

METALEPTEA

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A News Forum for Acridologists
and Orthopterists
THE ORTHOPTERISTS' SOCIETY



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MESSAGE FROM THE EDITOR

Once again I must apologize for delaying publication of *Metalepthea*. I have been to two Entomological Society of America meetings, several business meetings for the USDA, a trip to Canada, and two field trips to Peru. In all, I have been out of my office for nearly a quarter of the year, and it has taken its toll on me. For these reasons there has been a delay in getting this issue of *Metalepthea* into circulation. On the positive side, for the first time ever I now have some permanent assistance from some additional staff that should expedite my work in the future. Be patient.

Please note in this issue the first announcement for the upcoming Meeting of the Orthopterists' Society, to be held in 1989 in Spain. The next issue of *Metalepthea* will include more information regarding the meetings.

In the meantime, please send material for publication in *Metalepthea*. Without your input, there can be no output!

David A. Nickle
Editor, Orthopterists' Society

All corresponding Society business should be mailed to the Executive Secretary, Prof. S. K. Gangwere, Department of Biological Sciences, Wayne State University, Detroit, MI 48202, U.S.A.

MEETINGS. - Meetings of the Orthopterists' Society are held on a triennial basis, in the United States, Latin America, Canada, or Europe. 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. Annual dues for members are \$10 (U. S. currency) and for students \$5 (U. S. currency). Members are entitled to all publications available for the duration of their membership.

PUBLICATIONS. - The Society's publications include a newsletter, *Metaleptea*, which is published biannually, the *Proceedings of the Orthopterists' Society*, which is published triennially in conjunction with the Meetings, and *Occasional Papers*, an irregularly published journal for medium to large sized papers dealing with research on any aspect of Orthoptera. For information regarding any of these publications, contact Dr. David A. Nickle, Editor, SEL, USDA, c/o National Museum of Natural History, Smithsonian Institution NHB-168, Washington, D. C. 20560 U. S. A.

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PRESIDENT'S REPORT

Sometimes the "mills-grind exceedingly slowly but they grind exceedingly fine". That about covers the progress on our proposed training program for 1989. We have made definite progress at a much slower rate than we had hoped. In my last report I indicated that I expected financial assistance from a Canadian Government agency. I have to report failure, as I got nothing but a bureaucratic run-around. We have moved ahead anyway, and I can report our progress.

Dr. Gangwere, our Executive Secretary, and I prepared a draft proposal during a short trip that I was able to make to Detroit and Ann Arbor, Michigan, in May. Essentially, it is a proposal to be presented to officials at FAO (Food and Agriculture Organization, United Nations), Rome, for financial support to sponsor up to 24 candidates to attend our 1989 meeting and afterward to spend time in training in North America. Part of the time would be spent at the Canada Agriculture Research Station, Saskatoon, Canada, and part at the USDA Rangeland Insect Laboratory, Bozeman, Montana, U. S. A., learning the various skills for which these institutions are renowned.

An integral part of the proposal is the preparation and publication of a *Field Guide to the Locusts* and most serious pest species of grasshoppers of the world. We are committed to produce the *Field Guide* whether or not the training program becomes a reality. I am coordinating the *Field Guide* program. So far I have agreement from a number of contributors and preparation of more than half of the proposed topics is now in progress. I hope to find authors for the remaining topics in the near future. A number of members that I wrote to in May and June have not replied. This may be due to extended field work and some of these people may become contributors.

1) Regional papers.

These papers will deal with the pest species of the region concerned, including identification, life cycles, food plants, details of habits and behaviour, etc., and distribution. Drawings will be included to supplement keys and descriptions, and we hope to be able to include color photographs of all or most of the species.

2) Papers on specific locust pests.

The various species will be treated separately, usually by different authors. This will reduce duplication. Authors of regional papers will need to include these species only in keys, with a reference to the paper dealing with that species.

3) Papers on specific topics.

These papers deal with various topics which could not be covered in detail in the regional papers. The topics include: population monitoring and dynamics; migration; habitat selection; food habits and feeding behavior; biological control; chemicals and control methods currently in use; and toxicology of control chemicals.

The *Field Guide* is a direct response to the opinions expressed at the meeting about the Orthopterists' Society at the conference on Phylogeny and Evolution of Orthopteroidea, Siena, Italy, in January, 1986. The statements suggested that the Society should undertake a project. The *Field Guide* is admittedly a very ambitious project but it is beyond the scope of expertise of our members.

I expect to be able to give a complete outline of the *Field Guide*, together with the names of the authors of the various parts, in the next issue.

Dr. Gangwere and I have been invited to visit FAO, Rome, to discuss the proposed training program and preparation of the *Field Guide*. We will be in Rome about mid-October. I will report on the meeting in the next issue of *Metaleptea*.

V. R. Vickery
President
Orthopterists' Society

SPONSORED MEMBERSHIP

Orthopterists in some countries have difficulty in paying dues to the Society. This is caused by difficulty in sending funds outside certain countries or of sending dues in U. S. funds. Orthopterists are not the only people having problems. A recent note in the News of the Lepidopterists' Society (No. 4, July/Aug. 1987, page 61) describes the plight of lepidopterists in these countries. The note suggests further that U. S. members might assist by paying the Society dues for foreign members in exchange for insect specimens.

We have noted that members in some African and Asian countries have allowed their membership to lapse as they could not afford the dues in U. S. funds. We have deliberately kept the dues at the very low figure of \$10.00 U. S. This, however, can represent a sizeable amount due to differential in exchange rates. Even Canadians are at a disadvantage, but the sum of \$13.40 is not significant when compared with the differential in some other countries.

We need these foreign members if our Society is to be representative of the orthopterists of the world. In order to achieve this end, I invite members in affluent countries to sponsor members from underdeveloped countries or from countries where export of money is banned or difficult. I have already paid the dues for this year for a foreign member and I hope that others in the U. S. A. and Canada will do likewise. If a particular person is being sponsored (if you don't know such a person, our executive secretary will send you the name and address of the new member) you can contact the person and if desired arrange for insect specimens in exchange for dues.

V.R. Vickery
President

REPORT FROM THE EXECUTIVE SECRETARY

President Vickery and I have prepared an Orthopterists' Society-Wayne State University proposal to be presented, in the near future, to a granting agency in hopes of garnering support for an ambitious training program. This activity has occupied much of the Secretariat's attention over recent months. Vic will provide details in his report elsewhere in this number of *Metaleptea*.

President Vickery and his Site Selection Committee have selected Spain as the site for the summer, 1989, 5th Meeting of the Orthopterists' Society. The reasons are several. A European site seems appropriate in light of the Society's new international (rather than Pan American) character, and the Iberian Peninsula is both orthopterologically fascinating and a kind of "bridge" between Europe and Africa and the New World and the Old. I have agreed to serve as Meeting Organizer, and it is in this capacity that I am able to inform you that Eugenio Morales Agacino, of Madrid, has been appointed Meeting Host. Sr. Morales is the acknowledged Dean of Iberian Orthopterists; he has intimate knowledge of Spanish governmental agencies and universities; he has extraordinary acumen in dealing with institutions and people; and he is a superb organizer. These are qualities needed to provide us with a memorable meeting, and I know that he will devote his full energies to the difficult task facing us. He is presently constituting a Local Arrangements Committee, whose identity will be announced at a later time.

President Vickery and I expect to be in Europe on business later this year. We shall, of course, take the opportunity to meet with Eugenio and his committee and provide personal input into the program they are developing.

On the urging of some members, the Orthopterists' Society has made arrangements to hold an informal orthopterological workshop on the occasion of the 18th International Congress of Entomology, scheduled for Vancouver, British Columbia, Canada, during July 3-9, 1988. If you have program suggestions and if you wish to participate, kindly let me know so that I may make arrangements through President Vickery's office.

Evolutionary Biology of Orthopteroid Insects, a book edited by society member Prof. Baccio Baccetti, will soon go to press. This volume, to be published by Ellis Horwood Ltd., Chichester, England, should be of exceptional interest because of the important role that the Orthopterists' Society and many of its members played in the Siena, Italy, Jan., 1986, conference on which it is based.

Our current checking account balance is \$3,394.80 and our savings account balance \$1,292.70, for a total balance of \$4,687.50 (all figures in US currency) as of August 24, 1987. The 1988 society dues are payable with this mailing, yet, to date, some members have not cleared their 1987 dues. I urge you to mail in yours today.

S. K. Gangwere
Executive Secretary
Orthopterists' Society

AN UPDATE ON THE AFRICAN LOCUST SITUATION

by
Kimberly Stoner, USAID

The situation with grasshoppers (*Oedaleus senegalensis* has been our main concern) has not turned out this year as predicted in the western Sahel (Senegal, Gambia, Mauritania, Mali). Last year, these countries, especially Senegal and Mali, had major insect infestations and major control efforts. So far this year, possibly due to scattered early rains, which were followed by up to a month of dry weather, our reports have been of only scattered hatching and heavy early mortality of grasshoppers in this region. *Oedaleus senegalensis* is a major problem at this time only in Chad and northern Nigeria, and a lesser problem in Niger, Burkina Faso, and eastern Mali. Heavy rains in much of the Sahel region have just started, though, and, of course, *O. senegalensis* migrates long distances over the season, so there may be further problems later on.

On the other hand, the desert locust situation in eastern Africa is a much greater concern than it was last year. We had reports of swarms over the winter and spring in Ethiopia, Saudi Arabia, and Yemen, and now there are swarms in Eritrea and Tigray in Ethiopia and in the Kassala area of Sudan. We are now starting to hear about desert locusts in western Sudan (Darfur). There are also reports of solitary desert locusts in the northern desert areas of Chad and Niger.

Migratory locusts are reported as solitary but numerous in southern Chad, in the Chari river area. Brown locusts, which were a serious problem in Botswana last year, appear to have been brought under control in both Botswana and South Africa. We have heard very little about any problems with red locusts in East Africa this year.

As you can see from the summary of USAID funds obligated for January to July of 1987, there was a tremendous amount of preparation for a full-scale campaign this year, including considerable technical assistance and training as well as insecticides, spraying equipment, and logistical support. Many of the severe infestations, since the expected problem in the western Sahel have not yet appeared.

Situation Report No. 6
Friday, July 31, 1987, 10:00 am
Agency for International Development,
Office of U.S. Foreign Disaster Assistance

AFRICA - Insect Infestation

In West Africa, the rains have started and survey teams have begun to locate insect infestations. It is expected that within two to three weeks the extent of hatching will be known. In Senegal, Gambia, and Mauritania, the June rains initiated early hatching

but were subsequently followed by dry weather, which killed most of the hatched insects. The rains have begun again, and localized hatching has occurred in Senegal, the Gambia and along the Mauritania/Senegal border.

Grasshopper infestations in northern Nigeria are reported to be heavy in areas. Localized grasshopper and locust infestations have also been reported in Niger but have remained under control. In Burkina Faso, grasshopper hatching has been less than expected.

Heavy infestations of *O. senegalensis* in all 7 Sahelian prefectures in eastern Chad have caused moderate to severe damage to crops planted in June. Heavy infestations of migratory locusts were reported in southern Chad, and desert locusts are present along the Chad/Sudan border.

Unusually heavy rains in East Africa provided excellent breeding conditions for desert locusts and grasshoppers. Sudan has been infested with desert locusts in the east (Kassala) and the west (Darfur) and grasshoppers in all regions. The desert locust situation in Ethiopia is even more serious. Mature desert locust swarms were first spotted in all eares of northern Ethiopia. The swarms have already spread into Tigray and threaten to move into neighboring countries if not effectively controlled. On July 28, Ambassador Janowski declared a disaster.

Equipment and supplies are in place in the Sahelian countries and Sudan and insect control operations have begun. Ground control is being used for local infestations in Senegal, Chad, Mauritania, Burkina Faso, Niger, and Sudan. Aerial operations are also getting underway in Senegal, the Gambia, and Sudan.

To date, OFDA has obligated more than \$6.2 million for the 1987 campaign, while the Africa Bureau's Office of Emergency Operations (OEO) has obligated almost \$2.8 million; this makes a grand total of over \$9.1 million. See the attached chart for details of these expenditures.

AID/W Obligations to 1987 Locust/Grasshopper Campaign
January - July 31, 1987

[Please note: The funds list below have been obligated or are estimates of items which have already been procured].

<u>Country</u>	<u>Amount</u>	<u>Purpose & Source of Funds</u>
Burkina Faso (OFDA)	\$73,400	Manager for 12 months
	170,000	Part payment of 20,000 liters fenitrothion (OEO)
	35,000	Remainder of funds for fenitrothion (OFDA)

	38,250	Ground support (OFDA)
	235,082	Helicopter (OFDA)
	<u>40,000</u>	Entomologists (OFDA)
TOTAL	591,732	
Cameroon	\$190,000	Grant to FAO for training (OEO)
	<u>10,000</u>	Communications specialist (OFDA)
TOTAL	\$200,000	
Chad	\$191,000	2 entomologists (OFDA)
	485,930	90,000 liters malathion and shipping costs (OFDA)
	16,500	In-country transport of malathion (OFDA)
	8,100	PRIFAS training (OEO)
	398,708	Contract with World Vision for 250 hours of flying time (OFDA)
	74,023	Avgas, fuel (OFDA)
	80,000	Ground support (OFDA)
Gambia	\$96,000	Entomologist (OFDA)
	40,000	Entomologist (OEO)
	268,357	73,750 liters malathion and transport (OFDA)
	7,086	1,840 liters carbaryl and transport (OFDA)
	5,400	PRIFAS training (OEO)
	30,385	Training for CPS agents (OFDA preparedness budget)
	129,100	Radios and transport (OFDA)
	<u>35,000</u>	Ground support (motorcycles and sprayers) (OFDA)
TOTAL	\$611,328	
Guinea-Bissau	\$39,000	Management (OEO)
	5,000	Training (OEO)
	25,000	Bicycles (OEO)
	50,000	Spare parts (OEO)
	24,250	8000 liters carbaryl and transport (OEO)
	32,037	7500 liters malathion and transport (OEO)
	40,000	Sprayers (OEO)
	20,000	Operations (OEO)
	13,000	Fuel (OEO)
	<u>35,000</u>	Camping equipment (OEO)
TOTAL	\$283,287	

Mali	\$25,000	In-country training (OEO)
	531,000	Phase II operations (OEO)
	10,000	Vehicle rental (OFDA)
	945	100 scales and shipping (OFDA)
	1,304	10,000 masks (OFDA)
	42,000	Manager (OFDA)
	5,600	PRIFAS training (OEO)
	301,989	32,000 liters malathion and shipping (OFDA)
	80,000	Entomologist (OFDA)
	38,000	Partial cost of FAO entomologist (OFDA)
	14,000	Partial cost of FAO entomologist (OEO)
	<u>152,629</u>	Helicopter survey (OFDA)
TOTAL	\$1,202,467	
Mauritania	\$100,000	Entomologist (OEO)
	5,000	PRIFAS training (OEO)
	25,000	Amb. Auth. (OFDA)
	1,600	masks (OFDA)
	23,300	radios (OFDA)
	<u>45,000</u>	vehicle fuel (OFDA)
TOTAL	\$199,900	
Niger	\$24,530	Pilot training (OFDA preparedness budget)
	3,333	6 VHF radios (OFDA)
	15,000	OCLALAV team support (OFDA)
	16,867	Manager (OEO)
	10,000	Amb. Auth. (OFDA)
	27,000	Training in aerial operations (OEO)
	5,900	PRIFAS training (OEO)
	173,431	Helicopter (OFDA)
	26,500	Aircraft maintenance
(OFDA)	20,000	Aircraft fuel (OFDA)
	11,000	Helicopter Support (OFDA)
	<u>17,100</u>	Helicopter Support (OEO)
TOTAL	\$350,661	
Regional	\$50,000	FAO conference in Nairobi (OEO)
	500,000	Pesticide testing (OEO)
	300,000	Remote sensing (OEO)
	30,000	PRIFAS training (OEO)

	9,000	FEWS (OEO)
	400,000	Environmental assessment (OEO)
	520	Graphic artists (OFDA preparedness budget)
	9,500	Training supplies (OFDA preparedness budget)
	20,000	Transportation (OFDA preparedness budget)
	25,000	CICP trainers (OFDA preparedness budget)
	<u>20,000</u>	Pesticide disposal (OFDA preparedness budget)
	TOTAL \$1,384,020	
Senegal	\$20,000	Training in egg pod surveys (OFDA)
	35,000	Logistical support for assessment (OFDA)
	3,475	Entomologist (OFDA)
	16,000	Program assistant (OFDA)
	23,000	Training for CPS agents (OFDA preparedness budget)
	209,000	Technical assistance for operations center (OFDA)
	41,000	Equipment for operations center (OFDA)
	50,000	Fuel, lubricants (OFDA)
	30,000	Logistical support (OFDA)
	228,505	88,850 liters carbaryl (OFDA)
	405,803	113,400 liters malathion (OFDA)
	139,309	Helicopter (OFDA)
	<u>740,000</u>	Contract for 480 hours aerial spraying (OFDA)
	TOTAL \$1,941,092	
Sudan	\$298,400	EC program (FY86 OFDA funds)
	600,000	400 MT propoxur (OFDA)
	<u>50,000</u>	Training (OEO)
	TOTAL \$948,400	

Yemen	\$3,441	Assessment (OFDA)
	37,382	10,000 liters malathion (OFDA)
	67,275	15 MT carbaryl (OFDA)
	2,500	Protective clothing (OFDA)
	<u>25,000</u>	Ambassador's Authority (OFDA)
	\$135,598	
GRAND TOTAL \$9,102,746		

CRICKET QUIBBLES

by

D. Keith McE. Kevan
Lyman Entomological Museum
McGill University

I was dismayed to see that our President-Elect and our Editor, both of whom are supposed to know something of cricket taxonomy, should see fit to perpetuate the junior synonym *Grylloides sigillatus* (Walker) (*Metaleptea*, 8:33). The name *sigillatus* of Walker 1869 is indeed quite widely known, but this does not make it correct! It is applicable only to the normal, micropterous form of the species to which it belongs, and is 10 years junior to *supplicans* (Walker, 1859), which is fully winged, but apparently very uncommon as a general rule. The macropterous condition has been found both in the field (notably in Bermuda, though not described from there) and by experimental rearing in the laboratory. Though I have not dissected the types of Walker's two nominal species, I have little doubt as to their synonymy. The synonymy, as such, has been accepted since 1967, when it was pointed out by Chopard in his Catalogue of the Grylloidea. Unfortunately, however, Chopard omitted to give priority where it was due. This was, in fact, rectified in 1980 (Kevan, Mem. Lyman ent. Mus. & Res. Lab. 8:81), since when, *supplicans* has been used elsewhere. The only ways that *sigillatus* can be correctly used for the species are either to show that it differs specifically from *supplicans* (which is most improbable) or to petition the International Commission on Zoological Nomenclature to use its plenary powers to set aside the name *supplicans*, which would be improper - and a waste of effort, for, although the species is widespread and common, the literature on it is not voluminous and there is no question of serious confusion or lack of stability in nomenclature. "*G. supplicans* form *sigillatus*" is still correct, as indicated in Vickery and Kevan, 1983, Mem. Lyman ent. Mus. & Res. Lab. 13: 604, and in 1986 *Ins. Arachn. Canada* 14: 688.

I was also somewhat surprised to see, on the page referred to above, what gives the impression of a claim to originality for the "discovery" of the original home of the House cricket, *Acheta domesticus* (L.). The species has long been known to occur "wild", away from human habitation in the drier parts of Africa, as far south as northern Tanzania (though the identity of the species from the latter has not been rechecked), and of southwestern Asia (Uvarov, 1921, Ent. mon. Mag. 57: 138-140; Chopard and Kevan, 1954, Trans. R. ent. Soc. London, 105: 343; Kevan, 1955, Ent. mon. Mag. 91: 263).

More important than the above, I should like to draw the attention of those interested in cricket taxonomy, to the work of Andrei V. Gorokhov², if this is not already known to them. The "higher" classification of crickets is in for a big shake-up, and there is no room for complacent conservatism. While I do not necessarily agree with all his ideas (some of which he admits to be

tentative), much of what he says makes good sense and developments should be watched carefully and adopted when prudent. Gorokhov is not the only one "rocking the boat", but I shall not mention names as the other work is not yet published, or even in press. I have already noted (1986, Proc. 4th Trien. Meet. PAAS:54) that Gorokhov (1984, Verh. Sympos. Internat. Entomofaunist. Europ. Centr. 10, Budapest: 187) removed the Stenopelmatidae, *s.str.* to the Grylloidea, as a separate superfamily, on the basis of the clubbed setae at the bases of the cerci, which are found in the crickets, but not in other grigs. (He left the curious genus *Oryctopus* tentatively with the stenopelamatoids, but this does not seem correct as I have been unable to detect clubbed setae in that genus.) Be that as it may, his three contributions (all in Russian) on the classification of "real" cricket (1984, Zool. Zhurn. 63: 1641-1651; 1986 *Ibid.* 65: 516-527 & 851-858) should be taken seriously. I do not intend here to express an opinion on the general validity of his conclusions nor to discuss his reasons for them (they include genitalic studies). Others more competent than I shall judge, but I shall outline his classification as far as it goes at present. One should, of course, bear in mind that the scheme is only provisional. As Gorokhov does not (yet!) recognize the Grylloptera as a separate order, he includes all crickets (except Stenopelmatioidea, not considered in the above papers) in a single superfamily, Grylloidea. This contains a number of families, some of which he calls "groups" (though giving them "family" terminations) within a "megafamily Gryllidae". His scheme is much easier to follow if one recognizes the Infraorder Gryllidea including a number of superfamilies, which, in effect is what Gorokhov does with his "families". Below are the major groups (without the tribes) recognized by Gorokhov, but arranged in superfamilies with a few remarks of my own (mostly on nomenclature) in parentheses.

(Superfamily GRYLLOTALPIDEA): Family GRYLLOTALPIDAE (from Grylloalpida Leach, 1815; Gorokhov does not recognize Scapteriscinae Ragge 1955, above tribal level; subfamily status may be --is?--preferable).

(Superfamily MYRMECOPHILOIDEA - probably should be included in next): Family MYRMECOPHILIDAE (from Myrmecophiliens Saussure, 1874) includes Subfamilies Malgasiinae Gorokhov, 1984 (should be regarded as full family?) and Myrmecophilinae (from which Bothriophylacini should probably be separated as a distinct subfamily on grounds other than genitalic similarities).

(Superfamily MOGOPLISTOIDEA - probably should include the last): Family MOGOPLISTIDAE (Brunner v. W., 1873; one subfamily only, though Arachnocephalini might be raised from tribal level).

(Superfamily GRYLLOIDEA, *s.str.*): Family TRIGONIDIIDAE (from Trigonididae Brunner v. W., 1873, not Saussure's Trigonidiens of 1874, not 1870), includes Subfamilies Nemobiinae, from Nemobiites Saussure, 1877 (this radical change of affiliation seems justified)

and Trigonidiinae; Family PODOSCIRTIDAE, from Podoscirtites Saussure, 1878 [not 1877], (syn. Stenogryllidae Bruner, 1916) includes Subfamilies Pentacentrinae (from Pentacentridae) Bruner, 1916, Podoscirtinae and Euryscirtinae Gorokhov, 1985; Family ENEOPTERIDAE, from Eneopterites Saussure, 1874 (but as this is, in effect, a replacement name for the unavailable Platydactylidae Brunner v. W., 1873, it seems that the International Code requires that the date be cited as of 1873), includes Subfamilies Hemigryllinae Gorokhov [1986], Eneopterinae, Phalangopsinae, from Phalangopsites Saussure, 1877 [not 1878], and Landrevinae, from Landrevites Saussure, 1878 (this whole family probably requires more scrutiny); Family GRYLLIDAE, *s. str.*, from Grylloides Laicharting, 1781, includes Subfamilies Gryllomiminae Gorokhov [1986], Itarinae (of Shiraki, 1930, not originally Chopard, 1931, which according to the Code, probably should be replaced by the earlier Phormincterinae, from Phormincterites Saussure, 1878, even though *Phormincter* is a junior synonym of *Itara*--for discussion, see Vickery and Kevan, 1983, Mem. Lyman entomol. Mus. & Res. Lab. 13 (1): 640), Gryllomorphae, from Gryllomorphae Saussure, 1877, and Gryllinae, *s. str.* (Brachytrupinae are not recognized even at the tribal level); "CACHOPLISTINDAE" (in Gorokhov's scheme, this should be renamed OECANTHIDAE as the latter has priority, a point overlooked by Gorokhov; it dates, with this spelling, from Brunner v. W., 1873, not from Seane, 1877, an error in Vickery and Kevan, 1983; Gorokhov regards "Oecanthinae" as a subfamily of "Cachoplistidae", but the two may prove to be separate families so that the name Oecanthidae is possibly not even threatened. In any event, it seems that the spelling should be CACOPLISTIDAE, without the "H", as *Cacoplistes*, as originally spelt by Brunner v. W., 1873, had no "h" and no *lapsus calami* can be claimed as the spelling was used twice; *Cachoplistus* of Saussure, 1877, is an emendation justified by etymology, but not valid according to the International Code of Zoological Nomenclature; that the name *Cacoplistes* was proposed for a genus without named, included species does not invalidate it as it is pre-1931; *Cacoplistidae* dates from *Cacoplistites* Saussure, 1877, not *Cachoplistites* Saussure, 1877; if anybody wants to use the "h" spelling validly, it will be necessary to invoke plenary powers of the International Commission, which, even if successful, would scarcely seem warranted); Family PTEROPLISTIDAE Chopard, 1951; one subfamily only.

Gorokhov does not refer to the SCLEROPTERIDAE, from Scleropterinae of Chopard, 1934, a very small group that may be separable into two subfamilies on the basis of very different tibial spines: Scleropterinae and Acanthoplistinae. For the same reason, *Xabea* and related genera might well be placed in a subfamily Xabinae, distinct from the Oecanthinae, but within the Oecanthidae. It is probable also that the tribe Prognathogryllini Zimmerman, 1948, from *Prognathogryllides* Perkins, 1899, should also be recognized as a subfamily of Oecanthidae; the affinity with this group, rather than with the Eneopteridae, was noted by Gurney and Rentz, 1978, *Pacif. Ins.* 18: 85-87, and by Otte and Alexander, 1983, *Monogr. Acad. Nat.*

Sci. Philadelphia 22: 1-477; Gorokhov mentions these endemic Hawaiian insects as a tribe, when discussing Oecanthinae.

It will be interesting to see the further developments in cricket taxonomy that will result from future studies, including those on fossil families -- for which see Gorokhov, 1985, Paleontol. Zhurn. 2: 59-68.

May, 1988

*The English transliteration of this author's name is used here, though he himself often used the German "ch" rather than "kh". I apologize if this is not acceptable!

Nomenclatural Tail shakes Systematic Dog
Reply to Dr. Kevan

DANIEL OTTE

Academy of Natural Sciences of Philadelphia

A. Grylloides sigillatus

Whether or not the name *sigillatus* is correctly applied hinges on whether the types of *supplicans* and *sigillatus* are different species or not. Dr. Kevan *believes* they are: "Though I have not dissected the types of Walker's two nominal species, *I have little doubt as to their synonymy*" (italics mine). It is precisely this kind of taxonomy, based upon opinion and on slavish adherence to the International Code, rather than upon evidence, attention to biological reality, and systematic practicality which produces nomenclatural swamps and gives taxonomy a bad name.

Are sigillatus and supplicans different species?

Because the type of *supplicans* is a female from Ceylon while that of *sigillatus* is a female from Swan River, Western Australia, and because one species is macropterous while the other is micropterous it is probable that they belong to two different species. There is *no* published evidence that they belong to the same species. Indeed, the only published evidence shows that they belong to different species!

Unfortunately Dr. Kevan will not be able to compare them, for the type of *supplicans* is apparently lost (it is not included in Judith Marshall's most recent list of cricket types from the British Museum). Even if both types were available, one wonders what structures Dr. Kevan would dissect to look for differences, since both are females.

It is true that Chopard synonymized *supplicans* under *sigillatus*, though for what reason escapes me, for there is no discussion of the evidence in Chopard (1967, p. 109). But later (1969), in his treatment of *Grylloides* in *The Fauna of India* Chopard (p. 85) compares *sigillatus* with *supplicans*. In addition to pointing out the difference in the length of the fore- and hindwings, he illustrated the male genitalia of the two species (Figs. 65 and 66, p. 87). Expert and novice alike will agree that these *cannot* belong to the same species.

So, we are led to the following conclusions: (1) There is now no evidence that the types of *sigillatus* and *supplicans* belong to the same species. (2) We may *never* know if they are the same (since the type of *supplicans* is lost). (3) Even if the type were found, we still would not know because (a) females belonging to the same sibling

complex often lack diagnostic characters that allow one to distinguish among them, and (b) the types are from different parts of the world, hence present the usual problem of how one should treat allopatric populations. (4) The latest taxonomic treatment of the genus (1969) indicates that *supplicans* is a distinct species; therefore its name should not be treated as a senior synonym of the widespread *Grylloides sigillatus*. However, I (and others) are prepared to be convinced by evidence that the Ceylon type belongs to the same species as the Swan River type. Until then *sigillatus* is *sigillatus*.

This latest crusade by Dr. Kevan reminds me of his ill-conceived (and perhaps successful) attempt to change the well-known name *Romalea microptera* to some other name that no one can remember. If these changes do not promote biological understanding, what useful purposes do they serve? This sort of dabbling may bring much pleasure to him and others who wallow in nomenclatural nit-picking, but it causes much inconvenience to those who are already boggled by immense biological complexity. It is just too much to ask non-systematists to follow taxonomic name changes which are of no consequence and which are based on one person's opinion about how things should be (Chopard must have concluded as much when he chose to use *sigillatus* instead of *supplicans* in 1967. An earth tremor just now, tells me I am correct). There is no substitute for careful scholarly work on complexes of species. Sitting in an office and picking nomenclatural nits leads us nowhere.

B. Original home of *Acheta domesticus*

Dr. Kevan misses the point. "*Acheta domesticus*" has been found "in the wild" in many parts of the world—Africa, Mexico, South Australia, Hawaiian Islands, south-east Asia etc. etc. Each of these places cannot be the original home. So, which is most likely the point of origin of the species? The best evidence comes not from where *A. domesticus* now lives in the wild, but from a consideration of the biogeography of *Acheta* and this section of the subfamily Gryllinae. Is it more likely to have come from Hawaii where it is alone in the middle of the Pacific or from Sahelian Africa where it lives with a whole set of species from which it differs largely in song? The records of *Acheta domesticus* cited by Dr. Kevan are questionable anyway, unless they are based at least in part on the song. How does he or anyone else know whether they are looking at *domesticus* or one of a number of indistinguishable siblings? He notes that it has been recorded from northern Tanzania. If this record is based on a specimen, it could well belong to one of two undescribed *Acheta* species known from Tanzania and Kenya. If it is a song record he is talking about, this could belong to a species of *Cryncus* whose song is essentially identical to that of *A. domesticus*. The

genus *Acheta*, like many other genera, consists of a set of closely related and difficult to distinguish species. Literature references to *A. domesticus* are to be mistrusted for they could refer to any one of a number of them.

C. Higher Classification of the Gryllidae

Cricket biologists will gladly adopt any gryllid classification scheme Dr. Gorochoff proposes if it is an improvement on the present system and is based on biological evidence and sound principles. If it is just an alternative classification, which further clogs the literature with names and adds nothing to our understanding of phylogenetic relationships, then it is likely to join other schemes presently gracing the ashheaps of nomenclatural history.

I would like to congratulate Dr. Kevan on his superb ability in exploring the nomenclatural fossil beds. He has caused much mirth and we applaud him for it. But in two cases, at least, I doubt that a new or more realistic understanding of orthopteran systematic relationships has emerged. In fact, he has produced just the opposite effect. The primary question that should be addressed as he practices his hobby are these: Does the revised system better represent biological relationships and biological history? and does it promote clear communication among scientists? Behavioral papers have been written recently in which *sigillatus* has incorrectly been called *supplicans*. This state of confusion is the direct result of nomenclatural dabbling! With respect to the three situations I am familiar with, namely *Gryllodes sigillatus*, *Romalea microptera*, and the subfamily Oedipodinae Dr. Kevan is 0 and 3.

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AUTHORS' NOTE

by
 Vernon R. (Vic) Vickery, Emeritus Curator
 Lyman Entomological Museum and Research Laboratory

D. Keith McE. Kevan, Emeritus Professor
 Department of Entomology, Macdonald College,
 McGill University

The Grasshoppers, Crickets and Related Insects of Canada and Adjacent Regions. Ulonata: Dermaptera. Cheleutoptera. Notoptera. Dictuoptera. Grylloptera and Orthoptera. The Insects and Arachnids of Canada. Part 14, 918 pp. incl. 7 plates, 824 text figures, 237 maps. Published December, 1986. Research Branch, Agriculture Canada publ. No. 1777 [of] 1985.

We, the authors, feel that we must explain a few anomalies regarding this publication.

During the mid-1970's we applied for and received a contract from the Department of Supply and Services, Canada, to produce a "Monograph" of the orthopteroid insects of Canada. In June, 1980, a manuscript entitled "The orthopteroid insects of Canada and adjacent regions" was submitted to the Biosystematics Research Institute, Ottawa, as specified by the contract. This was later than the original intended date, owing, in part, to illnesses and to the move, in 1978, of the entire Lyman Entomological Museum complex to a newly constructed building.

Some time later, we were informed that the manuscript would be altered and published as part of the Agriculture Canada "Handbook" series, "The Insects and Arachnids of Canada". We pointed out that our contract was for a monograph - not a handbook - but the decision was not changed. The conversion of the original work to handbook style was not carried out by the authors. The systematic arrangement of taxa at all levels was altered without the approval of the authors. Notes on distribution were reduced to single phrases, under the "Range", and taxonomic keys were altered to delete adventive species. We were able to make a few changes, but a number of errors remain, although we had advised the publishers that they should be corrected.

We agreed, however, to let the publication proceed, provided that (1) a prefatory statement be included, informing readers that the taxonomic sequence was not as recognized by us, and (2) a check-list be included as an appendix, with the taxa in the phylogenetic sequence that we deemed appropriate. This was agreed at a meeting of the head of the Biosystematics Research Institute, the scientific advisor and the first author. The other alternative seemed to be to relegate the manuscript to a filing cabinet.

Readers will note that the "Handbook", as published, meets neither of the above stipulations, although appropriate text was supplied by the authors.

When we discovered several years ago that the work was not to

be published as a monograph but as a "Handbook", it was decided, with the full knowledge of the Head, at that time, of the Biosystematics Research Institute, to produce a limited number of copies (about 100) of the original monograph, which the Lyman Entomological Museum would distribute (as No. 13 of its Memoir series) to libraries and major research workers concerned with orthopteroid insects, especially in countries other than Canada. This was done in 1983. The entire two-volume set was typed by Mrs. Muriel Vickery, wife of the first author, without remuneration. The first author was responsible for assembling the work and setting the illustrations and distribution maps in the appropriate places throughout the text. The Museum production contained 6 coloured plates and 6 in black-and-white, as well as a coloured frontispiece. The bibliographic synonymies in this original version were complete, at least so far as the region covered is concerned. In the "Handbook" they have been greatly reduced (not always logically), one of the many reasons for producing the Lyman Memoir.

Although the sequence in which taxa were originally arranged has been altered in the "Handbook", the sequence of illustrations remains as in the original manuscript (and in the Lyman Museum Memoir 13). The maps have been rearranged. The "Handbook" still contains illustrations of some species (adventives and fossils) which have been deleted from the text!

It now would seem to be necessary to publish a complete check-list, not to enable the authors to justify themselves, but to provide a guide enabling those managing insect collections to arrange their specimens appropriately. We intend to publish such a check-list. We shall also update it, because event over the 8 or 9 years since the original manuscript was written make this necessary.

The single advantage of the "Handbook" over the Memoir is that it has the taxonomic keys in both English and French. The French language versions were not provided by the authors.

Despite the shortcomings of the "Handbook", we hope that readers will find it useful. In cases of doubt, or need of additional information, a check may be necessary using the Lyman Memoir, and of course, the forthcoming check-list when it eventually appears.

Y.E.S., the Young Entomologists' Society (originally the Teen International Entomology Group), is a unique international entomological society that was founded in 1965. Our major goal is to assist all entomophiles, but especially youth and amateurs, in establishing contact with colleagues in other geographical areas who share similar entomological interests, enabling them to learn from one another by sharing advice, information, literature, and specimens. We currently have members from 55 countries around the world.

The organization's name reflects our special commitment to youth, but "young" members of all ages and expertise levels are welcome to participate in Society activities and programs. In fact, advanced amateur and professional entomologists are strongly encouraged to become involved in Y.E.S. (either as volunteers or members) because they serve as role models and teachers to guide the personal and educational development of other members. Therefore, membership in Y.E.S. is open to absolutely anyone with a desire to participate.

There are five membership categories: youth (up to age 18), collegiate, adult, sustaining, and subscriber (institutions and libraries). Dues and subscription rates are nominal, and specific information is available from Y.E.S. International Headquarters.

Our Society journal, *Y.E.S. Quarterly*, presents a variety of articles on insects and other arthropods, including topics like techniques, collecting, biology, ecology and behavior, rearing methods, identification tips, faunal studies, conservation, project and experiments ideas, teaching methods, bibliographies, and more. It also contains field notes, illustrations and other artwork, poems, Society news, and a "Tradingpost" (to buy, sell, or exchange entomological goods). We offer our members and other authors the chance to publish their articles and/or artwork at no cost (no page charges). The Society also publishes a Miscellaneous Publication series, Special Publication Series, and a Games and Puzzles Special Supplement.

The Society offers a variety of useful programs, activities, and services designed to assist members with their entomological endeavors. Most members elect to place listings in the annual Member Directory and the Tradingpost section of the journal to invite other members with similar interests to correspond and arrange exchanges of information, literature, or specimens.

If you have any questions, or need any additional information, please feel free to contact Gary A. Dunn, Director and Editor, Y.E.S. International Headquarters, Department of Entomology, Michigan State University, East Lansing, MI 48824-1115 USA.

RECENT DEATHS

The Orthopterists' Society regretfully announces the deaths of the following orthopterists:

Dr. Ernest Tinkham
Dr. Eleanor Slifer
Dr. Shri Y. R. Rao

Obituaries are forthcoming in the next issue of *Metaleptra*.

THE ORTHOPTERISTS' SOCIETY

5TH INTERNATIONAL MEETING OF
THE ORTHOPTERISTS' SOCIETY
AT VALSAIN (SEGOVIA), SPAIN
IN JULY, 1989

Preliminary Announcement

The 5th International Meeting of the Orthopterists' Society is tentatively scheduled for late July, 1989, at the local headquarters of the Instituto Nacional para la Conservacion de Naturaleza (ICONA), Valsain (Segovia), near Madrid, Spain. This superb new governmental installation, with state-of-the-art facilities and accommodations, appears ideal for the Society's meeting. And, orthopterologically speaking, Spain itself is ideal both because of its large numbers of endemic species and interesting mixture of faunal elements and because it is a kind of "bridge" between Europe and Africa and the New World and the Old. What better location for the Society's first meeting outside of the Americas?

Lodging will be at the ICONA facility, Valsain, or in nearby Segovia or Madrid (10 km and 70 km, respectively, from Valsain). Meals will be served in the ICONA restaurant and may be taken also in the local area. Costs should be modest. Camping will not be possible in the immediate area, but arrangements are underway for minimal-cost facilities in adjacent La Granja.

Weather. The 5th International Meeting is scheduled for summer. Weather in Madrid will be hot (perhaps oppressively so), but it should be sunny, cool, and pleasant in Valsain, in the Central Range of the Guadarrama Mountains. There is little likelihood of rain.

Organizing Committee. The Organizing Committee for the 5th International Meeting of the Orthopterists' Society includes:

Arrangements Chairperson E. Morales Agacino, of Madrid, Spain;

Arrangements Staffpersons D. Cadahia, J. Gosalvez, and V. Llorente, all of Madrid, J. J. Presa, of Murcia, Spain, and others to be appointed;

Organizational Committee Chairperson and Society Executive Secretary S. K. Gangwere, of Detroit, USA; and

Society President V. R. Vickery, of Ste. Anne de Bellevue, Canada.

International Transportation. Madrid, the capital city of Spain, is served by many airlines and an extensive system of railways and highways. Conference delegates arriving at Barajas Airport or Atocha Train Station will receive instructions concerning their travel to Conference Headquarters at Valsain. Those arriving by car should proceed directly to Valsain. Details will be announced later.

Registrational and Other Fees. Conference registration will be by mail, in advance, through the Secretariat in Detroit, or personally upon

arrival at Conference Headquarters at Valsain. A registration fee of \$100 (US currency) has been set for Regular Members and one of \$25 for Student Members if paid at least three (3) months in advance of the meeting. (These monies are refundable in full upon official withdrawal within six (6) weeks of the meeting. Registration later than the above or at the meeting itself is possible at a per-person charge of \$150 (Regular Members) or \$40 (Student Members), on a non-refundable basis. Family members of delegates may register gratis.

All additional charges (lodging, meals, Society banquet, local transportation) will be on an at-cost basis, the greater the number of registrants, the lesser the per-person cost. Total meeting costs (excluding page charges, discussed below) should be modest for an international meeting.

Official Letter of Invitation. An official, personal letter of invitation to attend the 5th International Meeting will be sent prospective participants on written request to the Secretariat. This invitation does not obligate the Society in any way to pay for travel, subsistence, or other expenses that participants may incur at the meeting.

Tentative Program. The tentative four-day program of the 5th International Meeting of the Orthopterists' Society will include the following activities:

- 1) Registration and opening-day reception and mixer;
- 2) Four sections of submitted papers (control, evolution & systematics, physiology & genetics, ecology & behavior) on locusts, grasshoppers, and their allies;
- 3) A full-day field trip within the environs of Valsain;
- 4) Business meeting; and
- 5) Banquet and closing ceremony.

In addition, planning is underway for an optional 4-day post-conference field trip for those who wish to avail themselves of an exceptional collecting opportunity.

Official Languages. English, Spanish, and French are the official languages of the 5th International Meeting of the Orthopterists' Society. Simultaneous translation services are expected to be available. Papers read in other standard languages must include an abstract/resume in one or more of the official languages and may not be submitted for full publication.

Publication. Publication will be in the 5th Proceedings of the Orthopterists' Society. All contributed papers will be considered for publication in their entirety at the author/authors' expense. All must include an abstract/resume in one or more of the official languages (English, Spanish, or French). Inasmuch as all abstracts are published (whether or not the full text is published), they must be received at the Secretariat at least six (6) weeks prior to the conference opening. All papers submitted for publication in their entirety must be turned over to the Meeting Organizer (Gangwere) or to the Society Editor (Nickle) on the day they are read. They must comply in format with the Society's editorial

standards, as published elsewhere. All are expected to be original contributions (i. e., not previously published elsewhere), and all will be reviewed/refereed by a panel of experts chosen by the Society's Publications Committee.

If abstracts cannot be provided within the prescribed time limits (i. e., 6 weeks prior to the meeting), the research may still be considered for inclusion in the program on a read-in-title basis. Read-in-title contributions may be considered for publication in full if the text is made available to the Organizer or Editor at the time of presentation.

There will be a \$10 (US currency) per-page charge for all papers published in their entirety and for each page of abstract. This charge covers the editorial process, administrative handling, printing, and mailing of 100 free reprints. Additional numbers of reprints may be ordered at authors' option and expense.

Post-Conference Field Trip. J. J. Presa, of the Universidad de Murcia, is organizing a 4-day post-conference field trip through parts of the orthopterologically rich Sierras de Cazorla and Segura of southern Spain. Participants' food, lodging, and transportation will be on an at-cost, relatively inexpensive basis. Inasmuch as accommodations are limited, registration should be made at least six (6) weeks in advance of the conference. A non-refundable payment of \$25 (US currency) is required of each participant, to be applied to his/her total field trip cost.

Accompanying Persons' Program. Family members are encouraged to attend the 5th International Meeting of the Orthopterists' Society. An Accompanying Persons' Program is being arranged under the direction of V. Llorente, of the Museo de Ciencias Naturales, Madrid, and her committee. Site-seeing visits to various historical and other interesting places are being explored. Costs of these half-day or full-day trips are payable at registration on an at-cost basis. Again, as with other costs, they are expected to be modest.

THE ORTHOPTERISTS' SOCIETY

5TH INTERNATIONAL MEETING OF
THE ORTHOPTERISTS' SOCIETY
AT VALSAIN (SEGOVIA), SPAIN
IN JULY, 1989

Advance Registration Form

Name _____
Surname/name _____ Given name _____ Initial _____

Sex: _____ Telephone/s: _____
Male Female

Institution (if any): _____

Mailing address: _____

Accompanying family: _____

Name Relationship Sex

Section/s of Interest: _____
Control Evolution & Systematics
Physiology & Genetics Ecology & Behavior

Do you wish to read a paper/s? _____ In which language? _____
Yes No

[If yes, list title/s and provide an abstract/resume in one of the official languages (English, Spanish, French) on the reverse of this page]

Do you wish this paper/these papers published in abstract form only or in its/their entirety? _____
Abstract only Full text

Do you wish to participate in the following?

Banquet _____ Site-seeing visits _____ Post-conference trip _____

[Kindly complete the above form and return it to S. K. Gangwere, Executive Secretary, Orthopterists' Society, c/o Department of Biological Sciences, Wayne State University, Detroit, MI 48202, USA. Please send no money now. Billing will be later]

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 is 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), and Saskatoon (Canada). The next meeting will be held in 1989 at a site to be selected in 1986.

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, Smithsonian Institution, Washington, DC, 20560, USA.

The 1985-89 Governing Board comprises President V. R. Vickery (Canada), President-elect D. Otte (United States), Regional Representatives T. J. Cohn (United States), N. D. Jago (United Kingdom), and N. E. Sanchez (Argentina), Past President J. E. Henry (United States), Executive Secretary S. K. Gangwere (United States), and editor D. A. Nickle (United States).

Past Presidents include:

S. K. Gangwere	(United States)	(1978 - 1979)
R. A. Ronderos	(Argentina)	(1979 - 1982)
J. E. Henry	(United States)	(1982 - 1985)

Honorary Members include:

F. O. Albrecht	(France)	T. H. Hubbell	(United States)
I. J. Cantrall	(United States)	D. K. McE. Kevan	(Canada)
C. S. Carbonell	(Uruguay)	J. Lieberman	(Argentina) (deceased)
M. Descamps	(France)	H. R. Roberts	(United States) (deceased)
P. T. Haskell	(United Kingdom)	C. A. Campos Seabra	(Brazil)

Membership is open to all persons, professional or amateur, with an interest in Orthoptera. Annual dues are US \$10 for Active Members and US \$5 for students. Members receive all publications of the Society.

Society business is handled by the Executive Secretary, Prof. S. K. Gangwere, Department of Biological Sciences, Wayne State University, Detroit, Michigan, 48202, USA.