

Metaleptea

The ORTHOPTERISTS' NEWSLETTER

Vol. 16, No. 1

THE ORTHOPTERISTS' SOCIETY

July 1995

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A MESSAGE FROM THE EDITOR

It has been a long year for me. My wife has gone through the same illness that Reg Chapman went through, but after recovering from that, she came down with another form of cancer, requiring still another set of difficult chemotherapy treatments, which finally terminated about three weeks ago. She came through all of her treatments successfully, but the toll on emotions, physical energy, family stress, and work efforts (i.e., mine) have been a heavy price to pay for all of us. I thank you all for your patience, while I dealt with all of these personal problems.

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I have submitted the *Proceedings* for final publication. It, too, took a considerable effort. The final product, which will be published as a special issue of the *Journal of Orthoptera Research*, should be in circulation in the very near future. I am proud of its contents and the high quality of the papers included therein. I foresee changes that will be made in the upcoming meeting in Australia that I think will shorten the turn-around time between submission of manuscripts and final publication of the *Proceedings*. You will hear a lot more about this in the next issue of *Metaleptea*, which will provide a complete update of the Australia Meeting, which should be extremely exciting for all of those planning on attending.

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An item of extreme sadness: Dr. Ricardo Ronderos, our second President, from La Plata, Argentina, died recently (3 March 1995), after a prolonged illness. News of his death came too late for us to remark on his great career as one of the leading orthopterists of our generation. A memorial is in preparation for the next issue.

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Another item of great importance to our Society is the retirement of Stanley Gangwere from his longtime position as Executive Secretary of the Orthopterists' Society. Absolutely no one has been more instrumental than Stan as contributing to the success of this Society.

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Stanley K. Gangwere, our Society's Executive Secretary since 1980, requested to be relieved of his duties so he could have more time for various orthopteran projects in progress. Stan was one of the originators of our Society, when it began as the Pan American Acridological Society in 1978. A meeting of some 50 orthopterists had taken place earlier in Argentina in 1976, where the formation of a society was discussed. This meeting was made possible in part because of a National Science Foundation grant Dr. Gangwere obtained for many of the participants to travel to Argentina. He was the first president (1978) and then assumed the position of Executive Secretary (which included the duties of treasurer) until 1988, when Dr. Roger Bland became the treasurer.

continued on page 2

WALKINGSTICK DATABASE

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Dr. Gangwere's devotion to our Society has been exemplified by the many hours he has spent weekly and monthly conducting Society business on matters of which most of us are unaware: maintaining a membership and mailing list that must be updated regularly; preparing and mailing billing statements, ballots and announcements from this list; and corresponding on a continuous basis to answer questions from the membership.

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Dr. Gangwere formulated, edited and published our original by-laws and their revisions, and assisted in securing publishers for the Proceedings of our meetings and the Journal of Orthoptera Research. For our triennial meetings he had budgetary and agenda responsibilities and secured grants to subsidize meeting costs. Dr. Gangwere obtained Latin American Training Grants in 1979 and 1981 from the Tinker Foundation and many other sources to assist financially Latin American acridologists. The grants allowed them to come to the United States to attend one of our triennial meetings followed by several months of training at various research stations and universities in the United States and Canada. Similarly, he obtained matching funds from the SOROS foundation to bring eastern European investigators to our last meeting in Hawaii. Dr. Gangwere also organized and arranged for the contingent representing the United States to attend the Symposium on Phylogeny and Evolution of Orthopteroidea held at Siena, Italy, in 1986. Clearly, we owe him a great debt of gratitude for his many years of service to the Orthopterist's Society which have enabled it to grow and function as a viable professional society.

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As a last reminder, check out the last page of this issue and submit your applications to attend to next meeting of the Orthopterists' Society in Cairns, Australia. It promises to be the best meeting yet!

David A. Nickle
Editor, Orthopterists' Society



THE PHASMID DATABASE

P. E. Bragg
51 Longfield Lane
Ilkeston, Derby, UK

Introduction

The Phasmid Database consists of three computer files which have been developed over a period of three and a half years. It originally started as a small scale project to list all the names and authors of Bornean Phasmida but has been extended to include the name, date, publication, and recorded localities of all the described phasmids in the world.

The Phasmid Database is the most up-to-date source of information on all the described species of Phasmids. As a computerized system, it offers far more flexibility than

traditional formats. At the moment *The Phasmid Database* is by no means completed, but it has reached the stage where I consider that it will be of use to other people and I have therefore decided to make it generally available.

The Phasmid Database is made up of three database files. The **species** file contains the original generic and specific names, authors, dates, publication titles and page references, and type localities for all described Phasmida. The **genera** file contains all valid genera, including the author, date, subfamily, and tribe, for each genus. The **subfams** file contains the families and subfamilies. The **genera** and **subfams** files can be linked together; at a later stage it will also be possible to link the species file with them. The taxonomy of the families, subfamilies, and tribes is a slightly corrected form of that used by Bailey and Gailil (1977).

Due to the original concept and some early difficulties in obtaining copies of important monographs, the data entered in the early stages were often limited and resulted in some errors. Many, if not all, of these early errors have since been corrected. Whenever possible, the original publications have been consulted; accumulation of papers and checking is an on-going process.

Distribution data is made up of the original locality and subsequent published records. All localities are recorded in one field of the database; the original localities are followed by a full stop and the subsequent localities which are separated by commas. The later records have been added by searching through over 1000 papers in my own collection. My collection of papers consists mainly of large works by any authors, papers by authors who produced numerous papers concerned with distribution of phasmids (e.g., Hebard, Gunther, Rehn) and papers which deal specifically with South East Asia. There is a bias towards papers published in English.

Uses

The **species** file should prove of use to museums and individuals for a variety of purposes. Nothing comprehensive has been published since Brunner von Wattenwyl and Redtenbacher's work (1906-1908), which is now very much out of date; because of its comprehensive nature, it is likely to continue to be the starting point for identification for some time. The **species** file can provide information on the 2,916 described species; of these, 21% (624 species) have been described since the 1908 monograph. The **genera** file can suggest related genera which may require investigation. The most obvious uses of the database are to:

1. check post-1908 species, or those which were overlooked by Brunner and Redtenbacher and are therefore not in their keys.
2. find literature, descriptions, drawings, etc., on recently described species.
3. produce geographical distribution lists.

However, it can be used for more trivial pursuits, such as counting the number of species described by particular authors, or the number of species described per decade.

[Editor's Note: This article is comprehensive, but space constraints restricts us from publishing it in its entirety in this issue. An update of the article will appear in the next issue of *Metaleptea*].

THE EXECUTIVE DIRECTOR'S COMMENTS

Jeffrey A. Lockwood

*A New
Executive
Director!*

With great trepidation and anticipation, I accepted the position of Executive Director of the Orthopterists' Society in February. I hope to rise to the challenge. I anticipate my share of false starts, mistakes, and oversights (some of which I have already demonstrated to the Board and a few unfortunate, but understanding, members.) However, these errors have arisen and probably will continue to arise from my sincere efforts to act in the best interests of our intellectual community.

§

*Future Plans . .
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My greatest current challenge is to figure out the internal workings of the Society (budgets, billing, membership, grants program, publications, etc.). In this regard, the Board has been tremendously patient, helpful, forgiving, and, above all, communicative. My respect for Stan's energy and dedication grows daily. In the midst of all this, I am particularly excited about the tremendous potentials for a fantastic JOR issue on our Hilo Proceedings, plans for an absolutely unforgettable meeting in Cairns (1997), an expanding sponsored member program to extend our network to all corners of the globe, and a rejuvenated and vital grants program to stimulate young orthopterists. For the future, I see the highest priorities as increasing membership while maintaining and enhancing the quality of the essential services of the Society to its members (e.g., publications, newsletters, international and informal meetings, etc.).

§

*Requests for
Ideas*

At this junction, I am asking every member to provide input regarding ideas for new initiatives. I am here to serve the Society and its members, but this is only possible if you tell me what is needed, where we must head, and how we can better address your concerns.

§

*Communications
Changes.*

To this end, I have taken two initiatives. First, along with the next rounds of membership billing, I will be sending a survey to members asking for your evaluation of current services and your ideas regarding new roles for the Society. Second, in order to facilitate communications within the Society, I will be assembling an enhanced membership listing, to include regular and electronic mail addresses and phone and FAX numbers. I will be soliciting this information from each member, along with the aforementioned survey. This expanded membership directory should allow us to communicate more easily, and I look forward to sending this to all members within a year (i.e., once all members have provided the essential information). However, please do not wait for me to undertake these two simple initiatives before letting me know your ideas, brainstorm, criticisms, and endorsements. Whenever you have a matter that you would like to bring to my attention, feel free to contact me at the following address:

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COMMENTS

AN UPDATE ON ERNEST TINKHAM'S TYPES

Previously (Weissman 1988), I published on the whereabouts of the types of the 106 species and subspecies of orthopteroid insects described by Ernest R. Tinkham. I had found 57 (54%) holotypes. During the intervening years, Dr. Norman D. Penny of the California Academy of Sciences (CAS), has meticulously gone through the thousands of specimens donated posthumously to the CAS by Mrs. Marion Tinkham. I am happy to report that Dr. Penny found intact, three more holotypes, all marked with handwritten, folded, pencil labels "HOLOTYPE".

These taxa are: *Cibolacris samalayuca*
Schistocerca chinatiensis
Plagiostira mescaleroensis

Additionally, the head of the holotype male and the intact allotype female of *Platyoplus gilaensis* were found. David C. Lightfoot and I will designate a new type when we review the southwestern decticides in a future publication.

References: Weissman, D.B. 1988. The orthopteroid collection of Ernest R. Tinkham. *Metaleptea* 10 (2): 71-82.

David B. Weissman
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MEMBERS' NEWS

L. Barrientos: I am now working as a researcher and lecturer at the Technical Institute of Higher Education in Ciudad Victoria, Mexico. I am doing research on the geographic distribution and bioacoustics of *Pterophylla* katydids of Mexico.

Martin Baumgart: I would like to inform the Orthopterists' Society about the publication of my dissertation on alternative control methods against *Zonoceras variegatus* (Pyrgomorphidae), using plant extracts of neem. The results, summarized in both English and French, could be of interest to those studying biological control of locust and grasshoppers.

Battal Ciplak: I have completed my PhD thesis on the Orthoptera of Malatya District (Turkey) and am continuing taxonomic and biogeographic studies on Turkish Orthoptera. At the moment I have been working as a full-time staff member in the Biology Department of the Inonu University in Malatya, Turkey.

L. H. Field: My research centers on 1) sound production and communication in New Zealand wetas (*Stenopelmata*) and 2) sensory physiology/biophysics of insect chordotonal organs and multiterminal stretch

receptors. Whenever I travel to Singapore, I work with Enrico Sismondo on the acoustic funnels made by giant jungle crickets. You can read all about New Zealand wetas in the March, 1994 issue of *New Zealand Geographic*, including an article I wrote on the acoustic world of wetas!

C. Gillott: I spent the period from September, 1993 to March, 1994, in the Taxonomy and General Biology Section, Division of Entomology, CSIRO, in Canberra, Australia, preparing the second edition of my textbook *Entomology*. While there, I utilized the expertise of many individuals, notably Pres. David Rentz, who graciously commented on and provided important literature for several of the orthopteroid orders. The book manuscript was shipped to the publisher (Plenum, New York) in September, 1994, and publication is expected in 1995.

C. Huang: I am interested in the systematics, geographic distribution, and feeding habits of grasshoppers. I have published a paper of the geographic distribution of *Sphingonotus* in China and another on the animals of Lonqui Mountains (including a fauna of 2,127 species in 1,450 genera, 289 families, 58 orders, and 15 classes). Of these there is one new genus and 9 new species of Orthoptera.

R. Lavigne: As of September, 1994, I retired from the University of Wyoming, after 35 years of teaching and research. I was given Professor Emeritus status and still maintain my office in the Plant, Soil, and Insect Sciences Laboratory. I am currently travelling in Australia, but I expect to return to Laramie next summer.

D. A. Nickle: Once again, I will be studying termites, katydids, and orthopteroids in the Peruvian Amazon, as part of my ongoing Earthwatch Project. This summer, for the first time, I will be getting up into the rainforest canopy: collecting and observing katydids for the first time at higher elevations of the rainforest.

Eamonn O'Toole: I am a graduate student in the Zoology Department of the University of Hawaii. My thesis research is focussed on the physiological evolution of mechanisms of water balance maintenance in crickets of the genus *Caconemobius*; it touches on several aspects of climate effects on phenotypic evolution, adaptive radiation, and speciation. I am also interested in other native cricket species, particularly regarding climatic limitations with respect to their distribution. I plan to compare the variability in water loss rates and cuticular lipid composition both within species of *Caconemobius* and between *Caconemobius* and native species complexes whose distribution appears to be strongly limited by water availability. I am now collaborating with Drs. Frank Howarth and Fred Stone. If you know of other researchers who are performing similar work, please send me their names. I would also appreciate any information that you might have regarding possible sources of funding for my research.

R. E. Pfadt: The *Field Guide to Common Western Grasshoppers* appeared as a second edition in January, 1995. The biology of 39 species of grasshoppers are treated, along with color illustrations of nymphal, adult, and eggs stages of each species.

J. D. Spooner: I have a Sona-Graph 6061-A with a bad mark level circuit. The machine records and plays back well. This machine is available for parts, or I would like to secure a working Sona-graph 6061A, or I would like to receive non-working 6061A's for parts. The manufacturer will not repair mine. My telephone # is (803) 648-6851.

Jan Wieringa: I am a PhD student in plant taxonomy. My main interest in Orthoptera lies now with African Orthoptera, especially those from the tropical rainforest belt. I have been collecting in Gabon twice, and I will be collecting soon in Cameroon. For those interested in African material for a particular group for a revision, please contact me. I am interested in material in private collections of *Catantopinae* and *Catopteropteryx* and *Eulioptera* (Phaneropterinae) from Gabon, Congo, and Cameroon.



**PRESIDENT'S REPORT
DAVID C. F. RENTZ**



It has been a long time since we communicated. Many changes have taken place in your Society and I think you should be brought up to date. The most important change was the resignation of our Executive Director and founder of the Society, Dr. Stanley K. Gangwere. Stan had assumed the position since the inception of the Orthopterists' Society and decided that it was time to let someone else have a go, so that he could complete a few research projects prior to retirement. We owe Stan a great deal. He has carried on the business of the Society very capably and we are in a very good position because of his efforts. We have a Newsletter, Journal, Research Fund, Awards Program, and International as well as National Meetings on a regular basis. We have several hundred members and the membership is growing all the time. All of this was under Stan's tutelage. Thanks, Stan.

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At the same time that we are sad to see Stan's departure from the administrative ranks, we are happy to welcome the new Executive Director, Dr. Jeff Lockwood, of the University of Wyoming. Jeff brings an enthusiasm for the job as well as considerable organizing skills. He is already making his mark and there will be a number of changes that should benefit us all. One innovation will be to get Metaleptea onto the Internet so that the information can be dispersed more rapidly than at present. There are pluses and minuses, but we should be able to iron out all the wrinkles in due course. Jeff will welcome your suggestions on the running of the Society and the special needs you see that the Society can fill.

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We are presently working on the next International Meeting. This will be held in Cairns, Australia, from 26 to 30 October 1997. This is the best time of the year from a personal comfort point of view. Remembering that the seasons are reversed in the Southern Hemisphere and that Cairns is well north of the tropics, pleasant temperatures and little or no rain should be expected. A trip that Lyn Lowe and I took there a few years ago revealed many orthopteroids, especially after dark. We are presently working on a plan to make collecting permits easy and with a minimum of red tape. Hopefully we will succeed.

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There will be all sorts of trips planned during and after the Conference. If you ever wanted to come to Australia, this is the time to do it. You will have the opportunity to see the Great Barrier Reef, walk in the Daintree Rainforest, night and day, see some of the Outback and search caves for insects. In addition, superb sets of symposia are being planned. You have already received some preliminary information on the meeting. Here's an additional incentive.

LOGO COMPETITION

We would like to have a Logo for the 1997 meeting in Cairns. So why not try to design one. The competition will be open to all members, except Board Members. It will close on 31 December 1995. The winning entry will be chosen by the Members of the Conference Planning Committee. The prize will be an autographed copy of the book Australian Orthopteroïd Insects, which is to be released later this year. The book is a synopsis of Australian orthopteroïd insects from Orthoptera through Blattodea, Mantodea, and Phasmatodea. This will be a good primer to the trip to Australia, and with over 80 pages of color plates, it should more than whet your appetite for your adventure. So please begin thinking and drawing.

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I hope to see you at the Meeting in Cairns. Please plan to bring family and friends. There will be lots to do and see, and the weather should be just about perfect.



**1994 FINANCIAL STATEMENT
ORTHOPTERISTS' SOCIETY
(In Dollars, US Currency)**

Checking account balance Jan. 1 \$4,318.25

Receipts

Dues 4,453.00
 Publication receipts. 2,921.00
 Gifts & contributions. 1,635.00
 Interest on checking account 40.66
 Miscellaneous. 30.00
 Other (transfer from savings) 8,600.00

Total receipts \$17,679.66

Disbursements

Stationery & clerical supplies 0.00
 Stamps, mailing, & telephone 0.00
 Publication & printing 3,228.70
 Bank transfers to savings account 690.00
 Miscellaneous80.00
 Other (investments \$10,900; research awards
 \$2,400) 13,300.00

Total disbursements \$17,298.70

Receipts less disbursements 380.95

Jan. 1 balance 4,318.25

Checking account balance Dec. 31 \$4,699.21

Savings account balance Jan. 1 \$5,783.56

Deposits

Cash transfer 690.00
 Interest on savings account 91.16
 New deposits 3,591.00
 Total deposits \$4,372.44

Withdrawals

Total withdrawals 8,600.00

Deposits less withdrawals (4,227.56)

Jan. 1 balance 3,783.56

Savings account balance Dec. 31 \$1,556.00

Overall status as of Dec. 31 (=checking + savings) \$6,255.21

THE ORTHOPTERISTS' SOCIETY

**Constitution and By-Laws
as revised September 15, 1993**

Published by the Directorate of the Orthopterists' Society, c/o Department of Biological Sciences, Wayne State University, Detroit, MI 48202, USA.

**THE ORTHOPTERISTS' SOCIETY
CONSTITUTION AND BY-LAWS****CONSTITUTION****Article I****Name**

Section 1. The organization shall be known as the ORTHOPTERISTS' SOCIETY.

Article II**Objectives**

Section 1. It shall be the purposes of the Society to facilitate communication among those interested in, and concerned with, Orthopterology and to encourage collaborative research and control programs in Orthopterology among the countries of the World; to promote, conduct, and foster research and the collection of data relating to Orthopterology; to disseminate information and to promote, conduct, and foster other activities designed to increase knowledge and understanding of Orthopterology and its implications; and to provide a forum in which individuals and organizations may consult and cooperate in considering research in Orthopterology and problems relating thereto.

Section 2. It shall be the further purpose of the Society to do all of the foregoing exclusively for scientific, educational, and charitable purposes. No part of the net earnings of the Society shall inure to the benefit of any officer, director, member, or private individual (except that reasonable compensation may be paid for services rendered to or for the Society affecting one or more of its purposes); and no officer, director, member, or private individual shall be entitled to share in the distribution of any of the Society assets upon its dissolution. No substantial part of the activities of the Society shall be carrying on propaganda or otherwise attempting to influence legislation, and the Society shall not participate in, or intervene in (including the publication or distribution of statements), any political campaign on behalf of any candidate for public office. In event of the dissolution of the Society or the winding up of its affairs, the assets of the Society shall be distributed exclusively to charitable, scientific, or educational organizations which would then qualify under the provisions of Section 501 (c) (3) of the Internal Revenue Code and its Regulations as they now exist or may hereafter be amended. The Society shall not engage in any prohibited transaction as described in Section 503 of the Internal Revenue Code of 1954, nor shall it accumulate income or use or invest income in such manner as to cause denial of exemption under Section 504 of the Internal Revenue Code of 1954.

Article III**Membership**

Section 1. The membership shall include Active, Student, Emeritus, Institutional, Sponsored, Life, and Honorary classes.

Section 2. All persons interested in Orthopterology by reason of their research, teaching, or other activities may become Active Members.

Section 3. Upon retirement from active professional service, Active Members are eligible for Emeritus status providing they have a record of five years continuous dues payment. Emeritus Members shall be exempt from payment of dues and shall have all the rights and privileges of Active Members.

Section 4. Any person who is enrolled, at any level, in a recognized educational institution may become a Student Member. Student Members shall have all the rights and privileges of membership, except the vote.

Section 5. Honorary Membership may be conferred on selected members who have rendered long and distinguished service to the field of Orthopterology. Honorary Members shall be exempt from payment of dues and shall have all the rights and privileges of Active Members.

Section 6. Sponsored memberships may be available to individuals who find it difficult to join or to remain in the society because of currency or other restrictions. Their memberships are supported by the society, largely through dues payments on their behalf by Active Members.

Section 7. Life memberships are available to members who choose to make a one time, lump sum dues payment at a rate set by the Governing Board.

Section 8. Institutional memberships are available to libraries and other organizations wishing to receive the society's publications but

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having no other membership rights or privileges.

Section 9. Past Presidents and Executive Directors and the current President, Executive Director, Treasurer, and Editor of the society shall be exempt from payment of dues and shall have all the rights and privileges of Active Members.

Article IV

Officers

Section 1. The officers shall include a President, a President-Elect, an Executive Director, a Treasurer, and an Editor or Co Editors.

Section 2. The President Elect shall serve as President-Elect until the next scheduled meeting of the Society. He/she shall assume the office of President at the close of the meeting held at the end of his term as President Elect. He/she shall thereafter be exempt from payment of dues, yet shall have all the rights and privileges of Active Members.

Section 3. The Executive Director shall administer the business of the Society and serve as a member of the Governing Board.

Section 4. The Treasurer shall be responsible for receiving and dispersing Society funds and serve as a member of the Governing Board. He/she shall maintain complete records and make them available to auditors when called upon to do so.

Section 5. The Editor/ Co-Editors shall be responsible for the publications of the Society and serve on the Governing Board.

Article V

Governing Board

Section 1. The Governing Board shall conduct the business of the Society subject to decisions on policy made by the membership by mail ballot or at the regular meetings of the Society. The Board shall consist of the following members:

- * President
- *PresidentElect
- *Most immediate Past President available to serve
- *Executive Director
- * Treasurer
- *Three regional representatives selected with due regard to the membership's world distribution.
- *Editor/ CoEditors

Article VI

Publications

Section 1. The publications of the Society shall include a newsletter, a Proceedings, Occasional Papers, and a journal.

Section 2. The newsletter shall be an informal publication released on an annual, semiannual, or other basis at special times deemed necessary.

Section 3. Inasmuch as the addresses, papers presented, policy deliberations, and other business of the scheduled meetings of the Society are of interest to Orthopterists throughout the world, a Proceedings shall be published at intervals determined by the frequency of meetings.

Section 4. Occasional Papers may be published at irregular intervals at the discretion of the Governing Board.

Section 5. A formal society Journal containing research articles may be published on a semiannual or annual basis.

Article VII

Meetings, Voting, and Office Holding

Section 1. The meetings of the Society shall be held at such time and place as may be decided by the Governing Board.

Section 2. Voting and office-holding in the Society shall be restricted to Active, Emeritus, Honorary, Sponsored, and Life Members.

Section 3. Changes in policy and other matters of major importance shall require approval by at least two thirds of those voting in a mail ballot of the voting membership.

Article VIII

Amendments to Constitution

Section 1. A proposal for amendment of the Constitution may be initiated by any member of the Society. The proposal shall be presented to the Executive Director, who is obliged to submit it to the Governing Board within six months.

Section 2. The Governing Board shall consider all amendment proposals and make a recommendation to the membership. In so doing the Board is empowered to make minor changes in the proposal wording to clarify obscure language, modify details of procedure, or otherwise facilitate the purpose of the amendment.

Section 3. Within six months following action by the Governing Board, the Executive Director shall mail a copy of the proposed amendment and a ballot to all voting members.

Section 4. The President shall name an Elections Committee consisting of himself/herself, the Executive Director, and at least one other member who, after a six weeks' deadline for ballot return, will canvas the vote and announce it to the membership in the next issue of the newsletter.

Section 5. A proposed amendment shall be adopted effective the date on which the ballots are counted if approved by two-thirds or more of those voting. If approved by less than two-thirds the amendment shall be lost and the existing wording of the Constitution maintained.

BY-LAWS

Article I

Membership

Section 1. Membership in the Society (except Honorary) begins on the date at which the applicant is approved for membership by the Governing Board through the Directorate. Membership rights shall cease following one year's non payment of dues.

Section 2. All qualified persons may become Active Members after submitting an application accompanied by the required fee to the Executive Director.

Section 3. Active Members in good standing in the Society for five or more years shall be considered by the Governing Board for designation as Active Members Emeritus following retirement from active professional service. The five year service requirement may be waived in cases of retirees' financial hardship.

Section 4. Any qualified person may become a Student Member after an application endorsed by an Active Member and accompanied by the required fee has been filed with the Executive Director.

Section 5. Honorary Membership may be conferred on selected Orthopterists under appropriate circumstances. Proposals for Honorary Membership shall be considered by the Governing Board following recommendation by any member of the Society. Favorable action by the Board shall constitute nomination. Formal designation of Honorary Membership shall require approval by at least two thirds of those voting in a mail ballot of the voting membership. No more than one candidate may be so designated per calendar year.

Section 6. Honorary membership is not to be confused with, and does not disqualify one from, other honors that the society may confer, such as President of the Society or Special Commendations.

Section 7. All members shall receive gratis the Society's newsletter. The Proceedings, the Journal, and any Occasional Papers published by the Society will be received by members and non members upon payment of an appropriate per publication fee to be determined by the Governing Board.

Article II

Duties of Officers and Methods of Election

Section 1. The President shall be the chief administrative officer of the Society and the Chairman of the Governing Board. He/she shall exercise such powers as are necessary to carry out his/her official duties including the appointment of an Executive Director and a Treasurer to administer the Society's business, the appointment of a host to plan for the next scheduled meeting, the appointment of an Editor/Editors to prepare the Society's publications, and the appointment of various special committees. He/she shall serve from the end of one scheduled meeting to the end of the next scheduled meeting. He/she shall be replaced by the President Elect in the event of failure or inability to serve.

Section 2. The President Elect shall be elected by the following procedure. At least six months before the next scheduled meeting, the Executive Director shall invite each member of the Governing Board to propose one name for President Elect. The name/names proposed by a majority vote of the Governing Board shall constitute the nominee/nominees. These names, arranged alphabetically, shall be placed on the ballot, along with space for a write in candidate, and mailed to each voting member of the Society at least three months before the meeting. After a six week deadline necessary for ballot return, the Elections Committee appointed by the President shall canvas the vote and announce the name of the winning candidate in the newsletter. The candidate who receives the greatest number of votes shall be declared elected. The Executive Director shall resolve a tie vote by immediately mailing to the membership a run off ballot containing the names of the deadlocked candidates. The winner of the run off ballot, which is conducted in the manner prescribed above, shall be declared President Elect. Any vacancy in the office of the President Elect shall be filled immediately in the manner prescribed above.

Section 3. The Executive Director shall be appointed by the President and approved by the Governing Board. He/ she shall serve the Society as secretary and business manager. He/she shall maintain a membership roll, keep a record of the proceedings, and attend to general correspondence.

CONSTITUTION

Section 4. The Treasurer shall be appointed by the President and approved by the Governing Board. He/she shall collect all monies due, pay all bills incurred by the Society, and submit a financial report at the scheduled meetings. His/her financial records shall be subject to a formal annual audit by a committee appointed by the President and approved by the Governing Board. The Audit Committee shall consist of the President, the Executive Director, and at least one other society member.

Section 5. The Editor-in-Chief shall be appointed by the President and approved by the Governing Board. He/ she shall be responsible for the preparation and editing of the newsletter, Journal, Proceedings, and any Occasional Papers published and shall serve as a member of the Governing Board. The editorial function may be shared, if necessary, between an Editor-in-Chief and a Co editor. The Co Editor, who is appointed and approved as above, also serves on the Governing Board.

Section 6. Regional Representatives shall be elected by the following procedure. At least six months before the next scheduled meeting, the President shall appoint one of the current Representatives as Chairman of a Representative Nominating Committee consisting of the current Regional Representatives. This committee shall submit at least two names for each of the three vacancies. This list shall constitute the slate of nominees. These names shall be placed on the ballot, along with space for write in candidates, and mailed to each voting member at least three months before the meetings. Representatives shall serve from the end of one scheduled meeting to the end of the next. The Elections Committee shall canvas the ballots after a six weeks' deadline for return of marked ballots and announce the results in the newsletter. The Executive Director shall resolve a tie vote immediately by mailing to the membership a run off ballot containing the names of the deadlocked candidates. The winners shall assume their Board duties along with the President, the PresidentElect, the most immediate Past President who is available, the Executive Director, the Treasurer, and the Editor/ Editors at the next scheduled meeting. The President shall appoint an appropriate replacement in event of a Board Member's inability or failure to perform his appointed duties. No Representative may normally serve more than two consecutive terms.

Article III

Society Dues

Section 1. Dues shall be set by the Governing Board subject to Society approval by letter ballot.

Article IV

Meetings, Quorums, Voting

Section 1. The meetings of the Society shall be scheduled, as necessary, for every third or fourth year so as not to conflict with the International Congresses of Entomology.

Section 2. Ten percent of the total membership shall constitute a quorum for the transaction of business.

Section 3. A simple majority of those present at meetings or voting by mail ballot shall be sufficient to carry any motion except as otherwise specified by the Constitution or By- Laws.

Section 4. Members in arrears shall be dropped from the rolls by the Executive Director after six months' notice.

Article V

Amendments to ByLaws

Section 1. Changes in the By Laws may be initiated by any member of the Society. Such proposals shall be processed in a manner identical to that of proposals to amend the Constitution.

Section 2. A proposed change in the By- Laws shall be adopted effective the date on which the ballots are counted if approved by two thirds or more of those voting. If approved by less than twothirds the proposal shall be lost and the existing wording of the By- Laws maintained.

Article VI

Committees

Section 1. All committees shall consist of any *exofficio* and other members appointed by the President with the approval of the Governing Board, who shall determine the members' term of office.

Section 2. The committees currently standing are: Audit Committee, Editorial and Publications Committee, Elections Committee, Meeting Committee, Membership Committee, Regional Representative Nominating Committee, Resolutions and Amendments Committee, Training Program Committee.

VALE
JACQUES R. (JACK) HELFER
 4 MAY 1920-15 February 1994

Jack Helfer died as the result of a fall from a cliff on his property in Mendocino, California. His crutches were found beside the bench upon which he had been sitting. Jack had suffered a debilitating stroke in September 1993 and had been hospitalized, returning home only on 10 February.

Jack was a native of Oakland, California, but had lived in the Mendocino area since 1935 with his wife Diane. He had been a high school teacher and was an acknowledged artist and wildlife illustrator. For more than 20 years he wrote a weekly column, Jack's Corner, in the local newspaper, the Mendocino Beacon. In this he expressed his generally conservative views of society — interspersed with natural history notes and illustrations, many in such detail that readers would probably have been left with more information on the particular subject than they had ever wanted to know. He wrote four books on the Mendocino Coast biota and was an accomplished poet, musician, and song-writer and collector. He also had collections of old bottles, sea shells, beetles, and orthopteroids. Most of the natural history material is now in the California Academy of Sciences.

I first met Jack in the late 1950's, when he was beginning to assemble material for his 1963 *How to Know the Grasshoppers, Crickets, Cockroaches and Their Allies*, part of the Jaques Field Guide Series. We were both learning about orthopteroids at the same time, utilizing the facilities at the California Academy of Sciences and corresponding with the late Dr. Ashley B. Gurney. Since then, we were always in fairly close touch. If I mentioned some interesting discovery in the Australian Orthoptera, I could be guaranteed that it would be revealed in a forthcoming Jack's Corner. I always wondered what the Mendocino public felt about reading articles dealing with obscure Australian insects. I have had hundreds of letters from Jack over the years. The files of the California Academy of Sciences and the Academy of Natural Sciences of Philadelphia also have many missives from Jack as a result of my time at both institutions. Jack and I took many field trips together in the 1960's, collecting in some of the more remote parts of northern California and discovering some very special species. I recall trips to Clear Lake to look for the elusive Shield-backed katydid, *Cyrtophyllicus chlorum* Hebard and how excited we were when we found a large number of specimens. There were also trips to Plaskett Meadows to find *Napaia diana* Gurney, Strohecker, and Helfer, *Aerochoreutes stenometopus* Strohecker and Buxton and a number of new species of *Melanoplus*. My memories of these trips are all pleasant. I vividly recall receiving a large cardboard carton from Jack in the late 1960's, while he was in the field. The parcel was addressed to my home in San Francisco and had a message on the outside "rattle-OK". The postman wanted to know what that meant. He and my mother opened it together and discovered to their amazement that it contained a live cranky male Predatory Katydid, *Neobarrettia spinosa* (Caudell), a treasure from Jack's collecting in Texas. I still have that specimen which is now part of the ANIC and has been used in reference many times.

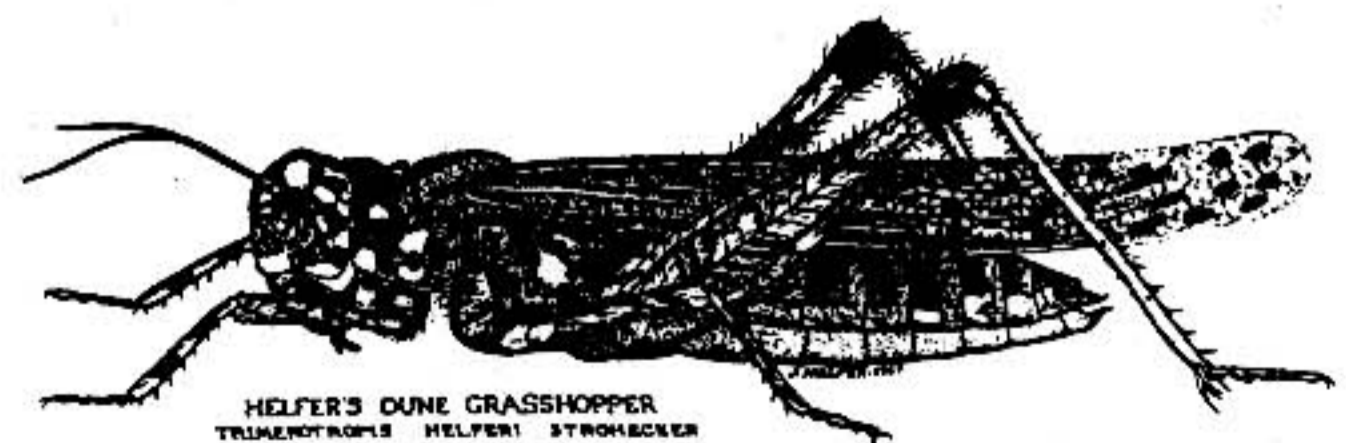
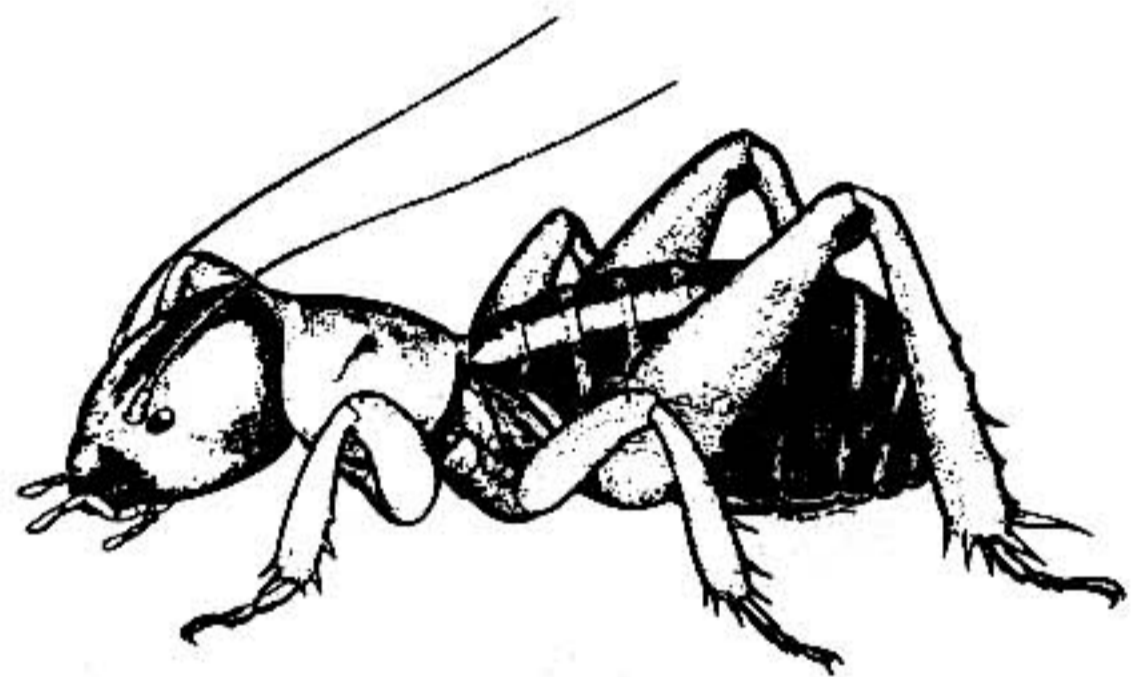
Jack had a mannerism that "put off" many people who did not know him well. He was opinionated and seemed to enjoy initiating heated discussions. I guess you could say he was "self-righteous". Having served in the Pacific in WW II, he had little time for the "long-haired", anti-war demonstrators in the 1960's. We decided it was best to avoid the topic at the time, since I was "amongst them" at Berkeley. I always wondered how Jack could meld his love of nature with the wanton habitat destruction that was going on around him in California. He supported the wood-cutting industry and said so in his columns. On the other hand, he constantly promoted natural history. He came to Australia in 1984 to visit friends he had made during his stay here during WW II. These travels were reported in his column over the next year or so. During his stay in Australia, we made several field trips together, but it was apparent that his back was giving him a great deal

of difficulty. He was carrying a piece of lead from a bullet from a sad incident some few years earlier. The pain from this injury, depression, and increasing incapacity from his stroke left him a very different person from the one I knew in my youth.

Jack had a unique technical illustrating style. This is evident in the drawings in his books. I could tell a drawing of his on sight. He had the neatest and most distinctive handwritten insect labels of anyone I know. One vignette that is illustrative of his personality was revealed when he sent me a copy of the Dover 1987 edition of his *How to Know ...* book. It had been "revised" — but when I looked in his "Additional Bibliographical References, 1970-1987", I was surprised, and honoured, I guess, to discover only references to my, Dave Weissman, and Nori Ueshima's papers — nothing else. When I asked Jack about the absence of other references, he said words to the effect "...Well, I'm sitting here in Mendocino far from everybody else and you were the only ones who cared to look after me by sending reprints, so you get the honour of having your papers cited, the rest can jump in the lake."

I shall miss hearing from Jack. He always had something to say that would evoke comment and controversy. This was often done through his column, resulting in a number of threats that fortunately came to nothing. He had strong feelings about those who grew and sold marijuana. Jack had very diverse interests. His life would make an interesting biography. His pursuits in Coleoptera, especially in the Buprestidae and Pselaphidae, were many. He had a style of abstract art that was recognised amongst those in the art world. I'll certainly miss hearing about all of that.

D. C. F. Rentz
 President, Orthopterists' Society



HELPER'S DUNE GRASSHOPPER
 TRIMENOTROPIS HELPERI STROHECKER

IN MEMORIAM



Ulrich Ziegler
Berlin, GERMANY

Ulrich Ziegler, a self-educated amateur entomologist from Berlin, died at the age of 52 on June 1, 1994, after a serious illness. His field of research involved studies on the Phasmatodea. The biology of walkingsticks fascinated him so much that at times, he maintained colonies of more than 30 different species. During the course of his research, he made photographs of various aspects of phasmid biology. His greatest contribution regarding his photographs concerned aspects of egg deposition by phasmatids.

Ulrich Ziegler's world-wide connections with other persons interested in phasmatids and his collecting trips throughout Europe and other regions of the world enabled him to obtain a remarkable collection of these interesting insects. In 1990 he and several colleagues issued the periodical *Arthropoda*, which has become an essential journal for all interested in maintaining breeding colonies of phasmatids.

In the following publications, he was able to communicate his broad knowledge of this group, knowledge of which was gained through long years of working with the insects. His death terminated a potentially

productive wealth of information that could have been gained from his love of phasmatids.

1989. Ein gynandromorphes Exemplar von *Phyllium bioculatum* (Gray) (Phasmida). *Entomol. Zeitschrift* 13: 30-32.
- 1993a. Schaben, Mantiden, Phasmiden (Haltung und Zucht). 1. Teil: Schaben (Blattodea). *ZAG Rundschreibn.* No. 14: 2-6.
- 1993b. Schaben, Mantiden, Phasmiden (Haltung und Zucht). 2. Teil: Stab-Gespensschrecken, Wandelnde Blätter (Phasmida) (Verbreitung, Taxonomie und Determination). *Arthropoda*, Jahrg. 1, No. 1: 15-19. ISSN 0943-7274.
- 1993c. Schaben, Mantiden, Phasmiden (Haltung und Zucht). 3. Teil: Haltung und Zucht von Phasmiden, sowie Bau von Terrarien. *Arthropoda*, Jahrg. 1, No. 2: 7-11. ISSN 0943-7274.
- 1993d. Die grüne Shabe, *Panchlora nivea* (Linne, Haltung und Zucht als Futtertier. *Arthropoda*, Jahrg. 1, No. 3: 14-15. ISSN 0943-7274.
- 1993e. Einiges Bemerkungen zur *Phyllium siccifolium* (Linne 1758). *Arthropoda*, Jahrg. 1, No. 4: 18-20. ISSN 0943-7274.
- 1993f. Über die Haltung von *Princisia vanwaerebeki* (van Herwege 1973) (Blaberoida; Oxyhaloidae). *Arthropoda*, Jahrg. 1, No. 4: 18-20. ISSN 0943-7274.

Reinhard Ehrmann
 Entomolisches Institut



Some Suggestions on Preserving Acridoids (And Other Orthoptera)

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Acridoids in collections have a very different appearance, and sometimes also differing degrees of usefulness, according to the method by which they have been preserved after their capture. We have seen some which do not even faintly recall their aspect when alive or freshly killed. Their colors have practically disappeared, especially the greens. Portions of them, originally of other colors, have turned brown, sometimes almost black. I suspect that most entomologists are attracted to insects, at least in part, through their esthetic sense. Those pinned corpses, disfigured remnants of once beautiful living creatures, lose for many of us a considerable part of their original glamor. But aside from these considerations, which a strictly rational worker might think of as subjective and unscientific, there is still a very objective and rational basis for the feeling of rejection these poorly preserved specimens sometimes inspire. In many cases, colors are important for taxonomic purposes, and identifications may be made difficult, sometimes even inaccurate, by discolored specimens.

Starting from the earliest days, careful entomologists have devised methods for improving the appearance of collection specimens. "Improving" may not be the right word, since their aspect never approaches that of the living animal. But, in comparison with the appearance of poorly preserved specimens, their aspect might be vastly improved, so that their living appearance may easily be inferred when we examine the specimens. Discoloration after death derives from bacterial action decomposing the internal organs, and ultimately affecting subepidermic elements of the complex color patterns. Considering that the source of bacterial decay lies within the digestive tract, all effective preservative procedures have in common the elimination of this structure, as well as other soft tissues with a high moisture content. Details of the accomplishment of this basic procedure may vary; some entomologists slit the abdomen open along the pleural line and remove the digestive tract, gonads and fat body located mostly inside the abdomen. When a specimen is bulky, sometimes a wad of cotton is substituted for the removed viscerae to avoid collapsing of the abdominal region. A short paper by Rehn (1932) is illustrative of this method.

A more recent publication by the Argentinian entomologist Rosas-Costa (1966) describes a method by which viscerae are removed through a slit made on the upper part of the cervical membrane, and as much moisture as possible is removed with cotton pads, which are only used for this purpose and never left inside the insect. A certain amount of antiseptic powder is then poured into the body cavity. This method has given such excellent results that it has been widely adopted, especially in South America, but also elsewhere. By this method, used as proposed by its author or with slight modifications, some of the best preserved collections of Neotropical acridoids have been made. An example is the collection made by Dr. Carlos Alberto

Campos-Seabra (now in the "Museu Nacional" of Rio de Janeiro), the one in the College of Sciences of Montevideo, and also, in part, the one in the "Museum National d'Histoire Naturelle" in Paris.

But alas, in throwing away viscerae, we are throwing away information, maybe valuable information on these specimens we are trying to preserve better. Probably nearly everyone using these methods has been more or less aware of that fact. But, one may reason, what is the use of leaving all the internal organs inside the insect, when they will be destroyed anyway by bacterial decay? In a dried, pinned specimen, what is left of the gonads and the various glandular systems? Obviously, nothing. So what is the use of worrying about the destruction of information which will in all cases be destroyed by bacteria, the concomitant destruction of valuable external information?

However, not all of what we are throwing away by eviscerating the insect would be destroyed by bacteria in a specimen allowed to dry without evisceration. Parts of the internal organs are of epidermal origin, and as such they are provided with cuticular linings resistant, in different degrees, to natural decay. Such are the stomodeal and proctodeal portions of the digestive tract, and portions of the male and female genitalia. The latter are usually left inside the insect regardless of cleaning procedures, but usually all of the digestive tract is discarded.

We have been working for some time on the study for systematic purposes of the cuticular armature of the stomodeum. In some cases these structures reveal relationships that cannot be suspected from other sources. In the process we have become aware of the importance of features of the mesenteron and proctodeum. The mesenteral structures are of course utterly lost in dry specimens. The cuticular stomodeal structures are sometimes reasonably well preserved in dry collection specimens which have not been eviscerated. But it would be better to preserve the stomodeum in an adequate fixing fluid during the process of eviscerating the insect. Of course this complicates the preserving process. The stomodeum, which is resistant and usually can be taken whole out of the specimen, has to be individually stored in a vial, and both the specimen and the viscera marked by a number or some other code so that they can be associated and identified as parts of the same specimen. Even better would be to keep part of the series of each species in a liquid fixer, but this is advisable only with limitations. To keep part of the daily collection in liquid may not be as useful as intended. Fixers usually bleach the specimens, and, especially for little-known taxa, bleaching may be a serious hindrance to identification. The method is extremely useful, however, when identification in the field can be made, or when parts of unmixed series can be divided and tagged for later identification of the liquid-preserved part, on the basis of the dry-preserved one. This applies not only for the digestive tract, but also for other internal organs, such as the reproductive organs and the various accessory glands, which may be of similar or maybe even superior interest. But just by keeping the stomodeum we are saving a considerable amount of information, not only taxonomic, but maybe systematic and relates to phylogeny as well. We are also saving information about the food of the insect and thus also indirectly about its habitat.

continued on page 14



NEW MEMBERS

*continued from page 12***Appendix:** Composition of useful fixing liquids.

Modified Pampel fixer.	
96% or absolute ethyl alcohol	440
cchavi	
40% formaldehyde solution	10 cc
Glycerin	80 cc
Acetic acid.	30 cc
Water.	440 cc
Modified Bouin fixer.	
80% ethyl alcohol.	900 cc
40% formaldehyde solution.	45 cc
Acetic acid.	45 cc
Picric acid.	4 gr

In the case of the modified Bouin fixer, it is better to prepare in

advance the solution of picric acid in the 80% ethyl alcohol, and add to it the formaldehyde and acetic acid shortly before use. Insects fixed in this liquid for a week or ten days can then be transferred to 80% ethyl alcohol for permanent storage. In the case of the modified Pamepl fixer, specimens may be kept in it for very long periods of time. In this case too, when travelling in regions where formaldehyde, glycerin and acetic acid were difficult or impossible to get, we have found it practical to carry a mixture of these three substances in the proportions indicated, and add it to the alcohol-water mixture when needed (ethyl alcohol being available almost everywhere). Prof. Carbonell has told us that many years ago, having run out of alcohol in a place where it could not be found, he used instead of the alcohol-water mixture, the cheapest rum he could find, with excellent results.



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THE ORTHOPTERISTS' SOCIETY

The Orthopterists' Society (formerly Pan American Acridological Society) is an international scientific organization devoted to facilitating communication among those interested in Orthoptera and their allies. Research and publication are fostered in all aspects of the biology of these insects from ecology and taxonomy to physiology, endocrinology, cytogenetics, and control measures.

The Society was founded in 1978 by some 50 orthopterists meeting at San Martin de los Andes, Argentina. Its constitution and by-laws were adopted in 1979, and it was accorded tax-exempt status by the United States government shortly thereafter. The meetings held since San Martin have been at Bozeman (United States), Maracay (Venezuela), Saskatoon (Canada), and Valsain, Segovia (Spain). The last meeting was held on August 2-6, 1993, at Hilo, Hawaii (USA).

Symposia, round table discussions, and research papers presented at the Society meetings are published in the *Proceedings of the Orthopterists' Society*, and a newsletter, *Metaleptea*, is issued semi-annually. Information regarding these publications can be obtained from the editor, Dr. D. A. Nickle, USDA, c/o National Museum of Natural History, NHB-168, Smithsonian Institution, Washington, D.C. 20560, USA.

The 1990-1994 Governing Board comprises President Daniel Otte (United States), President-elect R. F. Chapman (United Kingdom), Past President V. R. Vickery (Canada), Treasurer Roger Bland (United States), Regional Representatives Aiola Richards (Australia), Al B. Ewen (Canada), and B. Baccetti (Italy), Executive Director S. K. Gangwere (United States), Editor, D. A. Nickle (United States), and Editor of the new *Journal of Orthoptera Research*, N. D. Jago (United Kingdom).

Society business and finances are handled by the Executive Director, Dr. Jeffrey A. Lockwood, Division of Plant Sciences, University of Wyoming, Laramie WY, 82071, USA.

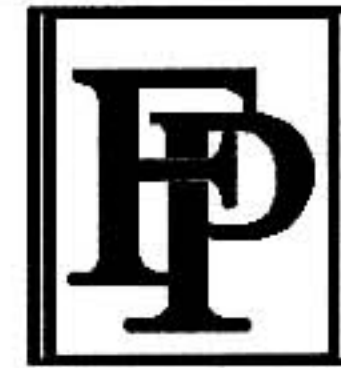
All correspondence relating to *Metaleptea* or the *Proceedings of the Orthopterists' Society* should be addressed to the Editor, Dr. David A. Nickle, USDA, Systematic Entomology Laboratory, c/o U.S. National Museum of Natural History, Smithsonian Institution NHB-168, Washington, D.C. 20560 USA.

Correspondence and information regarding the new journal series, *Journal of Orthoptera Research*, should be addressed to Dr. D. Otte, Managing Editor, Academy of Natural Sciences, 19th & the Parkway, Philadelphia, PA 19103 USA.

MEETINGS: Meetings of the Orthopterists' Society are held on a triennial basis, in the United States, Latin America, Canada, or other location, worldwide, in rotation. Symposia, research papers, and business conducted at the Meetings are published in the *Proceedings of the Orthopterists' Society*.

MEMBERSHIP: Membership is open to anyone expressing an interest in Orthoptera and related orders. Annual dues for members are US \$15 for Active Members, US \$7 for students and US \$25 for institutions. Members receive *Metaleptea*, and, upon payment of an additional charge, other Society publications.

PUBLICATIONS: The Society's publications include a newsletter, *Metaleptea*, which is published as news becomes available, but on at least a biannual basis, the *Proceedings of the Orthopterists' Society*, which is published triennially in conjunction with the Meetings, *Occasional Papers*, an irregularly published journal for medium- to large-sized papers dealing with research on any aspect of Orthopteroidea orders, and a new journal series, the *Journal of Orthoptera Research*, a refereed journal devoted to research articles of a small to medium size. For information regarding any of these publications, contact the Editor, Dr. David A. Nickle, USDA, Systematic Entomology Laboratory, c/o U.S. National Museum of Natural History, Smithsonian Institution NHB-168, Washington, D.C. 20560 USA.

**FITZGERALD PUBLISHING**

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Published - May 1991

Stick Insects Of Britain, Europe And The Mediterranean

by Paul Brock

Stick Insects Of Britain, Europe And The Mediterranean, has been written by the author of the well known AES guide, *The Phasmid Rearer's Handbook* which was first published in 1985. Since then the author, Paul Brock, has travelled extensively throughout Southern Europe, The Aegean and Turkey in his search for locality and habitat data for this new publication.

He has also visited the main National Museum collections of Europe, London, Oxford Brussels and Vienna in his search for type material and clarification of the genera and species which he has described in this book.

Stick Insects Of Britain, Europe And The Mediterranean includes 154 taxonomic illustrations, 47 botanical foodplant illustrations, 12 topographical habitat drawings, and 13 photographs of habitat and specimens and is, in our opinion, the most detailed, comprehensive book ever published on the Stick Insects of Europe and The Mediterranean region. This work is also unique in that it not only lists thousands of collection sites all over Europe (thus making it invaluable for the collector) but also discusses the habitats, captive breeding, and parasites and includes the most up to date and comprehensive list of scientific papers published this century on European Stick Insects.

Paul Brock has ensured that his publication is completely up to date and that its taxonomic keys are illustrated and user friendly for the benefit of the amateur entomologist - yet it is packed with detailed technical information and habitat data, which make it an absolutely first class read for amateur and professional alike.

Size 12" x 9" (30 cm. x 21cm.) Hardback. 50 A4 pages (equivalent to 100 A5 pages). 40,000 words, 200 line drawings, 18 maps and topographical habitat illustrations, 20 photographs, Colour cover and plate. Note only hardback edition available.

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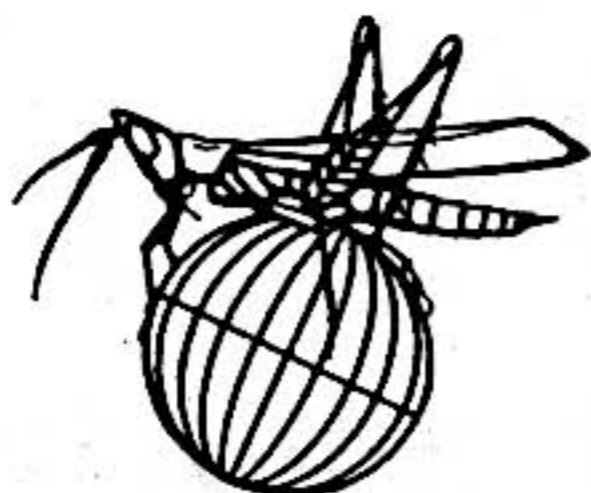
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NOTICE

Members needing copies of past PAN AMERICAN ACRIDOLOGICAL SOCIETY or ORTHOPTERISTS' SOCIETY publications are reminded that a small number of virtually all volumes and numbers is on hand at the Directorate. Prices (in US currency) are as follows: *Metaleptea* @ \$1.50 per number or \$3.00 per volume of 2 (two) numbers, *Proceedings* @ \$10.00 per volume, and *Occasional Papers* No. 1 @ \$4.40. Please advise of the volumes and numbers desired and send remittance to: Dr. Jeffrey A. Lockwood, Division of Plant Sciences, University of Wyoming, Laramie WY, 82071, USA. Orders may also be filled by invoice; simply ask to be billed.



ORTHOPTERISTS' SOCIETY

ORTHOPTERISTS' SOCIETY

COME TO AUSTRALIA

The next international meeting of the Orthopterists' Society will be in late October 1997 in Cairns, Queensland. Cairns is an ideal setting for our group. The week long conference will be held at the *Cairns Colonial Club Resort* which is not far from the centre of town.

Cairns is deep in the Australian tropics at 16° 55' S. The resort is only 6 kms from Cairns International Airport and is situated on 4 hectares (10 acres) of tropical gardens with swimming pools, tennis, bars and restaurants. There is a special playground for younger visitors.

Cairns is the gateway to many Australian natural wonders. Tours of the Great Barrier Reef depart from Cairns several times a day. The famous Daintree Rainforest area is a short drive from the city. The Kuranda area with its tropical markets, Butterfly and Nocturnal Animal exhibitions, and the Atherton Tableland with its many rainforest parks and lakes are not far from the resort.

Day trips during the meetings will explore all of the above as well as the usual shopping trips. A local tour operator will show us some of the night-life including possums, gliders, tree kangaroos, pythons and the like. Of course, we will be looking for orthopteroids after dark at a number of choice spots. Post conference tours are still being planned. We are considering extended journeys into the Daintree Rainforest to search for orthopteroids and a trip to the Undara Caves National Park where a wide range of cave insects and other life abounds.

Collecting permits will be arranged and you will have no difficulties in taking insect specimens back to your home countries. Australian customs regulations require that you sign an agreement to return any holotypes as a result of your collecting to an Australian collection. Otherwise collecting can be done in the usual manner except in National Parks where regulations for all collectors exist. Arrangements will be made to attempt to accommodate our interests in such areas but it may be necessary for collectors to make their own arrangements with Queensland National Parks for collecting after the conference.

For more details:

✉ _____

Orthopterists' Society International Conference Cairns, Australia - October 1997

To receive further information, please complete details below and return to:

Orthopterists' Society International Conference
ACTS, GPO Box 2200
CANBERRA ACT 2601 AUSTRALIA

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