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PAN AMERICAN ACRIDOLOGICAL SOCIETY
LATIN AMERICAN TRAINING PROGRAM OF 1979: PART I I

By. S. K. Gangwere

Grantee Reports

The following section presents information given by each grantee at the conclusion of his/her tenure of award. These reports are given essentially as written except for editing to assure uniformity of style, condensation of longer reports owing to space limitations, and translation of some reports from the original Spanish or Portuguese.* Moreover, the thanks tendered by each grantee without exception to the Tinker Foundation, to the other granting organizations and individuals, and to PAAS are eliminated in favor of a blanket acknowledgment in this paragraph. All grantees are obviously deeply indebted for the generous support given, and on behalf of them I shall take this opportunity to say, "Thank you."

Amedegnato, Christiane. At the Academy of Natural Sciences, Philadelphia, Pennsylvania, I researched with Dr. Radclyffe Roberts in the following activities: 1) the study of the type collections of North American Romaleidae and of Neotropical Acridoidea other than Gomphocerinae, Acridinae, and Oedipodinae; 2) the study of the general collection, particularly of Neotropical forest specimens. I found in this collection some specimens representing new genera and species to be studied as we undertake, in Paris, revision of the groups to which they belong. In particular, I selected some specimens of the group Syntomacrae (Ommatolampinae) which we are presently reviewing in Paris; I selected some specimens of North American Romaleinae toward a

*All received reports have been proof read and approved by the grantees.

The Pan American Acridological Society, or PAAS, is an international scientific organization with members in 24 different countries. Its purposes are to facilitate communication among those interested in, and concerned with, New World Acridology, to encourage collaborative research and control programs in Acridology among the countries of the New World, and to disseminate information and to promote, conduct, and foster other activities designed to increase knowledge and understanding of Acridology and its implications.

Some 50 interested persons met at San Martin de los Andes, Neuquen, Argentina, in 1976, and planned a society, PAAS, that took its formal inception in 1978 upon the adoption of a Constitution and By-Laws. Since then, PAAS has been engaged in a full range of programs and activities toward the satisfaction of its above-mentioned objectives and was recently accorded tax-exempt status by the United States Government.

Approximately 100 persons representing 10 different countries met at Montana State University, Bozeman, Montana, USA, in 1979, on the occasion of the 2nd Meeting of PAAS. The 3rd Meeting is scheduled for Caracas, Venezuela, in the first week of July, 1981. Subsequent meetings are to be scheduled on a triennial basis and will alternate between North and South America.

The present Governing Board includes President E. A. Boudaros, of La Plata, Argentina, President-Elect J. E. Henry, of Bozeman, Montana, USA, North American Representative G. B. Mulkern, of Fargo, North Dakota, USA, Central American Representative C. Marquez Mayaudon, of Mexico City, Mexico, South American Representative Amilton Ferrais, of Rio Claro, Brazil, Executive Secretary & Past President S. K. Gangwere, of Detroit, Michigan, USA, Editor-in-Chief Michael Tyrkus, of Detroit, Michigan, USA, and Co-Editors I. J. Cantrell, of Ann Arbor, Michigan, USA, and C. S. Carbonell, of Montevideo, Uruguay.

The present publications of PAAS include a semiannual newsletter entitled Metaleptes and a triennial Proceedings. A research publication is planned for the near future.

PAAS membership is open to all persons, professional or amateur, with an interest in New World Acridology by virtue of their research, teaching, or other activities. Inquiries may be addressed to Prof. S. K. Gangwere at the PAAS Secretariat, Department of Biological Sciences, Wayne State University, Detroit, Michigan 48202, USA.

general phylogenetic study of the family Romaleidae; and I also noted the presence and localities of some new Neotropical taxa which cannot be studied in the immediate future.

At the Museum of Zoology, Ann Arbor, Michigan, I worked with Drs. T. H. Hubbell, I. J. Cantrall, and T. J. Cohn. My activities were essentially the same as at Philadelphia, but the presence of much South American forest material caused me to concentrate my efforts in this direction, particularly on the new genera and species of Ommatolampinae. I also studied part of the university collection of genitalia of North American Melanopinae in hopes of detecting evolutionary relationships with the South American Melanopinae. The results of this partial study show that a general investigation of the North American and Asiatic faunas is necessary to solve the problem. As a result, I have sharpened my ideas on ways to approach the study of phylogeny.

At the Bozeman, Montana, Meetings of the Pan American Acridological Society I participated in the symposium on biogeography and speciation of Acrididae. My particular contribution concerned the principal trends of evolution in the eumastacids, correlations between the biogeographic distribution of different groups of Acridomorpha, the general features of the phylogeny of South American acridids, and the basis of our interpretation of their phylogeny. I also participated in the symposium on population and community ecology.

At the United States National Museum, Washington, D. C., I studied the type collection

of Neotropical Acrididae as well as the general collection there.

At these places, aside from meeting numerous distinguished acridologists, important for a young researcher, I was particularly pleased to establish contacts with North American workers who will help with our general project, in Paris, on the Romaleidae, for which we are lacking North American material. Also, the ideas I gained in discussion with the South American cytogeneticists who have done much work on the South American fauna was fruitful.

I have started a project of study on the arboreal fauna of Venezuela with the Venezuelan grantee Francisco Cerda thanks to this meeting. This project is significant because the arboreal acridid fauna of Venezuela is, as yet, completely unknown. It will be useful to know if the general composition of this fauna is the same as that of the regions we have already studied (Northwestern Amazon, South Peru, French Guiana). I hope that PAAS will continue as an efficient intermediary in this new endeavor.

Carboneil, Carlos S. I spent some days at the Museu Nacional, Rio de Janeiro, Brasil, in order to select, in collaboration with grantee Dr. Miguel A. Monne, a representative sample of the acridid collection there to be identified in the United States by comparison with types and with other specimens in the collections to be visited, as stated below.

I visited the Academy of Natural Sciences, Philadelphia, Pennsylvania, for the following purposes: 1) identification of specimens of

Neotropical acridids from the collections in Rio de Janeiro and Montevideo; 2) continuation of research on the revision of some tribes of the subfamily Leptysminae of the Neotropical Region in collaboration with Dr. Radclyffe Roberts;

3) study of large series in the Academy collections for revision of the Genera Tropidacris, Lophacris, Titanscris, Alevas, Phaeoparia, Abila, Homalosaperus, and some undescribed genera of Romaleidae. I borrowed for further study series of specimens of the above genera, carefully selected according to geographical origin and other characteristics. I shall collaborate with grantee Dr. Monne in part of the above revisionary work. The scientist with whom I worked throughout these activities was Dr. Roberts. The other Academy orthopterist, Dr. Daniel Otte, was away on a field trip, but I spent time with him later at Bozeman.

I visited the U. S. National Museum, Washington, D. C., for the same purposes as stated above except item #2. The scientist in charge there, Dr. Ashley Gurney, was absent because of illness, but I was helped by Drs. Oliver Flint and Paul Spangler.

I visited the Museum of Zoology, University of Michigan, Ann Arbor, Michigan, for the same purposes as stated above, and I borrowed specimens for further research. I consulted with Drs. T. H. Hubbell, I. J. Cantrall, and T. J. Cohn, along with the other grantees there at the same time including Drs. Christiane Amedegnato, M. Monne, F. Cerda, A. Mesa, and A. Ferreira. We held several informal "symposia" on acridological subjects. We also had a meeting with Dr. Henry Townes and Mrs. Townes, of the American

Entomological Institute, and we discussed with them the possibility of publishing a catalogue of Neotropical acridids in one of the Institute journals.

The working sessions of the Pan American Acridological Society were held at Bozeman, Montana, during the period July 23rd to 26th. My specific activities during the sessions were the following. I participated in the symposium "Biogeography and speciation in Acrididae" and gave a talk on the "Origins of Central and South American faunas." I acted as chairman of the roundtable discussion on "Evaluation of taxonomic characters" and in that session presented a paper on "Taxonomic characters in Neotropical acridoids." During the Bozeman meeting I made contact with, and assured future collaboration with, the following scientists: 1) Dr. David Nickle, who is to take charge of orthopteran systematics in the USDA Systematic Entomology Laboratory, Washington, starting September, 1979; 2) Prof. Francisco Cerda, Universidad Central de Venezuela, Maracay, for future collaboration in the study of the Venezuelan acridid fauna; 3) Dr. Jack Schultz, Cornell University, New York, for future collaboration in the study of Proscopiidae; and 4) Dr. Daniel Otte, Academy of Natural Sciences, Philadelphia, for future collaboration in the identification of Neotropical Gomphocerinae.

I also participated in the group field trips organized for all grantees by PAAs. We studied the western North American habitats and made collections of acridoids.

After the meeting I consulted with Dr. Hugo Fraser Rowell, University of California,

Berkeley, California, for future collaboration in the study of the Neotropical acridid fauna. Then I went on an extensive field trip of my own for the rest of my stay in the United States.

Cella, Doralice. I participated in the congress of the Pan American Acridological Society, and during it and the week of field work and collecting afterward I had the opportunity to:

1) Visit the USDA Rangeland Insect Laboratory of Dr. John Henry, Montana State University, Bozeman, Montana, and the entomology laboratory of Dr. Robert Pfadt, University of Wyoming, Laramie, Wyoming.

2) Make professional contacts with the following investigators: Dr. Ricardo Ronderos, Facultad de Ciencias Naturales y Museo, La Plata, Argentina, from whom I received and accepted an invitation to work with his group in La Plata for a period of three months on food habits and taxonomy in Acrididae; Ing. Carlos Carbonell, Universidad de Montevideo, Uruguay, from whom I received an invitation to work in his laboratory on Dichroplus bergi, the species I am studying at Rio Claro toward the degree "Mestre"; Dr. Nelly Lafuente, Departamento de Biología, Universidad de Chile, Valparaíso, with whom I had an opportunity to discuss grasshopper cytogenetics; Dr. Miguel A. Monne, Universidade Estadual do Rio de Janeiro, Brasil, with whom I had the opportunity to plan future collecting in the states of Rio de Janeiro and Minas Gerais, Brasil, with a view of taking species in which I am interested in that part of their distribution; and Dr. Francisco Cerda, Universidad Central de

Venezuela, with whom I discussed taxonomic problems in Acrididae.

3) Participate in the five-day group field trip planned by PAAS for the grantees for travel and collecting throughout the states of Montana, Wyoming, Idaho, Utah, and Colorado and exchange ideas with one another and with the many other scientists we met while in the field.

4) Observe a large-scale, ongoing program of grasshopper population control carried out at Sheridan, Wyoming, using chemicals and pathogenic organisms.

While at Dr. S. K. Gangwere's laboratory of insect ecology, Department of Biological Sciences, Wayne State University, Detroit, Michigan, I was engaged in several projects under the supervision of Dr. Gangwere, Mr. Charles N. Lietzau, doctoral candidate, and Mr. Steven Vix, Laboratory Technician. I observed and then practiced a number of techniques largely on two species of grasshopper, Arphia p. pseudonietana (Thomas) and Schistocerca emarginata (Scudder). These techniques included:

a) Differential feeding studies. Both A. pseudonietana and S. emarginata were given access to a total of 13 species of plant taken from their usual habitat. A 5-class scale was developed to rate the acceptability of each plant. S. emarginata displayed the greatest preference for broad-leaved plants and a low acceptability for the graminoids offered. A. pseudonietana ate only grasses though differences in acceptability were noted between the grass species, and it rejected or barely accepted all broad-leaved plants. These results correlate

both with the published literature I studied and with the other techniques I used on the two grasshoppers (below).

b) I studied specimens illustrating the many types of mouthpart adaptation in Michigan orthopteroids. Examination of the mouthparts of specimens of A. pseudonietana and S. emarginata disclosed that, as the above feeding studies suggest, A. pseudonietana has graminivorous-type mandibles and S. emarginata forbivorous-type mandibles.

c) Analysis of fecal pellets. I examined the feculae of many species. The A. pseudonietana I collected in the field had aligned types I-A and I-B feculae characteristic of graminivorous species. The S. emarginata I collected had unaligned type I-C feculae characteristic of broad-leaved feeders. I also prepared slides from ground plant material to serve as a reference for examining the fecal content under the microscope to determine the species of plant eaten.

d) Estimation of population size in the field. A mark and recapture method of estimating population size used by Dr. Gangwere was carried out on A. pseudonietana in the field. It proved successful despite the cool weather and provided me with valuable experience for working with my own species in more limited habitats. The method involves, among other things, the notching of the pronotal margin rather than the conventional but poorer method of marking with paint.

e) Sonogram analysis. The use of sonogram analysis was demonstrated by Dr. Drew Buchanan, and I was provided with literature on the

analysis of insect calls. Dr. Buchanan had me prepare sonograms of Orthoptera which we then compared with those of humans and birds. This experience should prove invaluable in my project comparing Brazilian and Argentine populations that could consist of separate species.

While in Detroit, I also worked in Dr. Michael Tyrkus' laboratory of cytogenetics at Children's Hospital. I worked both with Dr. Tyrkus and with Mr. Anthony Dajnowicz, Laboratory Technician.

While in Dr. Herbert Knutson's laboratory of insect ecology at Kansas State University, Manhattan, Kansas, I worked with Dr. Knutson, Laboratory Technician Mrs. Evelyn White, and doctoral candidate Ms. Sheryl Smith. These were the activities in which I was engaged:

a) I observed and worked on Dr. Knutson's research project entitled "Chemical and Physical Basis of Grasshopper-Host Plant Interactions." This project involves the physical and chemical defenses of the plant Artemisia ludoviciana against phytophagous insects and the adaptive specializations of the grasshopper Hypochlora alba that feeds upon the plant. Other species of grasshopper do not survive eating it. For example, the grasshopper Melanoplus bivittatus does not survive on A. ludoviciana but does survive on the plant Ambrosia psilostachya, yet Hypochlora alba does not develop when it feeds on A. psilostachya. The objectives of the project are to identify the chemical and physical relationships between the host plants and certain Kansas species of grasshopper, to determine why grasshoppers except H. alba rarely feed and never

mature on A. ludoviciana, and why H. alba feeds on A. ludoviciana and apparently needs it to reach maturity. To answer these questions different plant parts and purified substances from A. ludoviciana and A. psilostachya are offered to various nymphal stages of H. alba and M. bivittatus and observations are made of mortality, survival, metamorphosis, etc. Records are kept of the quantity of plant ingested, toxic effects, and feeding habits.

b) I participated in several field trips along with other Kansas State entomologists researching the Manhattan area (KSU Shielding area) to collect Acrididae and plants.

c) I was present at three seminars given by the Department of Entomology. These included Dr. T. L. Hopkins' and Dr. Knutson's report on the Second Triennial Meeting of PAAS and comments on their grasshopper-host plant research; Dr. A. B. Broce's and R. W. Huston's report on the National Livestock Insects Workshop and comments on recent advances in livestock entomology; and Dr. Spencer Tomb's talk on the systematics and reproductive biology of the genus Lygodesmia.

d) I undertook an extensive literature search on Acrididae using the Library of the Department of Entomology. I had access to Acridological Abstracts and to a large collection of reprints. I xeroxed appropriate articles and wrote authors for others. These papers will be an important source of reference for my later work in Brasil.

e) Mr. John Krchma demonstrated for me the use of the Scanning Electron Microscope and techniques of sample preparation.

Cerda, Francisco J. At the Museum of Zoology, University of Michigan, Ann Arbor, Michigan, I used their enormous library of Orthoptera to review the literature. I made approximately 1,400 photocopies. Most were related to the Neotropical Acridoidea and Mantoidea. I also had the opportunity to review some specimens of Venezuelan material, especially Romaleidae, which I was able to compare with specimens I brought with me from Maracay.

During my stay in Ann Arbor, I met many scientists who helped me in many ways. I particularly want to mention the following: Dr. Irving Cantrall, who trained me in dissection methods of acridid genitalia and gave me access to his catalogue of American Acridoidea, which I copied almost entirely; Drs. T. H. Hubbell and T. J. Cohn, who helped me with numerous problems, both scientific and logistic; Dr. Christiane Amedegnato, who provided ideas for future work; and Ing. Carlos Carbonell, who helped determine some material from our Maracay collection and gave me a copy of his bibliographical list of American Acridoidea.

These contacts and many others have helped me better understand the main problems of systematics in Orthoptera, and, as a result, I have changed research direction to work on the Romaleidae of Venezuela. These contacts have also broadened my possibilities of information and material exchange between such institutions as the Museum of Zoology of Ann Arbor, the Museum d'Histoire Naturelle of Paris, the Museu Nacional of Rio de Janeiro, the Carbonell collections in Montevideo, etc.

During the period I attended the Second Triennial Meeting of PAAS at Bozeman, Montana, I delivered the paper "Estado actual de la Acridiologia en Venezuela." I was able to contact a number of other acridologists with whom I hope to establish future cooperative activities. Among them are Drs. D. Otte, H. R. Roberts, A. W. Harvey, and R. Ronderos.

At the Academy of Natural Sciences, Philadelphia, Pennsylvania, I worked with Drs. Roberts and Otte, who are curators there, and with Dr. Ronderos, who was visiting the Academy at the same time. My research activities were several.

I reviewed and acquired literature on Orthoptera and Mantoidea. Most of the bibliography I developed there was obtained in the form of reprints generously donated by the Academy. I also photocopied much additional literature no longer available as reprints.

I partially organized the Academy Mantoidea collection including the classification of a large amount of unsorted material into families and subfamilies and, in some cases, into genera and species.

I undertook studies on the Neotropical mantids with emphasis on the Venezuelan species and found several new species and at least one new genus. I shall be able to continue this study in Venezuela because I was able to arrange for a loan of some specimens from the Academy.

I initiated a preliminary study of the Neotropical Romaleidae so as to become familiar

with the species in the group. This research represents the first step toward the beginning of my major work on the Romaleinae of Venezuela. I have arranged for a loan of a reference collection from the Academy to complete this study in Venezuela.

I also made approximately 150 photographs of types and selected other material to allow me to work more effectively in Venezuela.

Cordo, Hugo A. At Bozeman, Montana, I attended the meeting of PAAS and worked with a number of scientists from the USDA Rangeland Insect Laboratory. I consulted with Dr. Norman Rees on grasshopper parasite collecting and rearing; with Dr. John Henry on field techniques for utilizing microsporidian pathogens for biocontrol of grasshoppers; with Dr. Jerome Onasager on the details of collecting and shipping Argentine grasshopper parasites to the United States.

At the USDA Grassland, Soil, and Water Research Laboratory, Temple, Texas, I worked with Dr. Jack DeLoach. We went on a field trip that took us through Arizona, New Mexico, and western Texas as we collected grasshoppers and other natural enemies of rangeland weeds. We visited research facilities at the University of New Mexico and at Texas A & M University, and I was able to get needed advice on various grasshopper and weed projects we have planned for the next field season in Argentina.

At the completion of my stay in the United States I spent some time at the USDA Biological Pest Control Research Unit, Gainesville, Florida,

and at various related laboratories. These latter included USDA facilities at Stoneville, Mississippi, Charleston, South Carolina, and Fort Lauderdale, Florida. At all of these places I learned new techniques and arranged for future cooperation in grasshopper and weed control.

Ferreira, Amilton. At the Lyman Entomological Museum, Ste. Anne de Bellevue, Canada, I studied the collections of Orthoptera with the help of the curators Drs. Kavan and Vickery. I was particularly interested in information concerning the habitat of the katydids of the genera Cyphoderris and Anabrus, on both of which I am beginning collaborative work.

At the Museum of Zoology, University of Michigan, Ann Arbor, Michigan, I worked closely with Drs. Hubbell, Cantrall, and Cohn as I studied the collections there to broaden my knowledge of the Orthoptera as a whole. I was also able to make the elaborate preparations necessary for the forthcoming field trips in western United States and to visit the nearby campus of Wayne State University to consult with Drs. Gangwere and Tyrkus. In Dr. Tyrkus' laboratory there are some new techniques in use for the fine study of chromosomes which I was much interested in observing.

At the PAAS meetings in Bozeman, Montana, I participated in the roundtable discussion entitled "Evaluation of taxonomic characters," and I delivered four papers concerning grasshopper cytogenetics. I feel I profited greatly both from the numerous professional contacts I made with the other acridologists there and from the field trips that the society planned for the grantees.

Following the meetings at Bozeman, Dr. T. J. Cohn supervised a private field trip for Dr. Mesa and myself during which we traveled through many parts of western United States in search of Cyphoderris, Anabrus, and other orthopteroids of interest. I feel I learned a particularly great amount during this three-week excursion.

Guerra Munoz, Rosa. At the meeting of the Pan American Acridological Society at Bozeman, Montana, I had the opportunity to consult with two other specialists in cytotaxonomy, Drs. Alejo Mesa and Amilton Ferreira of the Universidade de Rio Claro, Brasil. I was able to talk with Professors Ricardo Ronderos and Carlos Carbonell concerning the current systematics of Trimerotropis ochraceipennis, an endemic species of Chile on which I am beginning work. I also gained valuable insight for this future work through stimulating discussions with Dr. Theodore Cohn concerning the distribution of the genus Trimerotropis in South America.

In my stay in Detroit, Michigan, I had the opportunity of working in the laboratory of Dr. Michael Tyrkus at the Wayne State University School of Medicine. I learned much there concerning changes in chromosomes and modern techniques by which to study them. I was graciously given access by Dr. Tyrkus to an extensive bibliography on this subject. I was also able to visit Dr. Gangwere's laboratory on the same campus and to spend some time at the nearby Insect Division of the University of Michigan's Museum of Zoology, Ann Arbor. At the latter, Dr. Irving Cantrall kindly introduced us to the magnificent collection and library of Orthoptera housed there.

My work at Texas A & M University, College Station, Texas, was undertaken before the Bozeman meetings and then continued following my assignment to Wayne. At College Station, I worked under the direction of Dr. Gilbert Schroeter, an established authority on population genetics who has experience with Trimerotropis helperi. Inasmuch as T. ochraceipennis of my country is an excellent species for cytogenetic work, this opens the possibility of a new line of research in Chile. My work consisted of obtaining practice in the sighting, recognition, and counting of chiasmata in the locust Schistocerca americana with the view of seeing if the presence of the polymorphic chromosomal segments encountered in some species of this genus influence the index of recombination, which bears directly on specific variability. The project then involved the material I collected in the United States comparing species with polymorphism and those without it. The results obtained did not give data sufficient to show comparative population differences but suggested the desired result could be obtained upon analysis of more extensive data.

Apart from the work mentioned above I learned a promising new method of preparing chromosomes. It is a particularly rapid method that uses liquid nitrogen.

As a result, I hope to undertake a new line of investigation in Chile, a line involving T. ochraceipennis, particularly interesting because of its great chromosomal polymorphism. Toward this problem I shall be able to use the modern techniques of chromosome banding and of population analysis learned during this visit to the United States.

Lafuente Indo, Nelly. I am involved in a project on the cytogenetics of Acrididae in my country, Chile, and the learning experiences I had in the United States during the Tinker-sponsored PAAS training project bear directly on this cytogenetic research.

In applying for this award I expressed interest in two things: to visit centers where research on grasshopper cytogenetics is carried out, and to visit the principal laboratories and collections of grasshoppers in North America. I was able to satisfy both of these objectives, and I learned a great deal of information thereby.

At Texas A & M University, College Station, Texas, I worked in the laboratory of Dr. Gilbert L. Schroeter, a specialist on grasshopper population genetics. While with Dr. Schroeter I discussed and got his views on: the form and structure of chromosomes, techniques of banding, population variability, chiasmata frequency, the role of the heterochromatic "C" zones, and the role of the "B" chromosomes and their origin. Some of these subjects are ones on which we are working in Chile and others are things on which Dr. Schroeter is working. As a result, we have decided to collaborate on an experimental cytogenetic project involving computer analysis of the results of both laboratories and a mutual exchange of investigators.

It is owing to the interest of Dr. Gregory Mulken that I came to visit the Agriculture Experiment Station and the Department of Entomology of North Dakota State University, Fargo, North Dakota. Dr. Mulken and his colleagues introduced me to the applied

entomology research underway there utilizing, among other things, the scanning electron microscope in the diagnosis and improvement of knowledge of grasshoppers and various other pest insects. These were of great interest to me.

At Fargo, I was also able to work for a time in the ultrastructural cytogenetic laboratory of Dr. George Gassner, where they are obtaining data using the electron microscope and other techniques and equipment potentially useful to me in my own work in Chile, and I was privileged to spend some time with Dr. D. North, an insect cytogeneticist with whom I discussed our problems on grasshopper chromosomes at the optic and electronic levels.

I might add that, during my stay in Fargo, I was invited to give a seminar, which I did on the subject "Form and chromosome number in Acrididae." I was honored to have this opportunity, and I feel that my talk was well received.

At Wayne State University, Detroit, Michigan, I was assigned for some weeks to the cytogenetic laboratory of Dr. Michael Tyrkus, of Children's Hospital. Dr. Tyrkus provided me data from his own research on human chromosomes as well as photographs of clinical interest which will be of great usefulness to me in the teaching of my course on cytogenetics. I was able to talk at length with Dr. Tyrkus on grasshopper and cricket chromosomes and to visit Dr. Gangwere's laboratory of insect ecology in the Department of Biological Sciences.

Also while at Wayne I was given the opportunity to spend some days at the Museum of

Zoology of the University of Michigan in nearby Ann Arbor. Here, the prestigious acridologist Dr. Irving Cantrall spent many hours showing us the collection of Orthoptera, which is the largest and most complete it has ever been my pleasure to study, and the magnificent library, equally impressive. I feel these experiences in Michigan were very useful from my personal professional point of view.

Finally, before returning to my own country I went again to Dr. Schroeter's laboratory at Texas A & M where I was able to spend the remaining time collaborating with him on the above-mentioned project on population cytogenetics in Acrididae.

The Second Triennial Meeting of PAAS at Sozeman, Montana, was exceedingly valuable to me both because of the high level of the research papers presented and because of the opportunity I had to know and to converse with acridologists from throughout the New World and Europe. I found it especially useful to discuss professional matters with such eminent scientists as Carlos Carbonell, Alejo Mesa, Theodore Cohn, Nick Jago, and Christiane Amadegnato and to see the USDA Rangeland Insect Laboratory, where Dr. John Henry and others work on grasshopper control.

Another aspect of the congress that I found useful was the opportunity the grantees got to collect material from northwest United States grasshopper populations. We were taken, for example, to the mountainous Gallatin Forest and other areas around Bozeman, and we participated in a five-day field trip that took us throughout

the states of Idaho, Utah, Colorado, and Wyoming, as well as Montana. During this period I collected an enormous quantity of specimens and variety of species, some of which we are analyzing cytogenetically.

I came to know two major projects on grasshopper control during the trip, one at the University of Wyoming, Laramie, Wyoming, directed by Dr. Robert Pfadt, involving chemical agents, and the other, at Sheridan, Wyoming, directed by Dr. Henry, involving chemical control supplemented by biological control using microorganisms.

I can say that this visit to the United States has been both for my collaborators and for me a most worthwhile experience. All that we saw and did will surely prove directly applicable to the quality and direction of our own investigations and teaching in Chile. What more can I say?

Luna, Georgina C. On my arrival in the United States I began work at the USDA Rangeland Insect Laboratory, Bozeman, on certain pathogenic organisms of grasshoppers. I worked under the supervision of Dr. John Henry and his colleagues Dr. Jerome Onsager, Mr. G. B. Hewitt, Mr. Gerald M. Mussgnug, and Ms. Elaine Oma. They gave me experience and many new ideas on the subject.

I was present at the Triennial Meeting of the Pan American Acridological Society at Bozeman where I made a presentation of my work in Argentina. Here, I met orthopterists and acridologists from throughout the New World and Europe and benefited from all these contacts.

However, the most useful of the contacts were with persons who share my particular research interest, among them Drs. A. Ewen, M. Mukerji, and K. Raina, of Agriculture Canada, Saskatoon, Saskatchewan, Canada.

I hope to put into practice in my country some of the new ideas and techniques I learned at Bozeman. Chief among these are evaluation of a bioassay system of the grasshopper pathogen Nosema locustae using second-instar nymphs, eliminations of cyst sporoducts of gregarines, utilization of viruses in grasshopper control, and application of pathogenic agents in the field, etc.

My final assignment in the United States involved participation in the meeting of the Society for Invertebrate Pathology, held at the University of Florida, Gainesville, Florida, where I met many additional specialists engaged in research on pathogenic organisms though most are concerned with invertebrate hosts other than insects.

Mesa, Alejo. I spent my first week at the Museum of Zoology, University of Michigan, Ann Arbor, Michigan, preparing the equipment necessary for the collecting in western United States planned for during and after the Bozeman meetings. I also made plans with Dr. Theodore Hubbell for a joint paper we are undertaking on gryllacridid taxonomy.

At the Bozeman Meeting, I read three papers on the cytology and morphology of Orthoptera. The first was a co-authored major revision of the cytology of the South American acridoids. It

included a list of chromosome numbers, morphology, and sex determination mechanisms as well as a corresponding bibliography and fresh information on more than 200 species. The second paper dealt with the cytology of more than 20 species of Proscopiidae, of which only 10 had been known previously from the cytological point of view. The most primitive proscopiid I studied shares the same ancestral karyotype as the Australian group Morabinae, which suggests a connection between the proscopiids and the morabines. The third paper was a co-authored discussion of the male concealed genitalia and chromosomes of a new Brazilian genus and species of Abractini.

I found all of the papers presented during the meeting stimulating and particularly profited from the sessions dealing exclusively with orthopteran cytogenetics and with those dealing with the systematics and biogeography of the order. And, of course, I had the opportunity and pleasure of meeting some old friends and colleagues as well as many promising newcomers.

After the congress and its group field trips were over I was privileged to go on a three-week field trip under the direction of Dr. Theodore Cohn, of San Diego State University. Dr. Cohn, Dr. Amilton Ferreira, and I traveled throughout Montana, Wyoming, Washington, Oregon, northern California, Nevada, and Utah collecting and preparing for cytological study more than 400 specimens of Acridoidea, Prothalangopsidae, Grylloidea, and Tettigonoidea. Among the materials collected, I shall especially mention *Cyphoderris monstrosa* and *C. strepitans*, which apparently belong to a primitive, practically

extinct group of Orthoptera. Dr. Cohn is vitally interested in them and is anxious to have the cytological information that Dr. Ferreira and I are able to provide toward a further understanding of evolution in the group. Anabrus simplex is another important species we collected. A. simplex was studied early in this country by Dr. Clarence McClung, who published drawings which suggest that this katydid has an unusual sex-determination mechanism which the three of us want to reinvestigate. Finally, we collected several species of Gryllacrididae, particularly those which Professors Hubbell and Cohn are presently researching from the taxonomic point of view. The cytological information obtained from these gryllacridids should help to clarify the phyletic relationships of the group.

Following the three-week field trip I returned to the museum at Ann Arbor to work under the direction of Dr. Hubbell on a revision of the South American Macropathinae, a group of primitive camel crickets which, at present, are poorly known. During this period I did the illustrations for the paper, making more than 200 drawings of morphological structures and more than 30 photographic illustrations. Dr. Hubbell is now completing the taxonomic section. We have found most of the species and several of the genera to be new.

During this period I also took advantage of the excellent library of Orthoptera at Ann Arbor to photocopy old papers and other classical works on taxonomy that are unavailable in South America. Moreover, I took photographs of many species of identified cricket from the extensive collections of Orthoptera to make possible a

future cytological study on this group of insects, so poorly understood in South America.

After departing from Ann Arbor, I spent shorter periods of time at the Academy of Natural Sciences, Philadelphia, Pennsylvania, and at the U. S. National Museum, Washington, D. C., so as to obtain certain data and material missed at Ann Arbor.

Monne, Miguel A. At the Academy of Natural Sciences, Philadelphia, Pennsylvania, I worked under the supervision of Dr. H. R. Roberts and accomplished the following:

1) I studied types and looked at other specimens of the genera Aleuas, Chlorohippus, Phaeoparia, Abila, and Homalosaparus with a view toward their revision, and I borrowed specimens for the description of two new genera of Romaleinae, a number of specimens of which are in the collections at Rio de Janeiro.

2) I identified specimens from the collection of the museum at Rio by direct comparison with type specimens found in the Academy collections. I brought a large number of specimens from the collection of the museum at Rio specifically for this purpose, and many of these were previously unidentified or incorrectly identified.

3) Using a copy of the bibliography of the Neotropical acridid fauna made by Prof. G. S. Carbonell, I was able to obtain duplicates of many of the old items of literature that were still available and to make xerox copies of those that were not available using the Academy's excellent library.

4) Dr. Roberts kindly allowed me to take a reference collection of acridids of the United States, Mexico, and Central America from the Academy collections to be added to those of the Museum at Rio de Janeiro. This reference collection will be an invaluable addition to our collection in Rio, for it will facilitate the study and identification of our existing collections and the new material that will be added there in the future. For our part, we shall send to the Academy paratypes and other specimens of species not represented in the Philadelphia collections.

5) I also examined and studied as carefully as possible within the limited time at my disposal the large and representative collection of acridids at the Academy. I took notes, as necessary, and I judge that this part of my assignment will vastly improve my understanding of the Neotropical acridid fauna and help me in my future research on this group of insects.

At the USDA Systematic Entomology Laboratory, U. S. National Museum, Washington, D. C., I consulted with Drs. Oliver Flint and Paul Spangler, who were my hosts in the absence of Dr. Ashley Gurney, the Curator of Orthoptera, who was then recovering from a serious illness. During my stay at USNM, I examined all the Neotropical acridid types in the collection and compared them with specimens from the museum at Rio for purposes of accurate identification. I also looked over the Neotropical section of the general acridid collection, both identified and unidentified materials, and took notes that will enable me to borrow specimens as necessary in my future research.

At the Insect Division, Museum of Zoology, University of Michigan, Ann Arbor, Michigan, I was engaged in activities essentially the same as those I described for my stay at the Academy of Natural Sciences. I made an agreement for the interchange of specimens between our two institutions, the Museum of Zoology and the Museu Nacional. It was agreed that, in the future, I shall send paratypes and specimens from Rio in exchange for specimens that I selected from the Michigan collections. I also used the extensive library and the convenient facilities for making photocopies at Michigan to add to the bibliography I obtained earlier at Philadelphia. These publications will prove invaluable for our future research at Rio.

At the meeting of the Pan American Acridological Society, Bozeman, Montana, I presented a paper entitled "A Survey of the acridid fauna in two localities of the middle course of the Amazon River" and profited greatly from the discussions I had with the acridologists of so many different institutions and countries. The direct, personal relationships I established with these scientists will be invaluable for the researches I have planned for the future on the Neotropical fauna of Acrididae. The scientists mentioned above, and many others not mentioned, helped me work in an efficient manner and unselfishly shared with me their vast knowledge and experience in this, for me, new field of entomological activity. They helped me accomplish a great deal of work in a limited period of time and made available to our comparatively young Orthoptera collection at the Museu Nacional a good amount of priceless material that promises a marked improvement in the quality of our work at Rio.

Sanchez, Norma Elba. Before, during, and after the Triennial Meeting of the Pan American Acridological Society, Bozeman, Montana, I had the opportunity of new and profitable experiences that promise to further my professional development. These experiences were numerous, but several of them stand out, and I shall tell you about them.

I began my visit to the United States at the USDA Rangeland Insect Laboratory, Montana State University, Bozeman, Montana, where I was assigned to the program of Dr. John Henry and his colleagues who are researching the biological control of grasshoppers. Then I moved to the Research Station, Agriculture Canada, Saskatoon, Saskatchewan, Canada, where I was assigned to the team of Drs. M. K. Mukerji, working on population dynamics of grasshoppers, and A. Ewen, working on the biological control of these insects. This period in Canada was especially valuable to me because my research interests are in the area of grasshopper population dynamics. I learned of and used many new ideas and techniques while with Dr. Mukerji, and I hope to use them upon my return to Argentina. Included are new population sampling methods, new ideas concerning the influence of climatic factors on embryonic development and developmental cycles, new means of predicting hatching dates and life stage, and new ways of estimating potential damage.

Upon my return to Bozeman, I presented a paper concerning my investigations in Argentina. This was given at the Second Triennial Meeting of the Pan American Acridological Society. During this congress I met and conversed with many acridologists from Europe and throughout the New

World. I might mention that, among the contacts I found most useful, was the one with Dr. Jack Schultz, of Cornell University, Ithaca, New York, who is researching on desert community ecology.

During the five-day group field trip organized by the society for the grantees, we traveled throughout the states of Montana, Idaho, Utah, Colorado, and Wyoming and made grasshopper collections in various habitats of many localities. We visited the laboratory of Dr. Robert Pfadt, Wyoming State University, Laramie, Wyoming, and observed his field research, and also observed the Montana State University control program at Sheridan, Wyoming.

Next I was assigned to Dr. Gregory Mulhern's laboratory at North Dakota State University, Fargo, North Dakota. Here, I had my first exposure to the application of modern computer technology to acridological research and learned about orthopteroid feeding behavior, a subject on which Dr. Mulhern is a world authority.

Finally, I visited the Academy of Natural Sciences, Philadelphia, where I surveyed the collection of Neotropical acridoids and gained experience in the field of taxonomy under the tutelage of Drs. H. R. Roberts, the curator there, and Ricardo Ronderos, my doctoral adviser at La Plata.

Zamorano Ponce, Enrique. I attended the Second Congress of the Pan American Acridological Society, Bozeman, Montana, where I presented my work entitled "Cytogenetics in the genus Scyllina." I made contact with specialists at Bozeman whose influence will be as important as

the licenciado in biology in my future professional development. The specialists of most immediate pertinence to me were, among others, Drs. Alejo Mesa, Carlos Carbonell, and Gilbert L. Schroeter.

While at Bozeman I was privileged to participate in extensive field trips to parts of western United States where I had the opportunity to observe and collect species of grasshopper such as Brachystola magna, Oedaleonotus enigma, Melanoplus sanguinipes, etc., which material I shall take with me to Chile to incorporate into the collections of Orthoptera there. I also collected lichens for the same purpose.

During my assignment to the laboratory of Dr. Gilbert Schroeter, Texas A & M University, College Station, Texas, I worked on the chromosome populations of two species, Oedaleonotus enigma and Schistocerca americana, so as to learn techniques that I may use in Chile on Chilean species. This research involved the following activities:

1) I cytologically scored 160 individuals of a California population of O. enigma with respect to their chromosome polymorphisms, viz., two pericentric inversions, a centric fusion, and supernumerary chromosomes and segments.

2) Dr. Schroeter and I collected about 50 specimens of S. americana near College Station and found it to be polymorphic for a heterochromatic supernumerary segment on the third smallest chromosome pair. I analyzed some of these individuals with regard to the frequency and distribution of chiasmata in the various karyotypes and established that the presence of

the segment significantly increases the chiasma frequency. Dr. Schroeter and I plan further statistical analyses for the near future to enable us to determine whether or not the effect is distributed throughout the genome. We hope to publish these findings.

3) With the help of Dr. Schroeter, I developed and refined techniques for C (centromere)-banding of chromosomes suitable for various species of Acrididae. These techniques should aid us in establishing the types of chromosome rearrangements that have taken place during the evolution of some of these species.

Finally, I visited the laboratory of Dr. Kathleen Church, Arizona State University, Tempe, Arizona. Dr. Church is a specialist in chromosome ultrastructure, a subject on which I shall defend my doctoral dissertation in the near future. Our discussions concerning this mutual interest proved of great benefit, and they alone would have made my visit to the United States worthwhile, yet they represent but a small part of what I learned while in this country.

BUDGET*

Category	Receipts	Expenditures	Balance
Direct			
Contributions**			
Tinker Foundation	\$25,000		
Montana State University	1,500		
North Dakota State University	1,500		
Anonymous private donors	1,045		
Wayne State University	1,000		
Boersma Travel Philadelphia Academy of Natural Sciences	446		
Total	<u>\$30,791</u>		
Direct Expenditures			
Adjusted travel, international & local		\$16,079	
Subsistence		10,081	
Separately budgeted lodging		2,054	
Field trips		1,657	
Telegrams		28	
Total		<u>\$29,899</u>	
Direct Fund Anticipated Balance			\$892***

Category	Receipts	Expenditures	Balance
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Indirect Contributions****			
Universidad Central de Venezuela	\$ 1,800		
Centre National de la Recherche Scientifique Union Carbide University of Michigan	1,225		
	1,000		
	1,000		
Kansas State University	300		
USDA AR	210		
Total	\$ 5,535		
Indirect Expenditures		\$ 5,535	
Indirect Fund Balance			\$0.00

In-Kind Contributions****			
Dollar value of total by anonymous donors		\$ 5,664	
In-Kind Expenditures		\$ 5,664	
In-Kind Balance			\$0.00

Category	Receipts	Expenditures	Balance
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GRAED TOTALS	\$41,990	\$41,098	\$892***
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*These figures are rounded-off approximations subject to final analysis.

**These funds were administered and audited by Wayne State University.

***This surplus is to be expended in partial payment of the grantees' publication costs in the Proceedings of the Second Triennial Meeting.

****These funds were given by the donors directly to the grantees in lieu of total PAAS support, except in the case of Union Carbide, so were donor audited.

*****This is support given in the form of grantee room and board. No audit is possible in absence of an actual money exchange.

REPORT FROM THE SECRETARY'S DESK

News on PAAS' grant applications is mixed. There is good news from the Tinker Foundation, which has kindly agreed to fund the society's 2nd Latin American Training Project in the amount of \$15,000 (U.S.). This award is, however, contingent upon receipt of matching funds, for which we need your help. If you think your institution or you might be able to help in this worthwhile endeavor by providing a small cash contribution or lodging or other services or facilities for training one or more grantees for a week or more, kindly let me know.

Some time ago, I mailed a preliminary announcement of probable availability of the Tinker-PAAS training grants to all Latin American members of the society, as well as to other appropriate Acridologists, and formal announcement of the program is enclosed with this issue of Metalepta. As with the 1979 project, there is to be an open competition to which qualified Latin American Acridologists are invited to apply. Please see the announcement. The application deadline is April 15.

Now to the bad news. Unfortunately, our petitions for travel support for North American participants at Maracay have been unsuccessful, and it now appears funds for this purpose will not be available. Nevertheless, I urge everyone who can to make arrangements to attend the Maracay Meeting, sure to be an outstanding acridological and entomological event. Early registration for it has been good despite funding uncertainties.

A superficial glimpse of PAAS' accounts (see below) would suggest that current assets are adequate for our needs, but let me assure you this impression is false. All listed assets and more will be required just to publish the Bozeman Proceedings, shortly to go to press, while, at the same time, the society's many continuing expenses must be met. Accordingly, President Ricardo Ronderos and President-Elect John Henry recently joined in requesting a dues increase, effective 1982. The current rate, in effect since 1977, is simply not adequate to meet our burgeoning mailing and other costs. Ronderos and Henry suggest a dues structure of \$10 (U.S.) for Active Members and \$5 (U.S.) for Student Members. The Board of Governors has already recommended approval of their suggested increase, so the voting membership must now make a final determination by letter ballot, as specified in our By-Laws (Article III: Section 2). Enclosed please find a ballot that you may use for this purpose. Enclosed on the same ballot is a part to be used to register your choices in the election of 1981-1983 officers of PAAS.

Editor-in-Chief Mike Tyrkus has decided to step down from his office, effective July, 1981, to assume other responsibilities. President-Elect Henry has not yet announced who will assume the editorship but presumably will make the appointment prior to the Maracay Meetings. The purpose of my mentioning this imminent change is merely to alert members of it and to solicit ideas toward future operation of PAAS' publications, so as to provide guidance to the new Editor. Please give us your input.

Paid membership includes, as of this writing (February 28), 98 persons. The current mailing

list includes 133 persons, of whom 33 express Spanish-language preference and 100 English-language preference. Three persons are new members, and two names have been dropped from the mailing list owing to failure to pay dues, as directed by the Constitution and By-Laws. A total of 19 Honorary or Emeritus Members and cooperating agencies and institutions are carried on the current list as dues exempt.

The present (February 28) balance in the society account total \$2,316.45 (U.S.). Last year's financial statement appears below.

Respectfully submitted,

S. K. Gangwere
Executive Secretary

Financial Statement:**

January 1 to December 31, 1980

BANK ACCOUNT BALANCE as of January 1** .. \$333.27

RECEIPTS

Dues..... \$367.00
Page charge & publication receipts..... 992.00
T-shirt & other sales receipts..... 218.50
Gifts & contributions..... 728.85

Total receipts.....\$2,306.35

DISBURSEMENTS

Stationery & clerical supplies..... 317.99
Printing & mailing..... 511.65
Publication expenses..... 326.00
T-shirts & other sales**..... 200.25
Miscellaneous..... 21.00

Total disbursements.....\$1,076.89

BANK ACCOUNT BALANCE as of December 31...\$1,562.73

*In dollars (U.S.). Certified correct by T.H. Hubbell, Chairman, & M. Tyrkus, Member, Audit Committee, on February 28, 1981.

**Account #471593 0125, National Bank & Trust Co., Ann Arbor, Michigan, U. S. A.

***Includes production costs of jewelry & other items not yet retailed by society.

BACK ISSUES OF METALEPTEA

The Editorial Office has on hand, as of the date of this mailing, a limited quantity of back numbers of Metaleptea (V1, V2, and V3N1). These issues may be purchased from PAAS for the sum of \$1.50 (U.S.) each. Please send notification of the numbers desired and remittance to: Dr. Stanley K. Gangwere, Executive Secretary of PAAS, Department of Biological Sciences, Wayne State University, Detroit, Michigan 48202.

EDITORIAL

With next summer's meeting rapidly approaching and the need for formalization of the program reaching its culmination, the Editors would like to stress the need for uniformity of effort on the part of authors for the next proceedings. To these ends, we repeat the editorial that appeared in the last issue of Metaleptea (V3N1).

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A SUGGESTED CONTRIBUTED PAPER FORMAT --- MARACAY MEETING

Perhaps it seems premature to be considering the publication of the Proceedings of the Maracay Meeting prior to the appearance of the Bozeman volume. However, in the opinion of the Editorial Office, now is the time to utilize the lessons learned from our last endeavor.

Basically, a much better volume may be obtained and several months trimmed from publication by simple adherence to a few rules.

Enclosed with this mailing is a "Call for papers" abstract form. Use of this form is suggested for submission of abstracts. Uniform usage of this form will result in a time savings of at least two months to the Editorial Office. With editing, the abstracts will appear as they are submitted on this form.

If, in addition to the abstracts, authors wish to have formal manuscripts of their presentations included, they should be submitted to the editor or his representative prior to the conclusion of the conference. Manuscripts, when submitted, should be legible, devoid of excess corrections, and complete with two (2) sets of figures (5" x 7" glossy prints). Xerox copies of line drawings will be returned, as will slides (2 x 2 or otherwise). Submission of figures in any of the above forms results in an unnecessary expense for the society, an undue delay in publication, and the possibility that the final figures, as set by the Editorial Office, will not convey the authors intent.

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Invited speakers and participants in roundtable discussions, etc., will hopefully also conform to the above. Special session convenors, co-convenors, and chairpersons are asked to inform their speakers of the above and ask for their compliance. They may also submit a short synopsis of their administrative role, discussing the purposes and goals of the session as well as a short discussion of the various presentations. Editorial comment by the convenors is encouraged.

Most professional societies that endeavor to publish their proceedings require adherence to simple rules such as these and generally are successful in producing a volume within a year of the conference. In the opinion of the Editorial Office, PAAS will fail to build a reputation as a viable, serious scientific organization if it neglects to do the same to upgrade its publication efforts.

The Maracay Proceedings will be the third volume published by PAAS. At this point, it would seem logical to assume that the initial problems of growth and organization should be past history. No doubt the international scientific community will feel the same. It is now a critical time in the life of PAAS, and hopefully, we will learn from our past experiences, and, by cooperating through our adherence to the above rules, take a major step toward our ultimate acceptance in international scientific circles.

The Pan American Acridological Society, as previously announced, will hold its 3rd Triennial meeting in July, 1981, at Maracay, Venezuela, in conjunction with the 4th Latin American Congress of Entomology, the 6th Venezuelan Congress of Entomology, and the 1st Symposium on Neotropical Lepidopterology. It seems appropriate for the society to undertake, on this occasion, a combined seminar - workshop dedicated to amelioration of some of today's more important grasshopper - related agricultural problems.

This forthcoming PAAS conference, entitled "Grasshoppers and Locusts in the New World: A Plan for the Future, has the following goals: 1) to expand lines of communication among participants; 2) to make available to them the latest scientific information and techniques; and 3) to determine directions toward which acridology should move in the next decade or so. The conference will also provide an opportunity 4) to develop collaborations needed to further acridology and thereby better serve mankind.

Formal meetings of PAAS and the following five-day field trip are to take place during the first two weeks of July 1981. This period was chosen because it coincides with the academic - year recess in institutions of higher learning in North and South America and with the most favorable grasshopper collecting season in Venezuela. Moreover, this schedule enables PAAS to join with the three societies mentioned above for the purposes of broadened discussion and exchange of ideas, not only in acridology, but in

overall entomology. The week-long meetings will include:

**PRELIMINARY PROGRAM
(July 5-10, 1980)**

Sunday 5.	8:30 a.m. Registration 5:00 p.m. Opening session 7:00 p.m. Welcome reception
Monday 6.	8:00 a.m. Registration 8:30 a.m. Symposium: New Trends in Systematics Lunch 12:30 p.m. Conference: Malarial epidemiology in relation to insects in Latin America. Dr. A. Gabaldon 2:00 p.m.
Tuesday 7.	3:00 p.m. Coffee break 3:15 p.m. Submitted papers 8:00 p.m. Social event 8:30 a.m. Symposia: - Biogeography of grasshoppers - Neotropical Lepidopterozoology Pest Management 10:30 a.m. Coffee break 10:45 a.m. Submitted papers 12:30 p.m. Lunch 2:00 p.m. Submitted papers 8:00 p.m. Social event

Wednesday 8. 8:30 a.m. Submitted papers
Lunch
12:30 p.m. Free afternoon.
2:00 p.m. Several visits will be arranged.

Thursday 9. 8:30 a.m. Symposia: - Basic Ecology of Acrididae
- Neotropical Lepidopterozoology
- Pest Management
10:30 a.m. Coffee break
10:45 a.m. Submitted papers
12:30 p.m. Lunch
2:00 p.m. Conference: Foraging strategies of bees. Dr. Josue Nunez.

Friday 10. 8:30 a.m. Symposia: - Applied Ecology of Acrididae
- Roundtable discussion: Ecology of Culicidae
- Pest Management
10:30 a.m. Coffee break
10:45 a.m. Submitted papers
12:30 p.m. Lunch
2:00 p.m. Submitted Papers
8:00 p.m. Closing Ceremony

MEMBERS NEWS AND ACTIVITIES

The field trips are so integral a part of our meetings that they deserve more detailed mention. Organized trips to localities near Maracay are scheduled at intervals during the conference which is then to be followed by a five-day post conference excursion. The latter will visit a diversity of communities ranging from dry savanna to tropical montane forest supporting a rich fauna of Acrididae. There will also be a trip to Rancho Grande, the famous Venezuelan biological preserve, which is of especial acridological interest.

The organizing consists of Dr. Eduardo Osuna, of the Instituto de Zoología Agrícola, Facultad de Agronomía, Apartado 4579, Maracay, Aragua, Venezuela, who is Congress Chairman; Professor Francisco Cerda, of the same address, who is Chairman of PAAS Local Arrangements Committee; PAAS President R.A. Ronderos, of the Facultad de Ciencias Naturales y Museo, Paseo del Bosque, 1900 La Plata, Argentina, who is coordinating grant applications and travel arrangements for South American Participants; and PAAS Executive Secretary, Dr. S.K. Gangwere, of the Department of Biological Sciences, Wayne State University, Detroit, Michigan 48202, USA, who is administering the same function for North American participants.

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W. Chapco, of the University of Regina, has synthesized several aspects of his research program. This effort resulted in the appearance of three reports in 1980: 1) Genetics of the migratory grasshopper, Melanoplus sanguinipes: Orange stripe and its association with tibia color and red back genes (Ann. Entomol. Soc. Am., 73:319-322), 2) Inheritance of an unusual color variant in the grasshopper Melanoplus sanguinipes (Can J. Genet. Cytol., 22:439-441).

C. Gillott, of the University of Saskatchewan, is resuming his research on the reproductive physiology of the migratory grasshopper, Melanoplus sanguinipes. In addition to his busy teaching schedule, which includes courses in introductory biology, entomology, comparative endocrinology and insect physiology, he is also serving as Associate Editor of the Canadian Journal of Zoology. His recent publications include a comprehensive text entitled Entomology (Plenum, New York, XVII + 729 pp., 1980). Through the academic year of 1979-80 Dr. Gillott was on sabbatical leave at the Tsetse Research Laboratory, University of Bristol, U.K., where he was studying the control of receptivity and ovulation in tsetse flies.

Nicolas D. Jago, of COPA, has been appointed advisor to the scientific and technical group that is coordinating the merger of the West African Locust Control Organization (OICMA) and the Common Locust Control Organization of the Desert Locust (OCLALAV). He is currently revising several of the major group of African acridinae,

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guttata (Houttuya), name change for well-known "Eastern Lubber Grasshopper" (Orthoptera: Romaleidae) (Ent. News, 91:130), and 6) Names involving the Madefiran and Syriza Cochroaches (Dictyoptera, Blattodea Nacphaetidae) (Ent. Res. 92:77-82).

Owen Olfert, of Agriculture Canada (Research Entomology Section), is continuing his research on the economic evaluation of grasshopper control strategies, and is developing remote sensing techniques for surveying crop damage and yield estimations. Dr. Olfert recently published a collaborative study entitled: Serial photography for detection and assessment of grasshopper (Orthoptera:Acridoidea) damage to small grain crops in Saskatchewan (Can. Entomol. 112:559).

Lars-Erik K. Pederson, of Cheminova Ltd., Denmark, is pursuing research problems in locust endocrinology and the development of future insecticides. A portion of his work was described in the recent report: Effects of Anti-Juvenile hormone (Precocene I) on the development of Locusta migratoria L. (Gen. Comp. Endocrin. 36:502).

including the Leva-Stenohippus complex (Subfamily Gomphocerinae). Dr. Jago's recent publications include: 1) A Revision of the Genera Silvitettix and Compsacris (Gomphocerinae: Acrididae) (Proc. Acad. Nat. Sci. Philadel., 131:257; 2) Studies on the African migratory locust in its area in the Lake Chad basin (FAO Report Project RAF/77/049 No. 1980/2), and 3) A new acridid from Thailand and synonymy of two Malaysian genera (Orthoptera, Acrididae, Catantopinae) (Ent. Mon. Mag., 116:7). He also has in press a paper dealing with a group of Central American grasshoppers that express a unique degree of asymmetry. Dr. Jago's busy schedule included trips to Rome, Ghana, and Nigeria as well as participating in two training courses for locust personnel.

D. Keith Kevan, of the Lyman Entomological Museum, attended the International Congress of Systematics and Evolutionary Biology held in Vancouver, B.C., Canada this past summer. This coming April he is planning on attending two Symposia to be held in London, England. He received a National Science and Engineering Research Council of Canada Grant to continue his work on orthopteroids and neuropteroids, and on ethnoentomology. Dr. Kevan's recent publications include: 1) Dictyoptera; Notoptera; Grylloptera; Orthoptera (In Danks, H.V. (Eds.) Canada and Its Insect Fauna. Mem. Ent. Soc. Can., 108:314), 2) The Department of Entomology, McGill University: A history to 1978 (Notes Lyman Ent. Mus. and Res. Lab. 5:1), 3) The Orthopteroid insects of the Bermudas (Mem. Lyman Ent. Mus. and Res. Lab. 8: vi and 182 pp.), 4) The female holotype and the previously undescribed male of Taniteilla senderi (Krauss, 1901) (Orthoptera:Pyrgomorphidae) (Trans. Amer. Ent. Soc. 105:473), 5) Romalea

NEW MEMBERS AND STATUS CHANGES

Metaleptea is pleased to welcome the following to membership in PAAS and to announce the listed changes in status of current members.

Michael H. Blust e
Kansas State University
Department of Entomology
609 Sunset Ave.
Manhattan, Kansas 66502 USA

Dr. Merlyn Brusven e
Department of Entomology
University of Idaho
Moscow, Idaho 83843 USA

Dr. George B. Hewitt e
USDA - SEA - Rangeland Insect Lab.
Montana State University
Bozeman, Montana 59715 USA

Dr. Chia Chi (George) Hsiung e
Lyman Entomological Museum & Research Lab.
MacDonald Campus, McGill University
Ste. Anne de Bellevue, Quebec, Canada H9W3B4

Dr. Owen Olfert e
107 Science Crescent
Saskatoon, Saskatchewan, Canada S7N0X2

Dr. J. Alan Pounds e
Department of Zoology
University of Florida
Gainesville, Florida 32611 USA

Dr. H. Rowell
Zoologisches Institut
der Universitat
Rheinsprung 9,
Basel, Switzerland

Dr. J.A. Whellen
30 High Street, Willoughby
Sydney, NSW, Australia

PROCEEDINGS UPDATE

Preparations of the Proceedings of the Bozeman meetings are progressing - slowly. As of the time of this writing, the majority of author proofs have been returned to the office, and the changes incorporated into the "final" copy. It would be of great use to the Editorial office if authors who have not yet submitted their corrected copy would do so as soon as possible.

Submission to the printers is imminent, but not yet accomplished.

THE PAN AMERICAN ACRIDOLOGICAL SOCIETY

CONSTITUTION

(Adopted VIII-1, 1978, and revised IV-1, 1980)

CONSTITUTION

Article I

Name

Section 1. The organization shall be known as the PAN AMERICAN ACRIDOLOGICAL SOCIETY.

Article II

Objectives

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

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

Section 3. 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 4. Honorary Membership may be conferred on selected members who have rendered long and distinguished service to the field of New World Acridology. Honorary Members 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 Secretary, 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 shall assume the office of President at the close of the meeting held at the end of his term as President-Elect.

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

Section 4. The Editor or Co-Editors shall be responsible for the publications of the Society and serve ex-officio 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

President-Elect

Most immediate Past President available to serve Executive Secretary

One representative from North America

One representative from South America

One representative at large from the New World Editor or Co-Editors, Ex-officio

Article VI

Funds and Disbursement

Section 1. All monies due the Society shall be collected, disbursed, and accounted for by the Executive Secretary as specified in the By-Laws.

Article VII

Publications

Section 1. The publications of the Society shall include a Newsletter and a Proceedings.

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 Acridologists throughout the world, a Proceedings shall be published at intervals determined by the frequency of meetings.

Article VIII

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 and Honorary Members.

Section 3. Policy and other matters of major importance shall be decided by written ballot of the entire voting membership.

Article IX

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 Secretary, 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 Secretary 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, the Executive Secretary, 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. Membership rights shall cease following one year's non-payment of dues.

Section 2. All qualified persons may become Active Members after an application endorsed by an Active Member and accompanied by the required fee has been filed with the Executive Secretary and approved by the Governing Board.

Section 3. Active Members in good standing shall be considered by the Governing Board for designation as Active Members Emeritus following retirement from active professional service. Those persons so designated shall have all the rights and privileges of regular membership and shall be exempt from payment of dues.

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 Secretary and approved by the Governing Board.

Section 5. Honorary Membership may be conferred on selected New World acridologists 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 the membership in attendance at the Society's next scheduled meeting. No more than two candidates may be so designated at a meeting.

Section 6. All members shall receive gratis the Newsletter and Proceedings of the Society. Non-members and institutions may receive these publications upon payment of a fee to be determined by the Governing Board.

Article II

Duties of Officers and Method of Election

Section 1. The President shall be the chief administrative officer of the Society and the Chairman of the Governing Board. He shall exercise such powers as are necessary to carry out his official duties including the appointment of an Executive Secretary to administer the society's business, the appointment of a host to plan for the next scheduled meeting, the appointment of an Editor/s to prepare the society's publications, and the appointment of various special committees. He 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 Secretary 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 nominees/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 canvass 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 Secretary 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 President-Elect shall be filled immediately in the manner prescribed above.

Section 3. The Executive Secretary shall be appointed by the President and approved by the Governing Board. He shall serve the Society as secretary, treasurer, and business manager. He shall maintain a membership roll, keep a record of the proceedings, attend to general correspondence, collect all monies due, pay all bills incurred by the Society, and submit a financial report at the scheduled meetings. His 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 and at least one other society member.

Section 4. The Editor shall be appointed by the President and approved by the Governing

Board. He shall be responsible for the preparation and editing of the Newsletter and Proceedings and serve as a member (Ex-Officio) of the Governing Board. Inasmuch as the editorship requires proficiency in both official languages of the Society, Spanish and English, his function may be performed by Co-Editors.

Section 5. The 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 Regional Representatives as Chairman of a Regional Representative Nominating Committee consisting of the current Regional Representatives. This committee shall submit at least two names for each regional opening. 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 meeting. The Elections Committee shall canvass the ballots after a six-weeks' deadline for return of marked ballots and announce the results in the Newsletter. The Executive Secretary shall resolve a tie vote by immediately mailing to the membership a run-off ballot containing the names of the deadlocked candidates. Regional winners shall assume their Board duties along with the President, the President-Elect, the most immediate Past President who is available, and the Executive Secretary 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 Board Member 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. Insofar as practicable, they shall alternate between sites in North America and Latin America.

Section 2. Ten percent of the total membership including one or more members from both the regional areas (North America and Latin America) 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 Secretary after six months' notice.

Article V

Amendments to By-Laws

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 two-thirds, the proposal shall be lost and the existing wording of the By-Laws maintained.

LA SOCIEDAD PANAMERICANA DE ACRIDILOGIA

ESTATUTO

(Aprobado el 1 de VIII de 1978
y revisado el 1 de IV de 1980)

Artículo I

Denominación

Sección 1. La organización será conocida como SOCIEDAD PANAMERICANA DE ACRIDILOGIA.

Artículo II

Objetivos

Sección 1. Serán los propósitos de la Sociedad de facilitar la comunicación entre aquellos interesados y en relación con la Acridiología del Nuevo Mundo y propender a la realización de investigaciones en cooperación y programas de control en Acridiología entre los países del Nuevo Mundo; para promover, conducir y facilitar la investigación y la acumulación de datos con respecto a la Acridiología; para diseminar la información y para promover, conducir y facilitar otras actividades designadas a incrementar el conocimiento y comprensión de la Acridiología y sus implicaciones; para proveer un forum en el cual individuos y organizaciones puedan consultar y cooperar en considerar la investigación en la Acridiología del Nuevo Mundo y problemas relacionados.

Sección 2. Serán también los propósitos de la Sociedad hacer lo mencionado con exclusivos fines científicos, educacionales y caritativos. Ninguna parte de las ganancias netas de la Sociedad podrá ser en beneficio de ningún oficial, director, miembro o persona alguna (excepto que razonables honorarios deban ser pagados por servicios rendidos a, o para la Sociedad y que afectan uno o más de sus propósitos); y no oficial, director, miembro o persona alguna estará autorizada a beneficiarse en la distribución de los bienes de la Sociedad a su disolución. No se distraerá parte sustancial de las actividades de la Sociedad en propaganda o intentos en influencia la legislación y la Sociedad no participará en, o intervendrá en (incluyendo la publicación o distribución de folletos) ninguna campaña política a favor de ningún candidato para un cargo pública. En la eventualidad de disolución de la Sociedad o cese de sus actividades, los bienes de la Sociedad serán distribuidos exclusivamente entre organizaciones caritativas, científicas, o educacionales, las cuales deben ser calificadas bajo las regulaciones insertas en la Sección 501 (c) (3) del Código del "Internal Revenue Service" y sus Regulaciones tal como ahora existen, o de sus subsecuentes enmiendas. La Sociedad no se comprometerá en ninguna actividad prohibida tal como está descrita en la Sección 503 del Código del "Internal Revenue Service" de 1954, y no acumulará ingresos o los usará de tal manera que origine discordancias de excepción bajo la Sección 504 del Código del "Internal Revenue Service" de 1954.

Artículo III

Miembros

Sección 1. Los Miembros serán incluidos en las siguientes categorías: Activo, Estudiante y Honorario.

Sección 2. Toda persona interesada en la Acridiología a través de la investigación, enseñanza u otra actividad profesional, podrá ser Miembro Activo.

Sección 3. Toda persona matriculada, a cualquier nivel, en una institución educacional reconocida, podrá incorporarse como Miembro Estudiante. Los Miembros Estudiantes gozarán de todos los derechos y privilegios de los Miembros, excepto el voto.

Sección 4. Podrá ser conferida la condición de Miembro Honorario a personas relevantes que hayan prestado servicios sobresalientes en el campo de la Acridiología del Nuevo Mundo. Los Miembros Honorarios estarán exceptuados del pago de cuotas sociales y gozarán de todos los derechos y privilegios de los Miembros Activos.

Artículo IV

Autoridades

Sección 1. Las autoridades de la Sociedad serán: un Presidente, un Presidente Electo, un Secretario Ejecutivo y un Editor o Co-Editores.

Sección 2. El Presidente Electo actuará como Presidente Electo hasta la próxima Asamblea

Ordinaria de la Sociedad. Asumirá el cargo de Presidente a la clausura de la asamblea que se realice al término de su período como Presidente Electo.

Sección 3. El Secretario Ejecutivo administrará los asuntos de la Sociedad y actuará como miembro de la Junta de Gobierno.

Sección 4. El Editor o los Co-Editores sera el responsable de las publicaciones de la Sociedad y actuará ex-oficio en la Junta de Gobierno.

Artículo V

Junta de Gobierno

Sección 1. La Junta de Gobierno conducirá los asuntos de la Sociedad sujeta a las decisiones respecto de su política, dada por los Miembros por voto postal o en reuniones regulares de la Sociedad. La Junta estará integrada por los siguientes miembros:

Presidente
Presidente Electo
Ex Presidente más inmediato en condiciones de ejercer
Secretario Ejecutivo
Un representante por Norte América
Un representante por Sudamérica
Un representante por El Nuevo Mundo
Editor o Co-Editores, Ex-oficio

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Artículo VI

Recursos y Gastos

Sección 1. Todos los fondos de la Sociedad serán recaudados, distribuidos y contabilizados por el Secretario Ejecutivo según lo establece el Reglamento.

Artículo VII

Publicaciones

Sección 1. Las publicaciones de la Sociedad incluirán un Noticioso y Actas.

Sección 2. El Noticioso será una publicación informal de secuencia anual, semianual u otros periodos en que se considere apropiado.

Sección 3. En tanto y en cuanto que las previsiones, trabajos presentados u otros asuntos de las asambleas de la Sociedad sean de interés para los Acridiólogos a nivel mundial, serán publicadas Actas a intervalos que serán determinados por la frecuencia de las asambleas.

Artículo VIII

Asambleas, Elecciones y Reuniones Ordinarias

Sección 1. Las Asambleas de la Sociedad se realizarán en aquellos lugares y en las fechas que decida la Junta de Gobierno.

Sección 2. Las Elecciones y Reuniones Ordinarias estarán restringidas a los Miembros Activos y Honorarios.

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Sección 3. La política a seguir y otros asuntos de mayor importancia serán decididos por voto escrito de la totalidad de los Miembros con derecho a voto.

Artículo IX

Reformas al Estatuto

Sección 1. La propuesta para la reforma a los Estatutos debe ser iniciada por cualquier Miembro de la Sociedad. La propuesta será presentada al Secretario Ejecutivo, quien está obligado a someterla a la Junta de Gobierno dentro de los seis meses de su recepción.

Sección 2. La Junta de Gobierno considerará todas las propuestas de reformas y preparará recomendaciones a los Miembros. En tal sentido, la Junta está facultada para introducir cambios menores en las propuestas, con el fin de clarificar su lenguaje, modificar detalles de procedimientos o bien facilitar el propósito de la reforma.

Sección 3. Dentro de los seis meses siguientes a la intervención de la Junta de Gobierno, el Secretario Ejecutivo enviará copias de la o las reformas propuestas y el correspondiente voto a todos los Miembros con ese derecho.

Sección 4. El Presidente designará un Comité Electoral constituido por él mismo y como mínimo, otro Miembro, el que luego de seis semanas de recolectados los votos realizará los cómputos y anunciará los resultados a los Miembros en la próxima edición de Noticias.

Sección 5. Una propuesta de reforma será considerada efectiva en la fecha en que se realice el escrutinio, si es aprobada por dos tercios o más de votos. Si es aprobada por menos de dos tercios de votos, será rechazada y mantenidos los Estatutos como hasta el momento.

REGLAMENTO

Artículo I

Miembros

Sección 1. La condición de Miembro de la Sociedad (excepto la de Honorario) será efectiva en la fecha en que el solicitante sea aceptado por la Junta de Gobierno. Los Miembros caducan en la condición de tales luego de pasado un año en el no cumplimiento del pago de las obligaciones sociales.

Sección 2. Toda persona calificada podrá ser Miembro Activo luego de solicitarlo avalado por un Miembro Activo, acompañando la solicitud por la correspondiente cuota social presentada por ante el Secretario Ejecutivo y aprobada por la Junta de Gobierno.

Sección 3. Todo Miembro Activo con permanencia, podrá ser considerado por la Junta de Gobierno para su designación como Miembro Activo Emerito, luego de su retiro del servicio profesional activo. Estas personas así designadas tendrán todos los derechos y privilegios de los Miembros regulares y serán exceptuados del pago de las obligaciones sociales.

Sección 4. Toda persona calificada podrá ser Miembro Estudiante luego de solicitarlo avalado por un Miembro Activo, acompañando la solicitud por la correspondiente cuota social presentada por ante el Secretario Ejecutivo y aprobada por la Junta de Gobierno.

Sección 5. Podrá ser conferida la condición de Miembro Honorario a personas relevantes si hay circunstancias apropiadas. Las propuestas para Miembros Honorarios serán consideradas por la Junta de Gobierno, previa propuesta de cualquier Miembro de la Sociedad. La recepción favorable por la Junta constituirá su nominación. La designación formal de Miembro Honorario requerirá la aprobación, como mínimo, de los dos tercios de los Miembros asistentes a la próxima asamblea ordinaria. No podrán ser designado mas de dos candidatos por asamblea.

Sección 6. Todos los Miembros recibirán sin cargo el Noticioso y las Actas de la Sociedad. Los no Miembros e instituciones podrán recibir estas publicaciones previo pago del monto que establece la Junta de Gobierno.

Artículo II

Obligaciones de las Autoridades y Mecanismo de Elección

Sección 1. El Presidente será el jefe administrativo de la Sociedad y presidente de la Junta de Gobierno. El podrá ejercer tales atribuciones como sea necesario para desarrollar sus obligaciones oficiales, incluyendo la designación de un Secretario Ejecutivo para la administración de los asuntos de la Sociedad, la

designación de un invitado para planificar la próxima Asamblea Ordinaria, la designación de un Editor/s para preparar las publicaciones de la Sociedad y la designación de varios comités especiales. Será reemplazado por el Presidente electo en caso de ausencia o impedimento para desempeñar sus funciones.

Sección 2. El Presidente Electo será elegido por el siguiente procedimiento. Por lo menos seis meses antes de la próxima Asamblea Ordinaria, el Secretario Ejecutivo invitará a cada miembro de la Junta de Gobierno a proponer un nombre para Presidente Electo. El nombre o los nombres propuestos por la mayoría de votos de la Junta de Gobierno constituirá la lista de candidatos. Estos nombres, dispuestos alfabéticamente, deberán ser incluidos en el voto con respecto para inclusión de otro candidato no nominado y enviado a cada Miembro con derecho al voto, por lo menos tres meses de la Asamblea. Luego de seis semanas, necesarias para el regreso de los votos, el Comité Electoral designado por el Presidente, computará los votos y anunciará el nombre del candidato ganador en las Noticias. El candidato que reciba el mayor número de votos será declarado electo. El Secretario Ejecutivo preparará una lista adicional que será inmediatamente enviada a los Miembros para una elección complementaria. El ganador de la elección complementaria, la que se realizará de la manera indicada arriba, será declarado Presidente Electo. Cualquier vacante en el cargo de Presidente Electo, será cubierta inmediatamente en la forma prescripta anteriormente.

Sección 3. El Secretario Ejecutivo será designado por el Presidente y aprobado por la Junta de Gobierno. El servirá a la Sociedad en calidad de secretario, tesorero y administrador general. Mantendrá el registro de asociados, un archivo de actas, atenderá la correspondencia general, cobrará todos los aportes monetarios a la Sociedad, pagará las obligaciones en que incurra la Sociedad y presentará un balance financiero en las asambleas ordinarias. Su rendición de cuentas estará sujeta a una formal auditoría anual por un comité designado por el Presidente y aprobado por la Junta de Gobierno. El Comité Auditor estará integrado por el Presidente y como mínimo otro Miembro de la Sociedad.

Sección 4. El Editor será designado por el Presidente y aprobado por la Junta de Gobierno. Será el responsable de la preparación y edición de un Noticioso y Actas y actuará como miembro (Ex-Oficio) de la Junta de Gobierno. En tanto que las tareas editoriales requerirán de expertos para el uso de los dos idiomas oficiales de la Sociedad, Español e Inglés, estas funciones serán realizadas por Co-Editores.

Sección 5. Los Representantes Regionales serán elegidos de la siguiente manera: por lo menos seis meses antes de la próxima asamblea el Presidente elegirá a uno de los Representantes Regionales en actividad como Presidente del Comité de Nominación de Representante Regionales el que estará intergrado por la totalidad de los Representantes Regionales activos. Este comité propondrá por lo menos dos nombres para cada vacante regional. Esta lista constituirá la lista de candidatos. Estos nombres serán incluidos en el voto, con espacio para la

inclusión de otros, y enviados a cada uno de los Miembros con derecho al voto, por lo menos tres meses antes de la Asamblea. El Comité Electoral computará los votos luego de seis semanas de cumplido el plazo de recepción y anunciará los resultados en el Noticioso. El Secretario Ejecutivo confeccionará una lista adicional con los candidatos derrotados para una elección complementaria, la que será enviada a los Miembros con derecho al voto. Los ganadores regionales asumirán sus obligaciones en la Junta conjuntamente con el Presidente, Presidente Electo, el ex-Presidente más inmediato disponible y el Secretario Ejecutivo, en la siguiente Asamblea Ordinaria. El Presidente podrá decidir un reemplazo apropiado en el caso de que un Miembro de la Junta no pueda cumplir con sus obligaciones por ausencia o impedimento. Ningún Miembro de la Junta podrá actuar en calidad de tal mas de dos periodos consecutivos.

Artículo III

Cuotas Sociales

Sección 1. Las Cuotas sociales serán establecidas por la Junta de Gobierno, sujetas a aprobación por la Sociedad mediante voto postal.

Artículo IV

Asambleas, Quorum, Elecciones

Sección 1. Las Asambleas de la Sociedad serán programadas, de ser necesario, cada tercero o cuarto año, en tanto no interfieran con los Congresos Internacionales de Entomología. En tanto sea posible, ellas deberán alternarse en lugares de Norte América y Latino América.

Sección 2. Diez por ciento del total de Miembros incluyendo uno o mas Miembros de los ambos de las areas regionales (Norte América y Latino América) constituirán el cuorum para el desarrollo y resolución de asuntos.

Sección 3. Una simple mayoría de aquellos presentes a una Asamblea o de votos por elección o consulta postal, será suficiente para aprobar cualquier moción, excepto aquellas especificadas en los Estatutos o Reglamento.

Sección 4. Los Miembros en mora serán eliminados de los padrones por el Secretario Ejecutivo luego de seis meses de ser notificados.

Artículo V

Enmiendas al Reglamento

Sección 1. Cambios en el Reglamento pueden ser iniciados por cualquier Miembro de la Sociedad. Tales propuestas serán procesadas de idéntica manera que las propuestas para reformas en los Estatutos.

Sección 2. Una propuesta de cambio en el Reglamento será adoptada en la fecha en la cual los votos sean computados, si es aprobada por dos tercios o mas de votantes. Si es aprobada por menos de dos tercios, la propuesta será desestimada y mantenida la redacción actual del Reglamento.

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