Laboratoire de Biologie
et Genetique Evolutives
Bat 13 Equipe INRA
F-91198 Gif-sur-Yvette Cedex, FRANCE

Ren, Hui
Guangdong Entomological Institute
105 Xingang west Road
Guangzhou, 510260
PEOPLE'S REPUBLIC OF CHINA

Rivers, David
Dept. of Entomology
237 Russell Labs
1630 Linden Dr.
University of Wisconsin - Madison
Madison, WI, 53706, USA

Rivnay, Tova
Department of Entomology
Museum of Comparative Zoology
Harvard University
Cambridge, MA 02138, USA

Rodriguez Perez, Mario A.
Facultad de Ciencias Biologicas
Universidad Autonoma de Nuevo Leon
P.O. Box 2790
Monterrey, NL, MEXICO

- Rose, Michael
Department of Entomology
Texas A&M University
College Station, TX, 77843-2475, USA
- Rosen, David
Hebrew University of Jerusalem
Levi Eshkol School of Agriculture
Faculty of Agriculture P.O. Box 12
Rehovot 76-100, ISRAEL
- Rozanov, L. P.
Uzbek Quarantine Laboratory
Tashkent, Uzbekistan, CIS
- Ruberson, John R.
Department of Entomology
Comstock Hall
Cornell University
Ithaca, NY, 14853-0999, USA
- Sahad, K. A.
Plant Protection Division
Agriculture Complex
Farmgate, Dhaka-15, BANGLADESH
- Santis, Luis De
Fac. de Ciencias Naturales y Museo
Paseo del Bosque
1900 La Plata, ARGENTINA
- Schauff, Michael E.
Systematic Entomology Lab, USDA
c/o U. S. National Museum NHB 168
Washington, DC, 20560, USA
- Sellenschlo, Udo
Hygienisches Institut
Marckmannstrasse 129a
D-20539 Hamburg, GERMANY
- Shaffee, S. Adam
Department of Zoology
Aligarh Muslim University
Aligarh, UP, 202001, INDIA
- Sharkov, Andrey V.
2471 84th St., Apt. 81
Brooklyn, NY, 11214, USA
- Shaw, Scott R.
P.O. Box 3354
University of Wyoming
Laramie, WY, 82701, USA
- Sheng, Jin-kun
Department of Plant Protection
Jiangxi Agricultural University
Nanchang, PEOPLE'S REPUBLIC OF CHINA
- Shi, Boacai
Institute of Plant Protection
Agriculture Academia of Beijing
P.O. Box 2449-19
Beijing, PEOPLE'S REPUBLIC OF CHINA
- Shi, Da-san
Shanghai Institute of Entomology
Academia Sinica
225 Chingqing Road (South)
Shanghai, 200025
PEOPLE'S REPUBLIC OF CHINA
- Singh, S. P.
Biological Control Cntr.
Natl. Cntr. Integrated Pest Management
Bellary Rd. Post Bag 2491
H.A. Farm Post
Bangalore, 560024, INDIA
- Singh, Sudhir
Plant Protection Div.
Institute of Rain and Moist Deciduous
Forest Research (IRMDFR), Na-alio
Jorhat 785 001, Assam, INDIA
- Sitdikov, Alfred A.
Zoological Institute
Academy of Sciences
Universitetskaya nabereschnaya 1
St. Petersburg, Russia, 199034, CIS
- Skinner, Samuel W.
Dept. Biology
Jordan Hall 138
Bloomington, IN, 47405, USA
- Skrzypczynska, Malgorzata
Department of Forest Entomology
Agricultural Academy
31-425 Krakow
Al. 29 Listopada 46, POLAND
- Smith, David R.
U.S. Department of Agriculture S.E.L.
c/o Smithsonian Institution
NMNH Stop Number 168
Washington, DC, 20560, USA
- Smith Jr., J. W.
Department of Entomology
Texas A & M University
College Station, TX, 77843, USA
- Sorg, Martin
Zoologisches Institut
Universitat zu Koln
5000 Koln 41 (Lindenthal)
Weyertal 119, GERMANY
- Sorokina, N.
All Union Plant Protection Inst.
Popbelskii Chanssee 3
Pushkin 6
St. Petersburg, Russia, CIS
- Specht, Harold B.
Agric. Can. Research Sta.
Kentville
Nova Scotia, B4N 1J5, CANADA
- Stanfield, Barrie
Agric. Can. Research Sta.
P.O. Box 1210
Charlottetown, PE, C1A 7M8, CANADA
- Stauffer, Robert S.
Department of Entomology
Texas A&M University
College Station, TX, 77843, USA
- Storozheva, Nadezhda
Institute of Biology and Pedology
Far East Science Centre
Academy of Sciences
Vladivostok - 22, Russia, 6900022, CIS
- Sugonyayev, E. S.
Zoological Institute
USSR Academy of Sciences
St. Petersburg, Russia, 199034, CIS
- Sullivan, Daniel J.
Department of Biological Sciences
Fordham University
Bronx, NY, 10458, USA
- Surekha, K.
Research Associate
Div. of Entomology
Indian Agricultural Research Institute
New Delhi, 110012, INDIA
- Sureshan, P. M.
Zoological Survey of India
Eranjipalam P O
Calicut 673 006, Kerala, INDIA
- Suzuki, Yoshito
Lab. of Pest Management Systems
Kyushu National Agric. Expt. Sta.
Nishigoshi
Kumamoto, 861-11, INDONESIA
- Tachikawa, Tetsusaburo
Entomological Laboratory
College of Agriculture
Ehime University
Tarumi-Cho
Matsuyama, 790, JAPAN
- Taguchi, Hidenari
Biological Laboratory
Kamokoutougatsukou Saijouchigashi
770 Saijouchou
Higashi-Hiroshima City
Hiroshima Pre, 790, JAPAN

Tang, Yu-qing
USDA ARS
Horticulture Research Lab.
2120 Camden R.
Orlando, FL, 32803, USA

Tavares, Marcelo T.
Departamento de Ciencias Biologicas
Universidade Federal de Sao Carlos
Via Washington Luiz
km 235 Caixa Postal 676
Sao Carlos, SP, 13560, BRASIL

Tejada, Luis O.
Instituto Tecnologico
Monterrey Tech.
Monterrey, NL, 64849, MEXICO

Tepedino, Vincent J.
Bee Biology & Systematics Lab.
Utah State University
UMC 5310
Logan, UT, 84322, USA

Teran, L. R.
Pje. Caseros 1050
4000 S.M. de Tucuman, ARGENTINA

Thorpe, Kevin
USDA ARS Insect Biocontrol Lab.
Bldg. 402 BARC-East
10300 Baltimore Ave.
Beltsville, MD, 20705-2350, USA

Thuroczy, Csaba
Dept. Natural History Koszeg
H-9730 KOSZEG
Jurisics Var, HUNGARY

Torre C., S. L. de la
Apdo Postal 4155, Zona Postal
Habana 4, CUBA

Triapitsyn, Serguei
Department of Entomology
Division of Biological Control
University of California
Riverside, CA, 92521-0314, USA

Trjapitzin, V. A.
Zoological Institute
Academy of Sciences USSR
St. Petersburg, Russia, 199034, CIS

Tscharntke, Teja
Zoologisches Institut
Kornblumenstasse 13
D-7500 Karlsruhe, GERMANY

Ubidillan, Rosichon
Museum of Zoology Bogor
JL. 1R Juanada No. 18
Bogor, Java, INDONESIA

USDA, Serials
Rm. 002
Nat'l Agric. Library
Beltsville Agricultural Research Center
Beltsville, MD, 20705, USA

Vargas-Piqueras, Pedro
Departamento de Proteccion Vegetal
S.I.A. Apartado de Correos 240
Cordoba, SPAIN

Verma, M.
Department of Zoology
Bareilly College
Bareilly, UP, 243 001, INDIA

Vianna Jr., Rogerio L.
Fundacao Universidade de Brasilia
Depto. Biologia Vegetal
Laboratoria de Ecologia
Brasilia - DF, CEP, 70910, BRASIL

Vidal, Stefan
Institut Fur Pflanzenkrankheiten
Universitaet Hannover
Herrenhauser Str. 2
w-3000 Hannover 21, GERMANY

Viggiani, Dr. Gennaro
Departamento de Entomologia e Zoologia
Agraria
Universita degli Studi di Napoli
Via Universita 100
80055 Portici, ITALY

Vikberg, Veli
Liinalammintie II as 6
SF-14200 Turenki, FINLAND

Vincent, David L.
USDA ARS BA PSI
Bee Research Laboratory
Building 476 BARC-East
10300 Baltimore Ave.
Beltsville, MD, 20705-2350, USA

Voegelé, Jean
Station de Zoologie et de Lutte Biol.
INRA 37 Bd du Cap
06 600 Antibes, FRANCE

Voinovich, Natalia D.
Zoological Institute
Academy of Sciences
St. Petersburg, Russia, 199034, CIS

Wahl, David B.
American Entomological Institute
3005 SW 56th Ave.
Gainesville, FL, 32608, USA

Wall, Ingmar
Entomolge

Sonnhalde 8 (Villa Rodalia Alpina)
D-78357 Muhlingen - 2, GERMANY

Walter, G. H.
Entomology Department
University of Queensland
St. Lucia 4067
Queensland, AUSTRALIA

Watsham, Anthony
St. Ignatius College
Box CH.80 Chipipite
Harare, ZIMBABWE

Werren, John H.
Department of Biology
University of Rochester
Rochester, NY, 14627, USA

Wiebes, J. T.
Rijksmuseum van Natuurlijke Historie
Raamsteeg 2 Postbus 9517
2300 RA Leiden, THE NETHERLANDS

Wijesekara, Anura
Dept. of Entomology
University of Maryland
College Park, MD, 20742, USA

Winotai, Amporn
National Biol. Control Res. Center
Kasetsart University
P.O. Box 9-52
Bangkok, 10900, THAILAND

Wisniowski, Bogdan
Museum of the Ojcow National Park
32-047 Ojcow, POLAND

Wittsack, W.
WB Zoologie
Padagogische Hochschule
Lohmannstr. 23
4370 Kothen, GERMANY

Woolley, James B.
Department of Entomology
Texas A & M University
College Station, TX, 77843, USA

Xu, Zhi-hong
Dept. Plant Protection
Zhejiang Agricultural Univ.
Hangzhou, PEOPLE'S REPUBLIC OF
CHINA

Yang, Zhong-Qi
Department of Forest Protection
Northwestern College of Forestry
Yanglingzhen Xianyang City
Shaanxi Province,
PEOPLE'S REPUBLIC OF CHINA

Yao, An-Ly A.
204-11 Itaewon-dong
Yonsan-Ku
Seoul, 140-200, REPUBLIC OF KOREA

Yashiro, Naoya
Entomological Laboratory
Agricultural Faculty
Osaka Prefectural University
Mozu-ume-machi
Sakai City, 591, JAPAN

Yasnosh, Valentina A.
Georgian Institute of Plant Protection
Chavchavadze av. 82
Tbilisi, Georgia, 380062, CIS

Yefremova, Z.
Division of Zoology
Ulyanovsk Pedagogical Institute
Ulyanovsk, 432600, CIS

Yoshimoto, Carl M.
Entomology Research Centre
Research Branch Agriculture
Ottawa, Ontario, K1A 0C6, CANADA

Yousuf, Mohammad
Plant Protection Div.
Arid Forest Res. Inst.
16/512 Chopasani Housing Board
Jodhpur (Rajasthan), 342-008, INDIA

Zerova, M. D.
Institute of Zoology
Ukrainian Academy of Science
Lenina Str. 15
252 601 Kiev, Ukraine, CIS

Zolnerowich, Gregory
Texas A&M University
Department of Entomology
College Station, TX, 77843-2475, USA

Zuparko, Robert L.
80 Eucalyptus Rd.
Berkeley, CA, 94705, USA