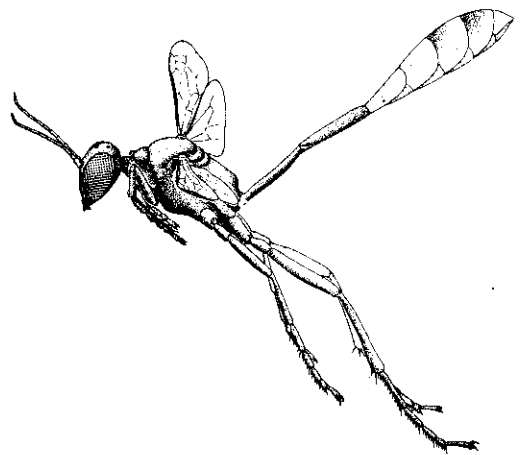


SPHECOS

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A Newsletter for Aculeate Wasp Researchers

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Notes from the Editor

Because of the large volume of material accumulated since Sphecos 2 I have decided to produce two issues in close succession. This issue is restricted mainly to research reports, scientific notes, obituaries, collecting reports, etc. Sphecos 4 will consist mainly of profiles of wasp workers and recent literature. Highlights of issue 3 include a reproduction of Spinola's rare 1805 paper "Faunnae Ligusticae Fragmenta", several scientific notes, some interesting collecting reports, and several obituaries.

Quite a few of you responded to my insistence on page 1 of Sphecos 2 that the questionnaire at the end of Sphecos 1 be filled out and returned to me. However, a number of people have not yet responded. I need this data in order to compile the Directory of Wasp Workers. If your copy of Sphecos 3 has a large red "Q" on the upper right corner you have not returned the questionnaire, and Sphecos 4 will not be sent to you until I receive it.

I only recently discovered that there are two S. Yamane's in Japan. One is Soichi Yamane, the other is Seiki Yamane. To differentiate between themselves they have adopted the convention of using the initial S. for Soichi and Sk. for Seiki. Unfortunately in Sphecos 1 their names were lumped as one individual in the Recent Literature section.

We should all congratulate Dr. Clarence Mickel, the multillid expert, on reaching his 22nd birthday. He was born February 29, 1892. Maybe Dr. Mickel will send us an autobiography for Sphecos.

Judging by the response of the readership, the highlight of Sphecos 2 was Woj Pulawski's account of his trip to southern Russia (see Sphecos 2:7).

Research News

Dick Bohart sends the following note: "My research time has been fully occupied with Chrysididae lately and the presence of Lynn Kimsey is responsible for that. We really hope to finish a "book" circa 200 pp. on a "Synopsis of North American Chrysididae" by the end of the year. This is pretty ambitious but it is going along well at present."

Brian Freeman, University of the West Indies, Kingston, Jamaica, is studying Trypoxylon. "Concurrently with the work on T. palliditarse in Trinidad I also looked at the two species of Sceliphron there: S. asiaticum (L.) and S. fistularium (Dahlbom). They overlap broadly in distribution but the latter species tolerates wetter conditions and is associated with open forests. S. asiaticum, like S. assimile (Dahlbom) in Jamaica, is common in canefields and was not found in forest, nor any localities with mean annual precipitation greater than 2,000 mm. The map on p. 217 of van der Vecht and van Breugel's (1968) monograph shows S. asiaticum and S. assimile meeting in western Panama. This is because of its small scale; of course the list of collected specimens shows that S. assimile stops in Costa Rica and S. asiaticum starts in Panama. And between them is a 400 km. gap with the highest precipitation in Central America! These author's males of S. asiaticum from Panama have intermediate clypeal morphology and they suggest hybridization. Clearly more specimens are needed from Costa Rica and Panama, but I feel we may have sub-species here, with the heavy rainfall area a barrier reducing gene flow."

"The distribution, biology, taxonomy (and hybridization experiments) of these two species and S. caementarium (Drury) would form the substance of an admirable Ph.D. thesis. Just a suggestion."

Carl Rettenmeyer, the Biological Sciences Group, Univ. of Connecticut, Storrs, Conn. 06268, writes that he is "currently working on alarm defensive behavior in polistine wasps."

Braulio F. S. Dias, Departamento Regional de Pesquisas Ecologicas, Fundacao IBGE, Ed. Venancio II, 70302 Brasilia, DF, Brazil, "is conducting a survey of the wasp fauna of the Brazilian Federal District, in the middle of the Savanna biome of the Central Brazil Highlands. This survey is connected with a project to build a reference collection for the local fauna and several projects on nesting biology, flower ecology and community structure. Requests of specimens on loan for identification are welcome. It would be of great help to us if authors of papers on the biology and systematic of South American wasps could send free copies to our library."

Roger Akre reports that a paper written with MacDonald and Keyel on the spread and pestiferous nature of Vespula germanica in the U.S. has been submitted to the Bulletin of the ESA. Roger also says that "the 4th galley for the Handbook (552, Yellowjackets) arrived and I (and Al Greene) am correcting it. It does have a 1980 date printed on it, but still does not have a cover. I hope they correct some of the mistakes that I have now marked for the 4th time."

Michael E. Archer, Dept. of Biology, Coll. of Ripon and York St. John, York, England, "has recently completed a simulation programme for the colonial development of Vespula vulgaris and Dolichovespula sylvestris. The model is unusually detailed using about 250 parameters and variables and outputs a daily description of the developing colony in terms of numbers, dry weight biomass and calorific equivalent units. He is hoping to apply the model to other social vespids, in particular Vespa crabro."

Suzanne W. T. Batra, USDA, Beneficial Insect Introduction Laboratory, Bldg. 417, Beltsville Agricultural Research Center, Beltsville, MD 20705, "has published several papers on wasp behavior and pheromones. These include investigations of: The Indian termite-associated eumenid, Anterhynchium abdominale; pheromones of N. American eumenids of the genera Eumenes, Monobia, Ancistrocerus, Stenodynerus and Pseudodynerus; pheromones of Sceliphron caementarium; and behavior of Vespa crabro germana. Publications on ecology, pheromones and management of Apoidea are also available."

Harry Empey, P. O. Box 64087, Highlands N., 2037 Transvaal, South Africa, submitted the following:

"1. I have submitted a manuscript titled: 'Taxonomic notes on Cerceris militaris Dahlbom and the Brazilian species, Cerceris rufonigra Taschenberg'. This is in press and will be published in the March issue of J. ent.Soc.sth.Afr. I will send reprints when available".

"2. For some time now I have been examining all available types of Ethiopian species of Cerceris, designating lectotypes, etc., where applicable. I have prepared a lengthy manuscript on these studies and it concerns numerous new synonymy. The manuscript is almost complete and I am hoping to have the Transvaal Museum publish this paper in their Annals some time this year".

"3. I have started studies on the Ethiopian species of Liris and the subgenera Leptolarra and Motes. I have a number of Arnold's and Cameron's types with me at present. Prof. Jean Leclercq has been instrumental in arranging the loan of numerous specimens from Tervuren, mainly material from the Congo. He has recently written to me offering Madagascan material under his care to study as well, as he feels that he will never be able to complete any work on Liris. So far, I find the genus extremely difficult".

"4. My work on Ethiopian species of Cerceris continues slowly. Colin Vardy has been very helpful by sending me from time to time numerous specimens collected mainly by Ken Guichard in the Arabian peninsula and west Africa, with numerous undescribed species present. My collecting (three trips) in South-West Africa has had its rewards, for there are at least seven new species involved. My collecting in and about South Africa has brought in many more, and with all the other material I have on loan, there are well over seventy species awaiting description. I had better stop examining material and collecting for a while in order to arrange a key to the species and describe everything in one mammoth paper. The problem is: who will publish such a book!? A key to the known species is in draft form. Furthermore, numerous unknown sexes of known species await description; this should be included in this book as well."

Lloyd Eighme, Pacific Union College, Angwin, California writes: "Current research in the Sphecid collection at Pacific Union College involves mainly the genus Diodontus. One new species has become apparent from the specimens collected in the North Coast Range. Clear cut characters have been very difficult to find in this genus. I have attempted to separate species and species groups with a number of characters only to discover a continuum or constant gradation from presence or absence with almost everything in between. A study of over 2,000 specimens including some Eastern and mid-western material especially from the U.C. Davis collection has been quite frustrating, but in the past few months some previously overlooked characters have been discovered which may lead to a more satisfactory separation of species. I was sidetracked recently by receiving David Vincent's key to Passaloecus, and in attempting to determine our specimens of that genus I think I detect some of the same problems as with Diodontus. It was interesting to see how he handled it. I still have hopes of removing the confusion from Diodontus."

Charles Porter, Fordham Univ., Bronx, N.Y., says "I do not (at present) plan to attempt any major revisionary work on Aculeata but hope to continue publishing on the Hymenoptera of the Lower Rio Grande Valley (I would love to do the Eumenidae, which are so common, diverse and attractive here) as well as on the fauna of the north Chilean Coastal Desert (Tarapaca Province). For both geographic regions, I would like eventually to cover at least the Sphecidae, Eumenidae, and Vespidae, as well as the ichneumonids and other parasitoids. As you know, I have short papers on the R. Grande Valley Zethus (an interest kindled by Lionel Stange) and Sphecini, and have just submitted for publication in Florida Entomologist a short review of the LRGV Bicyrtes (giving phaenology, flower records etc.), of which we have 5 species: capnoptera, fodiens, ventralis, variegata and viduata."

"My immediate plans include a 5 month sabbatical in Argentina (February to 1 July) and I'm scheduled to leave on 25 January. I've been contracted by the Instituto Lillo of the National University of Tucuman (where Lionel and I have worked in the past, as you so well know) and should be able to spend February and March in the field, with the following 3 months divided among teaching a course on "Systematics of Hymenoptera", laboratory, and field work. I hope to collect in the arid and semiarid northern highlands and in the Sierras de Cordoba and San Luis - these higher and drier places, with their specialized faunas are, of course, inaccessible to me on my winter visits to Argentina, when, on the other hand, I can usually find abundant parasitic Hymenoptera in the subtropical, humid lowlands."

Maria Nei da Silva is an MS student in Zoology at the Rio Claro campus of the "Julio de Mesquita Filho" State University, in Brasil. Her thesis research, under Dr. Vilma Maule Rodrigues, is on the social biology of Mischocyttarus atramentarius (Vespidae: Polistinae). Her greatest expertise and interest is in the sociality of Vespidae. She is also a teacher at the Juiz de Fora Federal University, in Juiz de Fora".

Padre Bruno Bonelli, Via Avisio II, 38033 Cavalese (TN), Italy, says: "I am still working on the ethology of Eumenid wasps such as Rhynchium oculatum and Delta emarginatum, etc., chiefly about paralyzing behavior, examining the number and location of the stings inflicted to the victims. I noted that there is strong variability among the different species and among the females of the same species. Next September I will go again to Bolivia to continue my work there and to study the predation behaviour of some Sphecidae and Pompilidae."

Abraham Willink, Instituto Miguel Lillo, Tucuman, Argentina says: "I just finished a revision of the Eumenid genera Montezumia and Monobia, the first with 50 species and subspecies of which 21 are new, and the second with 30 species including 6 new ones. I will now return to the genus Hypodynerus to work out the remaining 4 species groups which contain many new species (I finished and published on three species groups earlier)."

"I am leaving on the 4th of January for a two month trip to Patagonia with a young colleague and two students, helped by a grant of the National Geographic Society. We plan to work in the region of the Nothofagus woods and also the dry deserts, collecting specially Hymenoptera but also other groups of Insects."

Lic. Maria Virginia Colomo de Correa, Instituto Miguel Lillo, Tucuman, Argentina, is working on the genera of the subfamily Pompilinae of the Pompilidae. She has finished the argentine species of Tachypompilus and Poecilopompilus and is at the moment studying the genus Euplaniceps of the same country.

Ing. Agr. Arturo Roig, Vicente Lopez 590, 5500 Mendoza, Argentina, is interested in the pompilid subfamily Pepsinae and is currently studying the genus Chirodamus and plans to go on with other genera of the same subfamily, specially the argentine species.

Stefano Turillazzi, Istituto di Zoologia dell'Universita, via Romana 17, 50125 Firenze, Italy, says: "Helped by some students I'm concluding some studies on Italian Polistes: Polistes gallicus, P. nimpha and P. foederatus: 1) biological cycle of P. nimpha, 2) observations on hibernating females, 3) experiments on construction in rotated combs, 4) improvement of the technique of artificial nests. With Prof. Pardi we are elaborating the data collected during a mission to Java (Indonesia) where we studied the social behavior of Parischnogaster nigricans (Stenogastrinae)."

Robin Edwards, Rentokil Ltd., Felcourt, East Grinstead, Sussex RH19 2JY, England, "published in May his book on the Vespinae entitled "Social Wasps, their biology and control". A new look at the fascinating world of social wasps and hornets for readers interested in insects and natural history, for students, and for food manufacturers, environmental health officers and pest controllers. The aim of this book is to bring together the information now available on the British wasps, but numerous references are made to species in other countries where research has provided new facts."

"The book, of 410 pages, has the text profusely illustrated with over 200 black and white photographs and diagrams, and with eight pages of colour photographs. There is a bibliography and author index of 606 references and a comprehensive subject index. The book contains 16 chapters and an appendix:"

1. Introduction
 2. Life history I. Nest initiation
 3. Life history II. The immature stages
 4. Life history III. The rise and decline of the colony
 5. The activities of workers inside the nest
 6. The behaviour of workers outside the nest
 7. Organisms associated with wasps and hornets
 8. Population dynamics (by Michael E. Archer)
 9. Wasps in the human environment
 10. Control methods
 11. Organisation of social behaviour
 12. Origin and evolution of social wasps
 13. Classification of the Vespinae
 14. Morphology, anatomy and physiology
 15. The British species
 16. Experimental techniques
- Appendix. Check list of Vespinae of the world.

"Copies of Social Wasps are available at £10 cash with order from Rentokil (the publishers) or at \$ 25 cash with order from Pest Control Magazine, Books Dept., 9800 Detroit Avenue, Cleveland, Ohio 44102, U S A."

Tadashi Suzuki, Tokyo Metropolitan University, Tokyo 158, Japan, is investigating the ecology and economics of polistine wasps in Japan.

Status of the Polistine Bibliography

Chris Starr, Dept. of Entomology, Univ. of Georgia, Athens, GA. 30602, relates his progress on getting the polistine bibliography published. "I've received a number of inquiries about the fate of the annotated bibliography of world literature on the Polistinae, which was originally slated to appear in late 1978. This has proved to be a somewhat larger task than I imagined, which accounts for part of the delay. That is not, however, the main difficulty. The size of the bibliography and the decision to subsume the Polistine Information Bulletin under Sphecos make the original plan of issuing the bibliography as a special number of the PIB undesirable. Publication in a widely distributed journal (which I consider very appropriate), is dependent upon securing funds from some granting agency. The publication costs will be high, too much for my department to handle alone. This is the one serious stumbling block right now. I'm exploring alternate routes, but the situation is uncertain, and I regret that I can't promise to make the bibliography available to you in the foreseeable future. If anyone has any unobvious suggestions of how to get this thing printed up (I believe I've checked out all the obvious ones), please let me know."

Help Needed

Mike Edwards, Lea-Side, Carron Lane, Midhurst, West Sussex, England GU29 9LB, asks the following question: "does anyone know a good character (other than de Beaumont's Swiss key or Lomholdt's Scandinavian key) to separate female Crossocerus exiguus (Vander Linden) from C. wesmali (Vander Linden)? I believe I have females of the former taken with a definite male."

Jack van der Vecht, Burg. Vermeerlaan 4, Putten (Gld.), The Netherlands, needs help with an apparently obscure author of a vespid generic name: "Dalla Torre, in his Catalogus Hymenopterorum, vol. 9 (1894), gave on p. 49, in an alphabetical list of synonyms of Odynerus, the name Epipona Blyon, without further comments. So far I have failed to find the name of this author in the literature. Could anybody help me?"

Michael E. Archer "is preparing a taxonomic review of the vespine social wasps (Vespula, Paravespula, Dolichovespula) continuing the work that was started by Ian Yarrow. He would very much appreciate Asiatic material for study and will willingly identify such material for museums or private individuals."

Hal C. Reed, Dept. of Entomology, Washington State University, Pullman, Wash., 99164, "would like to receive collection data (date, elevation, locality, etc.) on females of the social parasite, Vespula austriaca (Panzer) and queens of its host, V. acadica (Sladen) from North America. It has been assumed from European literature that V. austriaca emerges from diapause ca. 1 month later than the host in Europe (V. rufa) and thus only invades an already established nest. Thus, it has been proposed that the social parasite does not coexist with the host queen prior to worker emergence. I am trying to determine if such a coexistence period might occur in the austriaca/acadica relationship. Spring and early summer collection dates will provide insight into this problem."

Robin Edwards "would like to receive reprints of all papers dealing in any way with the Vespinae of the world. The need for a volume 2 of "Social Wasps" in about 5 years is anticipated and he is already collecting material to bring his first book up to date. Please put his name on your mailing list now."

Barry Donovan sends a request for cocoons of Sphecophaga vesparum from nests of Vespula germanica in Europe: "Vespula germanica established in New Zealand in 1945 from queens hibernating in crates of aircraft parts flown in from Europe. The species is now found throughout the country. Populations often reach high densities in summer, autumn and winter. Honey bee hives are attacked, fruit is destroyed, and people are annoyed. The existence in some areas of overwintering nests increases the pest status of these wasps."

"The species in New Zealand is without the enemies that might limit its numbers in Europe. If enemies specific to Vespula spp. could be established in New Zealand perhaps populations could be reduced to a more tolerable level. An apparently unsuccessful attempt to establish Sphecophaga vesparum from North American Vespula (kindly supplied by Dr. Akre) has recently been made. Sphecophaga in confinement parasitized V. germanica larvae but only in the absence of wasp workers: wasp workers destroyed adult Sphecophaga."

"In Europe Sphecophaga vesparum successfully parasitizes Vespula germanica. Attempts to arrange for a supply of Sphecophaga vesparum cocoons from Europe have however not yet been successful. If any researcher could supply even a small number of cocoons, could they please contact me at the following address":

Entomology Division
DSIR
Lincoln
Private Bag
Christchurch, New Zealand

"Advice on other possible biological control agents would be appreciated. Perhaps the rhipiphorid Metoeus paradoxus would be worthy of consideration?"

Literature Requested

Robin Edwards needs copies of the following:

Bluthgen, P. 1961. Die Faltenwespen Mitteleuropas. Abh. dt. Akad. Wiss. Berl.

Duncan, C. D. 1939. A contribution to the biology of North American vespine wasps. St anf. Univ. Public. Biol. Sci. 8:1-272.

Any offers please?

Exchanges

Robert S. Jacobson, Vespa Laboratories Inc., R. D. #1, Spring Mills, Pa. 16875, says he is interested in making contact with anyone that is studying or collecting asiatic or mexican Hymenoptera and would be interested in exchanging specimens.

Brad Booker, 22b Waterloo Close, Livesy, Blackburn BB2 4RQ, England, relates the following: "From my own field work I have, each year, many 'duplicate' specimens which are the unavoidable casualties of research into the distribution of Aculeate species in Britain. Colleagues desirous of acquiring such material, whether on loan, exchange or purchase bases, should inform me of their needs and I shall do what I can to help in meeting them."

Guido Pagliano, Corso Corsica 6, 10134 Torino, Italy, says: "I have a lot of Hymenoptera and Diptera that I caught with a malaise trap in Italy. I wish to exchange them for labeled Hymenoptera from other places. My insects are kept in 90% ethyl alcohol."

"I also have determined Italian Sphecidae and I would be disposed to exchange them for determined Hymenoptera of all families and places."

Scientific Notes

"Some remarks on the construction of
the underground nests of Vespula wasps from Torun Valley"

"160 nests of Vespula germanica and V. vulgaris collected from the two most frequent kinds of soil on the sand fields in the Torun Valley (Central Poland) have been investigated. The nests found in the dune sand were approximately ballshaped. The suspensory pillars were located on the suspension axle of the nest. On the other hand, nests found in a gravel/pebble admixture were deformed and the suspensory pillars of main or even of old combs were out of the suspension axle."

Tadeusz Pawlikowski (Copernicus University, Institute of Biology, Dept. of Animal Ecology, 87-100 Torun, Poland).

Pre-publication report "On the ecology
in Trinidad of Trypoxylon palliditarse Saussure"

"Trypoxylon palliditarse Saussure is a common organ-pipe mud-dauber in Trinidad in the West Indies. Similar in nest architecture to the well-known species from the United States, T. politum Say, it also seems to be associated with wooded habitats. It prefers moderately wet environments in Trinidad, nesting commonly in areas with mean annual precipitations of 1750-2250mm, which we may regard as its optimal environment. However, its minimum fecundity in the field (which averaged about 10 eggs/female) was inversely related to mean annual precipitation, falling to about 5 eggs/female in the wet valleys (precipitation greater than 2,500mm) in the north of the island."

"Its developmental mortality, revealed by dissection and microscopical examination of its old cells and their contents, was remarkably low even for solitary wasps. At four localities where sample sizes exceeded 100, such mortality was less than 10%. A striking increase in mortality, however, occurred in the wet valleys previously mentioned. Here developmental mortality sometimes exceeded 80%. The data show that massive losses of adult females must occur before nesting, and overall, less than one female in four starts to nest. Females emerge with undeveloped ovaries and there is some evidence that at least most of them migrate from the natal site."

"The population processes are closest to W. R. Thomson's theory of the regulation of animal numbers, in which individuals spread out from high density areas where the environment is said to be optimal, to low density areas which are sub-optimal: they may permit survival and reproduction but mortality exceeds natality."

"This work is shortly to be submitted to the Journal of Animal Ecology."

Brian Freeman (Dept. of Zoology, Univ. of the West Indies, Mona, Kingston, Jamaica).

"Unusual nesting site of
Stictia signata (Sphecidae, Nyssoninae, Bembecini)"

"Stictia signata (Linnaeus) is common on sandy river and ocean beaches, as well as in clear sandy patches along streams or in natural clearings, in Para State in northern Brasil. Although sand would appear to be necessary for the nesting of this species according to Bates (1963), Bodkin (1917), Wolcott (1923), Richards (1937), and Willink (1947), a nesting aggregation of more than 50 wasps has been observed intermittantly since July, 1977, in piles of sawdust near the sawmill in the town of Barcarena on the Para River near the city of Belem."

"There is no sandy beach near Barcarena, and the river is bordered by mud-flats with emergent, rooted vegetation. The sawdust piles of the sawmill cover an area of about 200 sq. m. near the river. Although weathered, the sawdust is tan in color, much lighter than the red clay which is exposed nearby. The sawdust is firmly packed, probably by the rains, and is damp to the touch below the surface. Surface temperatures of 37 degrees C were measured in direct sunlight, and lower layers were warm, possibly due to the heat of fermentation of the sawdust which gave off a pungent smell."

"The aggregation was observed in July and November of 1977; May, August and October of 1978; and February, June and August of 1979. On each occasion wasps were seen to fly over the sawdust and to enter burrows in mounds of sawdust. Six nests were excavated in June, 1979. Each had a single cell at the end of a sloping 25 to 40 cm tunnel, as described by Evans (1966) for this species from Mexico and Dominica. Two larvae and two eggs were found. Prey consisted of 27 Tabanidae, 4 Stratiomyidae, 6 Syrphidae, and 12 muscoid flies. Wasps which left burrows made rapid closures of the nest entrance, as noted by Bates (1863)."

"Sawdust was probably accepted for nesting in place of sand because of its light color and friable texture. The large number of wasps, the presence of larvae in nests, and the existence of the aggregation for more than 2 years show that sawdust served in this instance as a suitable nesting medium. Although sawdust piles are an unstable environment, subject to erosion and decomposition, they may not be less permanent than river sandbanks which are flooded every rainy season. Moreover, deforestation and logging of the Amazon Basin would seem to assure a continual supply of sawdust."

Literature Cited

- Bates, H. W.
1863 - The Naturalist on the River Amazons. 2 vols. John Murray: London.
- Bodkin, G. E.
1917 - "Cowfly tigers", an account of the hymenopterous family Bembicidae in British Guiana. J. Bd. Agri. Brit. Guiana 10:119-125.
- Evans, H. E.
1966 - The Comparative Ethology and Evolution of the Sand Wasps. Harvard Univ. Press: Cambridge, xvi + 526 pp.
- Richards, C. W.
1937 - Results of the Oxford University expedition to British Guiana, 1929. Hymenoptera, Sphecidae and Bembicidae. Trans. Roy. Ent. Soc. London. 86:101-118.
- Willink, A.
1947 - Las especies argentinas de "Bembicini" (Hymenoptera: Sphecidae: Nissoninae). Acta Zool. Lilloana 4:509-651.
- Wolcott,
1923 - *Insetae portoricensis*. J. Dept. Agric. Porto Rico, 7(1):1-313.
Bill Overal (Museu Paraense Emilio Goeldi, C. P. 399, Belem, Para, Brazil.)

The M. Spinola Collection

Finally all of Spinola's Collection is under one roof. Word has just been received from Carlos Vidano and Alessandra Arzone, Università degli Studi, Istituto di Entomologia Agraria e Apicoltura, via Giuria 15-10126 Torino, Italy, that that part of the Spinola Collection formerly housed at the Tassarola Castle (near Alessandria) has been purchased for the future Regional Museum of Natural History, Torino. Currently the Tassarola part of the collection is housed in the Museo e Istituto di Zoologia Sistemática, Università di Torino. The rest of the Spinola Collection has been at this institution for many years. Presently only the Hymenoptera are available for study but the other orders should be accessible in about 2 years. The acquisition of the Tassarola part of the Spinola Collection is described in a booklet written by Pietro Passerin d'Entreves (1980) which is lavishly illustrated by color plates. A catalog of the Hymenoptera section of the Spinola Collection was also published this year by Casolari & Casolari Moreno (see Recent Literature in Sphecos 4 for complete citations of both publications).

Arnold S. Menke

Spinola's FAUNNAE LIGUSTICAE FRAGMENTA Decas Prima, 1805

As promised in Sphecos 2:2, M. Spinola's first entomological work, which was published late in 1805, is reproduced below. The original and possibly only extant copy was discovered by Karl-Johan Hedqvist in the library of the Swedish Academy of Sciences, Stockholm. This copy bears a dedication to the famous French naturalist, G. A. Olivier, in Spinola's handwriting. How this copy ended up in Stockholm is unknown. The work was not seen by Hagen or other early bibliographers as pointed out by Dalla Torre (Wiener Ent. Zeit. 7:249, 1888), nor apparently was it seen by Horn & Schenkling or other bibliographers of this century.

Spinola talks about the 1805 work, which he refers to as the "Decade," in the introduction to his 1806 book, Insectorum Liguriae, vol. 1. The following translation by Don Cameron, (Dept. of Classical Studies, Univ. of Michigan, Ann Arbor, Mich.), of Spinola's remarks on p. xi indicate that he deliberately destroyed the 1805 work by burning because it contained so many typographical errors: "Perhaps I should say something about a certain 'Decade'?" "I condemned the work to the flames because it was very badly published, and this work was dreadfully fouled up with errors by a most ignorant type setter; but the substance of the work I now produce again with the addition of more careful study and figures." "I hope this first fascicle [of the Insectorum Liguriae] will fulfill the desires of entomologists and will cause them to put out of their minds the aforementioned 'Decade' which has been destroyed."

Obviously Spinola did not burn all copies of the work, but probably very few escaped the fire. A few years ago, I wrote to a number of European libraries, including some in Italy, in an effort to locate a copy of the 1805 work without success. Dalla Torre in the previously cited 1888 paper points out that even the Museum in Genoa, the city in which the work was published, does not possess a copy. Mick Day wrote in a recent letter to me: "Pam Gilbert, our librarian, has recently been to various European libraries, including Frankfurt and Paris, but drew a blank on further copies of Spinola's toasted treatise." Mick suggests also that the Stockholm copy could be considered a proof copy because of the many typographical errors and because the author's name is not given on the title page. If the Stockholm copy was a proof then under the provisions of Article 9 (3) of the Code it would not constitute a publication. However, I think we must accept the Stockholm copy as a validly published work because Spinola makes it clear in the introduction to Insectorum Liguriae that his printer simply did a terrible job of type setting. Also he stated that he hoped entomologists would "put out of their minds the aforementioned 'Decade'" indicating that he must have sent out a few copies.

Mick noted the following typographical mistakes in addition to the absence of the author's name and the obvious errors in the title:

p. 7: 1803 should be 1805

p. 8: porructa should be porrecta, porrrectum should be porrectum

p. 9: Autennis should be Antennis, Stemmatis should be stemmatibus, subsestile should be subsessile

p. 15: lincola should be lineola

p. 16: liguria should be Liguria, HyalinAE should be hyalinae

Probably other mistakes can be found by comparing the work with the Insectorum Liguriae. Evidently a plate was intended to accompany the Faunnae Ligusticae because an explanation of the figures is found on p. 21. In Insectorum Liguriae Spinola infers that the plate was not printed.

It would be interesting to locate additional copies of the 1805 paper. If any of the readers know of any copies would they please contact me.

Arnold S. Menke

FAUNNÆ LIGUSTICÆ
FRAGMENTA

AUTHORE M***** S*****

Magister Spindler

DECAS PRIMÆ.

GENUÆ

Anno 1805. Mense Novembris.

TYPIS PETRI CAJETANI API.

contenir cette 1^{re} feuille

au Savant Olivier

membre de l'institut national des
de France

Maximilien Sprincla

disciple et son admirateur



QUAS tibi præbeo, amice lector, novas insectorum species, omnes egomet in agro ligustico cæpi. Scientiæ locupletandæ causa, tecum sine mora divitias divido nostrates. Sit tibi grata hæc forte nimis immatura decas, nam immatura tantum, ut nomen ligusticum jamjam potentioribus obsoletum, saltem inter entomologos servætur.

D. DOMINICUS VIVIANI, clarissimus Botanices Genuæ professor, mihi amicissimus, species infra descriptas accuratissime delineavit et incisit. Entomophilorum gratitudo, scientiæ incrementum, Patria illustrata, ejus dulcissima erunt præmia.

FAUNÆ LIGUSTICÆ FRAGMENTA

DECAS PRIMÆ.

N.º 1. POLOCHRUM REPANDUM.

Hanc speciem certè novam, novum genus constituendam, reperi in agro Arquatensi, Mense Junii, Anno 1803. Diù incertus, Tiphiam primum, postea scoli-
am credidi, accuratioribus verò obser-
vationibus edoctus, errorem emendavi,
ac G. POLOCHRUM sequentibus chara-
cteribus constituere ausus sum.

G. POLOCHRUM. ——— *Characteres
Generici.*

MANDIBULÆ, arcuatæ, validæ, apice
denticulatæ.

8

PALPI, inæquales, filiformes posteriores breviores.

(N. B. *Meæ collectioni ut parcerem, articulorum perfectè nondum observavi numerum.*)

ANTERIORES, apice maxillæ } inserti.
POSTERIORES . . . Labii }

MAXILLÆ, corneæ, filiformes, apice palpigeræ.

LABIUM corneum, porrectum, tenue, elongatum, apice acuté emarginatum.

LINGUA simplex? Membranacea, porrecta, cordata, apice acutissime emarginata.

N. B. (Simplex?) *divisiones duas laterales semel visas existimavi, de observatione ritè adhuc dubito.*

LABRUM SUPERIUS, detectum, porrectum, membraneum, bilobum, extus ciliatum.

Habitus generis.

POLOCHRA, CAPITE magno, transverso, latitudine thoracis; OCULIS reniformibus. AUTENNIS filiformibus, longitudine thoracis. Vertice Stemmatibus Tribus; THORACE gibbo, lineis duabus transversalibus postice excavatō; ABDOMINE sub-ovato, subsestile, aculeo recondito, ALIS inæqualibus; PEDIBUS validis, brevioribus. COLORE nigro flavoque vario.

Nomen POLOCHRUM a colorum varietate.

Species unica — POLOCHRUM.

REPANDUM.

(*Diagnosis.*)

Nigrum, Autennis, capitis thoracisque maculis, abdominis fasciis sex repandis, ano pedibusque flavis.

Habitat in Italia, in agro arquatensi. Semel in horto capta.

10

(Descriptio.)

Mas — **CAPUT** nigrum, villosiusculum, mandibulis nigris, maculâ laterali flavâ; clypeo, lineâ infrantâ inter antenas, orbitaque oculorum sinuosa flavis. **ANTENNÆ** flavæ, extimo articulum primum duaque ultima supra nigra. Thorax niger, linea antica interruptâ, puncto calloso ante alas, maculisque septem dorsalibus, 1, 2, 2, 2, flavis.

ABDOMEN, segmento primo nigro, maculis duabus supra flavis, quasi in fasciam coeuntibus; segmentis 2°, 3°, 4°, et 5°, nigris, fascia repanda supra, et subtus maculis duabus flavis. Segmento sexto supra anticè nigro punctis duobus nigris notato, subtus flavo punctis etiam duobus nigris, segmento septimo anali toto flavo. **PEDES** cruribus nigris, flavo maculatis, femoribus nigris apice flavis, tibiis tarsisque flavis; **ALÆ** flavescentes, Anastomosibus ut in tabula.

FÆMINA differt a mare magnitudine majori, colore, nitidiore, capite minus villoso, lineâ arcuata inter alas, maculaque

11

lateralī thoracīcā flavis. Segmentum ultimum abdominis ex valvulis duabus exsertis, trigonis, in conum coalitis, aculeum ac genitalia recondentibus, flavis, sutura fuscā.

G. Polochrum inter scolietas Latreilli forte habitu enumerandum, ni instrumentis cibariis genitalibusque valde distinctum.



12

N.° 2. *Larra Atrata.*

Larra tota atra, cæruleo micans.

Habitat in Liguria, haud infrequens,
sæpe capta in agro albisolensi.

Facilis hujus insecti omnino unicoloris ac brevissima descriptio. CORPUS ut supra totum atrum, cæruleo micans. MAGNITUDO ac STATURA *Larræ* ichneumoniformis.

ABDOMEN dumtaxat magis conicum quam in reliquis congeneribus.



N.º 3. *Bombus Ligusticus*. ¹³

Bombus hirsutus, niger, thorace supra flavo, fasciâ mediâ nigrâ.

Habitat in Liguria, frequentissimus.

STATURA ac MAGNITUDO Bomb.

Hortorum cujus varietatem olim credidi,
CORPUS Hirsutissimum, nigrum, THORAX ut in diagnosi. ALÆ nigræ, violaceo nitentes. PEDES hirsuti, nigri.



14

N.º 4. *Chrysis fasciata*.

Chrysis, aurea, capite, fascia thoracica pedibusque viridibus.

Habitat in Liguria, in agro arquaten-si, rarissima.

MAGNITUDO chrysidis ignitæ CAPUT, ANTENNÆ, THORAX subtus et supra fasciā media inter alas; PEDESQUE viridi micantes. THORAX lobo antico scutelloque, et ABDOMEN totum aurea. Abdominis segmenta quatuor æqualia; ANUS integer, apice subangulatus. ALÆ hyalinæ.



N.º 5. *Pompilus dimidiatus*. 15

Pompilus niger, thorace postice, Abdomine antice rufis, punctis tribus abdominis albis.

Habitat in Liguria, haud infrequens.

CAPUT cum antennis nigrum. THORAX niger, scutello rufo, ABDOMEN segmento 1.º et 2.º rufis nigro postice marginatis, reliquis nigris; in margine antico segmenti quarti lincola, segmenti tertii punctis duobus albis. PEDES nigri. ALÆ fuscae, apice saturatiores.

Differt a *Pompilo*. Variegato, segmentis anticis abdominis rufis ac impunctatis; a *Pompilo Coccineo*, punctis tribus abdominalibus albis; a reliquis congeneribus, thorace nigro, scutello rufo.



16

N.º 6. *Pompilus sex-maculatus*.

Pompilus, niger, abdomine maculis sex cinereis.

Habitat in Liguria, in agro Arquaten-si, rarus.

CAPUT nigrum, fronte subvillosa. THORAX niger, immaculatus, villosiusculus. ABDOMEN nigrum, maculis tribus utrinque cinereis, villis brevissimis nitentibus. PEDES nigri, tibiis posticis saturate brunneis. ALÆ Hyalinæ, apice fuscæ.

Differt a *Pompilo rufipede* staturâ dimidio minore, pedibusque nigris.



N.º 7. *Astata Nitida*.

17

Astata nigra, abdominis segmentis utrinque margine nitentibus.

Habitat in Liguria frequentissima. Sæpe capta in floribus.

(G. ASTATA solidissimis characteribus constituit clarissimus LATREILLE, at unicam speciem TIPHIAM ABDOMINALEM *Panzeri* descripsit.) Entomologis speciem nunc præbeo alteram, quam habitu satis annuent astatam, etiam instrumentis cibariis nondum observatis.

CORPUS nigrum, nitidissimum fronte pubescente. Abdominis segmentis utrinque margine villosis, pube argenteâ nitente. PEDES nigri, ALÆ hyalinæ.



18

N.º 8. *Philanthus tricinctus*.

Philanthus niger, abdomine segmentis
tribus flavo marginatis.

Habitat in Liguria; frequens.

CAPUT nigrum; labio, maculisque
duabus frontalibus, flavo albidis. ANTEN-
NÆ nigræ subtus ferrugineæ, articulo pri-
mo toto nigro. THORAX niger immacu-
latus. ABDOMEN petiolatum, segmento
1.º angustiore secundoque nigris, 3.º
supra flavo macula dorsali antica nigra,
4.º et 5.º nigris flavo marginatis, 6.º
et 7.º rufis segmentis omnibus sub-
tus aterrimis. PEDES, scemoribus nigris
apice flavis, tibiis tarsisque flavis. ALÆ
fuscae.

Variat maculis frontalibus cum labio
coalitis, et fronte tota flavâ.

N. B. *Ex numero segmentorum spe-
cimina descripta mihi videntur mares
Fœmina adhuc reperienda.*

N.º 9. *Scolia Abdominalis*.¹⁹

Scolia, hispida, nigra, abdominis segmentis duobus ferrugineis.

Habitat in Liguria, in agro arquatensi, rara.

(N. B.) *Meæ collectioni ut parcerem, nondum cibaria observavi instrumenta, de genere dubito. Habitu vero scoliis adeò affinis est ea species, ut descriptionem protrahere noluerim.*

CAPUT nigrum, pube rariore. ANTENNÆ nigræ. THORAX niger, hispidus, pilis cinereis. ABDOMÉN nigrum, segmento 2.º et 3.º ferrugineis, marginibus albo ciliatis, pilis rigidissimis elongatis. PEDES nigri albo villosi. ALÆ hyalinæ.



20

N.º 10. *Hylotoma Ventralis*.

Hylotoma, antennis septemnodis, ventre, pedibusque flavis.

Habitat in Liguria, haud infrequens.

MAGNITUDO ac STATURA *Hylotomæ Angelicæ*. CAPUT cum antennis, nigrum THORAX concolor. ABDOMEN supra nigrum, lateribus segmentorum marginibusque sæpe dilutioribus et ad flavum vergentibus, subtus flavum. PEDES flavi; ALÆ obscuræ.



T A B U L A.

Fig. 1. a. *Polochrum Repandum*,
mas.

b. *Fœmina*.

c. *Ala superior*.

Fig. 2.^a *Larra atrata*.

3.^a *Bombus ligusticus*.

4.^a *Chrysis fasciata*:

5.^a *Pompilus dimidiatus*.

6.^a 6 - *Maculatus*.

7.^a *Astata Nitida*.

8.^a *Philanthus Tricinctus*.

9.^a *Scolia Abdominalis*.

10.^a *Hylotoma ventralis*.

Pomona Insect Collection

Pomona College in Claremont, California, has had an important insect collection (840 schmitt boxes) in its custody for many years. This collection was built up primarily by C. F. Baker starting in the early part of the century. The collection contains considerable tropical material (Cuba, Mexico, Nicaragua, Java, etc.) as well as many type specimens. For quite a few years this collection was largely inaccessible to the scientific community unless one could personally visit it. Fortunately Pomona College has decided to make the collection available by putting it under the care of museums equipped to service it properly. The largest part of the collection, the Hymenoptera (310 schmitt boxes), as well as 52 boxes of Diptera, have been given to the Smithsonian Institution. The remainder of the collection will go to the California Academy of Sciences. Most of the Hymenoptera types were placed in the California Academy of Sciences some years ago under unclear circumstances. However, a cursory examination of the Hymenoptera received by the Smithsonian indicates that some Cameron eumenid types are still present. It is unfortunate that all of the Baker Hymenoptera, specifically the types, does not reside under one roof. We can only hope that the California Academy of Sciences will publish a list of Hymenoptera types in their part of the Baker Collection.

Arnold S. Menke

Ducke Types

Some Ducke material (see Sphecos 1:17) is located in the Museum fur Naturkunde, Humboldt Universitat, Berlin, according to Eberhard Konigsmann.

Meadow Valley, Mexico

This placename is the type locality for a number of species of Hymenoptera described by Rohwer and others from material collected by C. H. T. Townsend. Recently I was able to pinpoint Meadow Valley. It is located in western Chihuahua at the headwaters of Rio Piedras Verdes at an elevation of 2226 m. (7300'). The precise coordinates are 108° 15' W, 29° 58' N.

Arnold S. Menke

Travel and Collecting Reports

Howard Evans spent about a year in Australia. The following was received in February:

"Right now we are in the field just about every day, mainly in the Brisbane area, though we have been as far north as Mackay, west to Cunnamulla, south into central New South Wales, also a trip by air to Darwin, N.T., and Kununurra, W.A. Shortly we will be off for a week in Tasmania and stops at the museums in Melbourne and Canberra. Then, in April, we will take a more extended trip to Adelaide and Perth to look at museum material and to Alice Springs and Cairns for some late season field work. Major emphasis has been on Cerceris nesting behavior, and I think our results have been pretty exciting. Also have worked on Bembix a bit more and collected lots of Pompilidae. Collecting for Bethyridae has been somewhat disappointing, mainly because I haven't worked very hard at it--or is it the other way around?"

Dick Bohart, accompanied by his wife, Margaret, was also in Australia this past year. His summary follows:

"In a collecting trip to Australia in 1979 the last two weeks of October as well as all of November and December were spent in Western Australia. The southwestern corner was traversed by car covering about 4,000 miles. Arrangements were made with the Western Australian Museum in Perth and with the National Park Service for permission to collect and transport specimens outside the country. In all my wife and I took about 9,000 specimens. These were layered in paper cotton envelopes. All collecting was done by net. Nights were cool and little came to lights. Days varied from cool to warm, but drifting clouds and a pulsating stiff breeze were customary. Face flies made collecting unpleasant at times. However, the wind was helpful in this respect. Western Australia is experiencing a prolonged drought and this may account for poor collecting in many natural areas but concentrations of insects were found in city parks where regular watering was carried out. Wildflowers were abundant and varied. Only a few bees were visiting the annuals. This may have been the result of the traditional every three years burning of underbrush. Better collecting was on bushes and trees, particularly Eucalyptus and related genera. Thynnids were the dominant wasps and many of the males were netted as they were carrying females during copulation. Perhaps 40 species were taken. Great numbers of bees of many species wound up in the bottle. These were mainly hylaeid, halictid, and megachilid types. Except for a few large species of Sphex, Podalonia, and Prionyx, sphecids were uncommon and local. One or two species of Spilomena were taken in numbers from Eucalyptus and its relatives. The variety of gasteruptionids and ichneumonids was surprising. Among other insects, buprestids, curculionids and mordellids were prominent. The first week of January was spent in the "outback" north of Adelaide. Here for the first time large numbers of eumenids and masarids were collected at mud puddles along a drying creek. Here, also, pompilids were abundant."

"In Western Australia our work was helped through the cooperation of Dr. Terry Houston of the Western Australian Museum. In Sydney I enjoyed a visit with Geoff Holloway and Clarry Chadwick. Dr. Smithers, the curator, was away on a field trip."

[The following excerpts from a letter written by Dick in November 1979, while in Australia give an additional glimpse of his adventures down under - editor]:

"It rained on our first day in W.A., then for 3 weeks was partly cloudy, breezy and warm until last night when we had a real thunderstorm and drenching rain. The country needs it even if the wheat farmers don't. There has been a 4 year drought in W.A. and this may account for the general sparsity of insects. October 19 [Bohart's arrival date] was early Spring and wasps weren't out even tho Spring flowers were abundant and varied. We have collected at the seashore on the Indian Ocean at Busselton and Yanchep, in the coastal hill forests, and here in the inland wheat belt. There is almost nothing in the way of Hymenoptera (except honeybees) between towns. Best collecting has been in town parks where the "grass" is at least occasionally watered. Eucalyptus flowers and those of white bottlebrush have been most productive. Thynnids have been fairly common, about 10 species, and perhaps 300 specimens. Sphecids and eumenids have been uncommon but are getting better. Beautiful sandy areas have very little on the ground [wasps] but I have hopes for later. Yesterday in the Moora town park there were a few bembicines, nyssonines, Sphodrotes (?), Pison, Prionyx, and mutillids frequenting a sandy area. White bottle brush produced several eumenids, our first Masaris, a variety of ichneumonids, braconids, several species of bees, beetles, bugs (mostly pentatomids), and thynnids. Mecoptera of one or two species are widespread. We get a few each day. There have been quite a few bees, especially Colletidae."

"Possibly you have heard about Australian bushflies? These are 5 or 6 species of Muscoidea that assail the face and arms most anywhere outdoors. Supposedly they are worse in the "bush" but they are obnoxious everywhere. Apparently, none are biters, rather they are crawlers. Australians are supposed to get "used to them". Nevertheless, all people I have seen have well developed arm-waving muscles. Repellants are 30-50% effective. When the breeze stops, collecting can be severely impeded by flies. If breezy, only 3 or 4 try to light on your nose and crawl on your lips! Some say they are better in hot summer, others say worse. We can hardly wait. The flies remind me of the worst rhagionid situations at Tanbark Flat [San Gabriel Mts., California]. Margaret has become quite a good collector in spite of the flies. She gets many choice items. We have taken every Pison and Liris that we have seen, mostly the former. Possibly if we keep at it there will be some Ana."

Charles Porter, Fordham Univ., Bronx, N. Y. sends the following report on winter collecting in the toe of Texas:

"Here in south Texas we have enjoyed one of the mildest winters on record and I've been in the field at Bentsen Rio Grande Valley State Park and the Valley Botanical Garden (at McAllen) for 4-6 hours everyday. Temperatures have ranged between 70 and 80 (with nightly lows rarely under 50) and the vegetation is green. As usual in winter, ichneumonids have been quite abundant, while aculeates (for which the season is March to November, with fall and spring peaks) have been quite scarce. Nonetheless, your readers might be interested in some of the species which can be found in extreme south Texas during December and January. Campsomeris tolteca is one of the commonest larger Hymenoptera, flying in tall grass, Serjania vines, etc., and visiting all sorts of flowers--Aster subulatus, Verbesina encelioides, Pathenium hystrophorus, Baccharis (glutinosa & neglecta) - flowers usually gone by December), and many others. Among eumenids, Zethus miscogaster and Z. montezuma are pretty common (montezuma peaks in winter) on Baccharis, Condalia obovata, Bumelia celastrina, Aster, Croton, etc.; Hypalastoroides mexicanus continues frequent, often on Parthenium hystrophorus; a Pachodynerus, which I assume is nasidens, occurs everywhere and rivals Campsomeris tolteca in abundance; several Leptochilus spp. and Stenodynerus spp. are turned up by sweeping Serjania or netted from flowers; at least 3 Eumenes may be active (only 1 so far this winter); and Monobia texana holds out until very later November (26th is my latest record - on flowers of Baccharis glutinosa). The vespids also are well represented in winter. This year I've found Bachygastra mellifica, Mischocyttarus cubensis mexicanus, Polistes instabilis, P. major, P. exclamans, P. apachus and what appears to be P. canadensis (In other winters, I've taken P. pacificus, a genuine rarity - 2 specimens in 7 years). Most of my vespids were collected from our 2 common Baccharis (glutinosa & neglecta), either from flowers or foliage, but, of course, they visit many other plants. Curiously, Polistes is not all that common here, only instabilis being consistently present. B. mellifica is pretty common and I recently detected a gigantic nest in a rather embarrassingly diminutive orange tree. M. cubensis often is abundant, especially in winter. Pompilids were not especially conspicuous this season but I did find Cryptocheilus attenuatus amid short grass on the Rio Grande Trail in Bentsen Park, an Anoplius and an Evagetes in various exposed spots, an Aporinellus on Citrus foliage, a Psorthaspis amid grass on the banks of the R. Grande, Auplopus spp. and Dipogon melanocephala in Serjania and other undergrowth, and a few Ageniella spp. in similar places. Sphecids diminish abruptly after November. This season I have taken only Trypoxylon clavatum (flying over trails in bright sun); Lestica sp. (on Baccharis glutinosa); 2 species of Liris (the only consistently abundant winter sphecids here), which frequent herbaceous vegetation and vines in Gallery Woods, as well as "artificial" habitats, such as orange groves; and 1 unidentified psenine from tall grass near the R. Grande. (In other winters, I have found a few Trachypus

mexicanus, Ochleroptera bipunctata, Didineis, an occasional Astata, and a few Cerceris.). Finally, Apoidea have been sparsely represented, except for the omnipresent Halictidae (Agapostemon, Halictus and many other genera, which swarm on late-blooming Aster, Helianthus, Palafoxia, Parthenium, Teucrium, Croton, etc.). Among anthophorids, this winter has produced only a species of Exomalopsis, while xylocopids have been represented by a large black Xylocopa species, whose identity I have not yet established (on flowers of Rhynchosia texana and of some ornamental labiatae) and by the smaller X. parkinsoniae, Croton sp.). This will give you some idea of our winter aculeate fauna, although other years have been more productive. Normally, our warm weather is interrupted every few days by cold fronts, but, if a collector has patience (and at least 2 weeks to spend) he will find the McAllen area productive and pleasant in winter, although I am sure localities a few hundred km south in Mexico (e.g. the Hotel Covadonga at Valles with its spacious grounds and tropical gallery woods along the R. Valles) would be even more exciting."

"One more item I would like to mention is the question of collecting permits for State and National Parks. The Bentsen Park authorities (at Austin) always have been prompt and courteous in issuing a permit and I have been granted permits for work in Big Bend, Guadalupe Mts., Yosemite & Sequoia Natl. Parks. However, the red tape seems to be getting out of hand, especially for National Parks. Most National Parks now want not only a report but a research proposal "relevant to the specific park". At several parks, moreover, I was given a permit only grudgingly. Park naturalists are generally ecologically oriented and seem to have an antipathy toward taxonomists, plus a total lack of understanding that taxonomic work depends on samples taken from the widest possible range of geographic localities. Maybe taxonomists should be reluctant to perform identifications when this service is requested by ecologists or park naturalists. My own view is that insect collecting permits of any kind are, at best, superfluous. Afterall, no insect has been exterminated by collectors. Maybe entomologists should organize some form of protest, which would stress the need for conservation through habitat preservation, replacement of pesticides with biological control agents, and rigorous protection of genuinely endangered species--many plants, and all vertebrate animals. It is rather ironic that I may legally visit a National Park and spray my tent with "Raid" to kill mosquitoes (some of them perhaps quite unusual and interesting species) but that, should I retrieve the mosquitoes for scientific study (without the necessary permit), I would technically be in violation of a law and subject to ejection from the Park, confiscation of my mosquitoes, and perhaps even a fine."

Marius Wasbauer has another report on collecting in Baja, California (see Sphecos 1:19).

"In December, I joined a 12 day expedition to the Sierra de la Laguna,, an isolated mountain range near the tip of Baja California. The other expedition members were John Doyen, Paule Rude, Charles Griswold, University of California at Berkeley, and Walter Tschinkel, Florida State University. I joined John Doyen at Berkeley, and flew with him on an early flight from San Francisco to San Diego where we met the other members of the party. We then took a taxi to the border and a Mexican taxi from the border to the Tijuana Airport where we got an 11 A.M. flight to La Paz. At the La Paz Airport, we were able to hire a large station wagon and after purchasing provisions, left on the 50 mile trip to Todos Santos. On arrival, the driver was unwilling to take us up to the pack station at Rancho La Burrera, because he told us the road was too poor. We managed, before nightfall, to hire an old tired pick-up truck for the trip. The owner of the pick-up was unwilling to make the trip at night because his truck had no headlights, but did agree to take us to a nearby beach where we camped for the night. The following morning he drove us to the pack station (about 18 miles) where we found that the pack animals were in use and would

not be available until the following day. We spent the day exploring around Rancho La Burrera which looks as though it would be very good for collecting at the proper time. In a large wash near the pack station, I saw pompilids flying but by the time I unpacked my net and returned, a gray overcast had set in and I was able to take only a few. The following morning we loaded all our gear including camping equipment, Berlese Funnels, twelve malaise traps and various other specialized collecting equipment onto five horses, mules and burros and started on foot up into the Sierra. The trail from the pack station to the meadow where we camped climbs about 4,500 vertical feet without benefit of switchbacks and was a strenuous walk but we arrived in plenty of time to set up camp. According to our altimeter, the area we were collecting was between 5,900 and 6,000 feet. The dominant vegetation consisted of three species of oaks, and one pinyon pine species along with an endemic Arbutus species, similar to madrone. The vegetation in the meadow was grass mixed with other annuals and was dry since we were 1 1/2 to 2 months into the dry season. The meadow was traversed by a stream (intermittent in December) which may be completely dry by the onset of the summer rains. The weather was not ideal for insect activity. Night temperatures varied from the mid 20's to the mid 40's. Not many aculeates were in evidence but we took about 50 pompilids and a few each of sphecids, chrysidids, dryinids and bethylids. Although most of the material has not been studied yet the majority of the pompilids I have examined are new records for Baja and there appear to be a couple of undescribed species. The season of choice to visit this area would probably be during the summer rains. Several of us are planning a return trip in September."

Lionel Stange, Florida State Dept. of Agriculture, Division of Plant Industry, Gainesville, Fla. 32601, sends the following report on his "Collecting trip to Argentina and Bolivia":

"I left with my wife and two children on December 12, 1979, with a planned 1-day layover at Santa Cruz, Bolivia where I hoped to talk with Dr. Donald Foster about my return trip. On the return trip I planned to spend 10 days in the Santa Cruz area. However, as the hours went by at the Santa Cruz Airport (affectionately termed the "Chicken Coop"), it became apparent that something was amiss with the plane schedules. We had planned to go to Argentina on the Aerolineas Argentinas line which is notorious for not flying in bad weather. So as we got reports of bad weather in N.W. Argentina it became obvious that they were going to delay. As it turned out, they cancelled the flight, and we spent 2 extra days in Santa Cruz. This normally hot, humid spot was abnormally cold and only ant collecting was productive. Finally we reached Argentina where I spent a few days with my former colleagues at the Instituto Miguel Lillo and did some general collecting around the area. Of course in January nearly everyone is gone from the universities and museums. During January I spent a few days at Tacanas (about 50 miles N of Tucuman), a locality which has produced many odd Hymenoptera. We "roughed" it at a seminary where my former student, Enrique Gonzalez, was chief cook and bottle washer. He was an excellent cook even though there was no electricity and he had to build fire each mealtime. My other companion on the trip, Rodolfo Golbach (Elaterid expert), had a Honda generator which provided good night collecting. It would be impossible to describe the beauty of the first night when countless fireflies became trapped in a large roofed area with open sides where we ran the trap (to compensate for the wind and light rain). When we put out our lights and looked toward the roof it seemed a midget universe with 4 species of fireflies lighting up the place that would put Disney World to shame. We spent many days at higher elevations (about 12,000 feet) where the insect fauna is quite distinct. I was with my present colleague, Bob Woodruff, who was so enraptured with some peculiar and very aggressive dung beetles that he collected hundreds of live specimens (to obtain eggs) that later escaped in the station wagon providing some unforeseen commotion."

"One of my projects was to study Larra, especially their flower preferences, and obtain any mole cricket biology. Few were found in Argentina but later in Bolivia I collected a good series crawling about on a milkweed attracted by honeydew. Even with the high inflation and weak dollar we were able to find hotel rooms in Argentina for about \$20 (2 people) and made out by eating "Milanesa Sandwiches" (the hamburger equivalent in Argentina which is a really delicious breaded veal outlet thing). I left Argentina on January 18 and went back to Santa Cruz for 10 days. First I stayed with a friend I had made on the first delayed trip to Argentina from Bolivia who worked at a sugar refinery ("Ingenio"). Later I met an American, Dr. Foster, who works for the Consortium for International Development in collaboration with the Bolivian government. He is trying to build the first important reference collection in Bolivia, with special emphasis on economic groups, but he is going after everything. He was kind to me, provided transportation (in his 4-wheel drive Bronco), and a bed in his air-conditioned laboratory. He took me to some of the diverse spots in the Santa Cruz area, extensive sand dunes to the east, the southern end of the Amazon rainforest at Buena Vista, and to diverse Chaco habitats like at Saavedra where the Agricultural Research Station is located. Anyone wishing to receive insects for identification from Bolivia can write to Don at "CID", Casilla 2612, Santa Cruz, Bolivia for particulars. I returned with many thousands of insects, especially ants and Eumenidae, and was happy to collect about 40 specimens of Zethus which I study. The "Drive-In Motel" is a modest hotel near the airport which I would recommend now (rates are about \$15 but subject to fast change). Meals are reasonable. The "Cortez Hotel" was always one of my favorites (has a swimming pool, exotic birds, outside town toward the "Jardin Botanica" which is an excellent collection spot where tree identifications are easy to obtain. However, in early December they devaluated the peso Boliviano from 20 to 25 per dollar with the reaction of doubling (!) the prices of everything. In Bolivia the safest restaurants are Chinese (Chifas) and probably the best one is the "New Hong Kong" run by a woman from California! One low note was the epidemic numbers of mosquitoes and a first case of Malaria after many years. Needless to say, I breathed a note of relief when the 35 days of possible incubation passed."

"Santa Cruz (400 m. elevation) is an ideal starting point for the student of Bolivian entomology. It is pleasant, fairly modern (although marginally clean), and has various consulates (American), and provides diverse ecological zones including the northernmost reaches of the Chaco and southernmost Amazonia rain forest. Nearby are the mountains which contain diverse zones including giant cactus forests. However, hotels are found only in big towns since there is little internal tourism (in marked contrast with Argentina). Transportation is good with many micro buses running about, airflights, some train service, and rental cars. Of course, with contacts there it is easier to make connections. Besides the American group there is a British Mission concerned with improving agriculture. Probably the logical center for the entomology museum would be Cochabamba which has an "Eternal Spring" climate and is also close to the Yungas. Unfortunately, major roads have deteriorated in Bolivia and it is now much more difficult to drive from Santa Cruz to Cochabamba (when roads were good it was a long days' trip with no hotels between). The sandy soil of Santa Cruz provides good nesting sites for Hymenoptera. There are few guides to Bolivia but they can be obtained in Bolivia from the American Consulate and also there is one guide (1972) "Discover Bolivia", sold by the "Los Amigos del Libro" bookshop in Santa Cruz. Even though Bolivia is poorly explored for insects and underdeveloped, considerable ecological upheavals have occurred which means less productive collecting each year. About 2000 Hymenoptera were taken and the collection will be deposited at the Florida State Collection of Arthropods at Gainesville. This is the major collection in the southeastern U.S. and is due to be doubled in about two years."

Address Changes

Justin Schmidt has accepted a position at the Honeybee Research Laboratory, USDA, 2000 E. Allen Road, Tucson, Arizona 85719, (602) 795-3222. Justin says that any hymenopterists that happen to come through Tucson are welcome to visit and/or stay over at his apartment. His main research interests are hymenoptera venoms and pheromones and the family Mutillidae.

Carol G. Nagy, formerly of the Marine Research Institute, Agigea, Romania, writes that until further notice (in Sphecos) he will be unreachable by mail. Colleagues are requested not to attempt corresponding with him for the time being [Carol has immigrated to Israel - editor].

Missing Persons

Does anyone know the present addresses of Dr. T. Iida and Mr. C. E. Roche? Contact Menke if you do.

Obituaries

RENATO LION DE ARAUJO (1912-1978)

We've only recently learned of R. L. de Araujo's untimely death, in an automobile accident in Rio de Janeiro on 7.IX.1978. This represents a great loss for Brazilian zoology. Araujo was born in the state of Minas Gerais. He early moved to Sao Paulo, the site of the main part of his life's work, and became associated with the Museu Paulista, now the Museu de Zoologia of the University of Sao Paulo, at an early age. This remained his principal professional association until he moved to Rio de Janeiro in 1961. Araujo's main research interests were in the systematics of termites and social wasps. In addition, he published 28 papers in applied entomology and was for a time allied with the State University of Campinas, where he taught entomology for agronomists. Indeed, in reviewing the facts of his life, one has to be struck with the variety and energy of his zoological activities. For a time he was director of the Rio de Janeiro zoo, and he served on the founding committee for the Sao Paulo zoo. His deep interest in the conservation of Brasil's fauna is also shown in his membership on a Sao Paulo state government committee to revise hunting and fishing laws. He was a founding member in 1937 of the Sociedade Brasileira de Entomologia, in which he held various offices, and a member in 1962 of UNESCO's permanent subcommittee on termites. He traveled and collected over all parts of Brasil, and between 1952 and 1967 he made four study trips to the United States. R. L. de Araujo was an ardent and skillful teacher and was known for his unbending integrity in scientific matters. M. P. Autuori, writing in the newspaper Folha de Sao Paulo, says that in such matters, Araujo was "intransigent, an attitude which was misunderstood by some", and suggests that this may have hindered his professional advancement. Araujo's 34 publications in basic entomology (1936-1979) comprise 10 on the systematics of polybiine wasps (Vespidae: Polistinae), 18 on the systematics and biogeography of termites, 5 on beetles, and one in sphecid systematics. His work through 1951 is mostly on wasps, after that on termites. Of this latter, I have particularly valued his survey of neotropical termites in the 1970 book edited by Krishna and Weesner. He also compiled a catalogue of the New World termites.

C. K. Starr

(I acknowledge the help of L. R. Fontes of the University of Sao Paulo in collecting materials for this notice.)

GAY D. MAHER (1928-1980)

We regret to learn of Gay Maher's death in April at the age of 52. She had been ill for some time, quite seriously for about 2 years. Gay was the founder, in 1976, of the Polistes Information Circular, later the Polistine Information Bulletin, and was primarily interested in social hymenoptera. She received her undergraduate degree from Goddard College in 1976 and had completed her first year as a graduate student at Florida State when she was forced to drop out because of illness. She produced a film on "Paper wasp (Polistes exclamans) behavior", which is distributed by Pennsylvania State University. Some of us saw an earlier version of this film at the international bug congress in Washington in 1976. She also wrote a book on "The joy of learning to fly", published by Delacorte in 1978.

C. K. Starr

JAN PIETER VAN LITH (1912-1979)

On the 5th of April 1979, Jan Pieter van Lith passed away in the age of 66 years. The entomological science lost a conscientious investigator, the Netherlands Entomological Society a dedicated member and many people a dear friend.

Jan van Lith was born the 26th of May 1912, in Rotterdam. Financial reasons necessitated him to look for a job after he had finished only three years of the secondary school. In 1929 he took up a post with a factory in Rotterdam, where he reached the position of deputy manager after his 40-years jubilee in 1969. After his retirement in 1973 he was able to devote his time entirely to his proper work: the systematics of the Psenini (Sphecidae).

Jan's interest in living nature was aroused early in his youth. He started to collect bees and wasps in 1933. In 1945 van Lith became a member of the Netherlands Entomological Society.

Van Lith had to gain knowledge of biology and entomology in particular by himself: he was completely a self-taught man. He published 54 papers on Hymenoptera and one about mites. In the beginning these papers were short and simple, communicating about new and rare species of bees and wasps for the Dutch fauna and about life-histories. His later papers are thorough revisions on Psenini. About this group of sphecids he wrote 26 papers with in total more than 700 pages. Some tens of new taxa are described by van Lith. The papers clearly demonstrate the conscientious way van Lith worked. The many excellent drawings in his papers were done by him. Van Lith became the specialist on the systematics of Psenini. He had contacts with most of the professional entomologists working on sphecids. Many institutes sent their material of Psenini to van Lith for identification. Unfortunately much material will remain untreated. His merits for the entomological science were rewarded with the Uyttenboogaart-Eliassen-prize in 1970.

The above mentioned gives an impression of the work of van Lith. To make the picture more complete it is necessary to write something about the man Jan van Lith. He was an amiable and modest man; he gave his opinion only after he had weighed the facts carefully. He was very helpful and was always willing to identify material. He did this very carefully, so a name given to an insect by van Lith can be trusted. Van Lith worked very hard; notwithstanding his weak health during the last ten years of his life he continued to achieve much work in a short time. All van Lith could do during his life was only possible by the continuous support of his wife and his daughter, to whom our sympathy goes out.

H. Wiering, (Doortjes 29, 1861 VH Bergen (NH) Netherlands)

Publications of J. P. van Lith

- 1937 Het zijdebijtje en haar nest [Colletes (Apidae) and its nest]. De Levende Natuur 41:305-308.

Psenulus schencki Tourn. f.n.sp. Natuurhistorisch Maandblad 26:65-66.

Eenige zeldzame bijtjes uit Zuid-Limburg [Some rare bees from the south of Limburg]. Natuurhistorisch Maandblad 26:103-104.

Anthidium strigatum Latr. en Coelioxys alata Forst. Natuurhistorisch Maandblad 26:109.

Enkele nieuwe bijen en wespen voor de Nederlandsche fauna [Some bees and wasps new for the Dutch fauna]. De Levende Natuur 42:209-213.
- 1938 Zeldzame Limburgsche Hymenoptera [Rare Hymenoptera from Limburg]. Natuurhistorisch Maandblad 27:122.
- 1939 Onze hoornbijen [The Dutch species of Eucera (Apidae)]. De Levende Natuur 44:20-22.
- 1940 De wolbijen [Anthidium (Apidae)]. De Levende Natuur 44:285-287.
- 1943 Die Nester von Psenulus (Hym. Sphec.). Natuurhistorisch Maandblad 32:95-96.
- 1944 Diodontus medius Dahlb. (Hym. Sphec.). Natuurhistorisch Maandblad 33:29.
- 1947 De collectie Nederlandsche Hymenoptera Aculeata van wijlen den Heer J. Lindemans [The collection of Dutch Aculeate Hymenoptera of the late J. Lindemans]. Ent. Ber. 12:100-109.

A note on the biology of Anthophora acervorum L. (Hym. Apid.). Ent. Ber. 12:197-200.
- 1948 Psen sibiricus Gussakovskij f.n.sp. (Hym. Sphecid.). Ent. Ber. 12:230-231.

Over nesten van Crabro capitosus Sh. in takken van een treures [About nests of Crabro capitosus (Hym. Sphecid.). in branches of weeping-ash]. Ent. Ber. 12:265-267.
- 1949 Epeolus rozenburgensis nov. spec. (Apidae, Hym. aculeata). Tijdschr. Ent. 91: 105-112.

Le sous-genre Psen Mimumesa Malloch (Hym. Sphec.) (avec une liste des Psenini captures aux Pays-Bas). Tijdschr. Ent. 91:135-148.
- 1950 Chrysis kaufeli f.n.sp. Publ. Natuurhist. Genootschap in Limburg, reeks III, 49-50.
- 1951 Over de biologie van het geslacht Psenulus Kohl (Hym. Sphec.) [About the biology of the genus Psenulus Kohl (Hym. Sphec.)]. Ent. Ber. 13:211-217.

- 1953 Opmerkingen over enige Chrysididae [Remarks on some Chrysididae]. Ent. Ber. 14:225-227.
- De Nederlandse metselwespen; enkele aanvullende gegevens over verspreiding en biologie [The Dutch Odynerinae (Hym.); some additional data about distribution and biology]. De Levende Natuur 56:231-233.
- 1954 Opmerkingen over enige Chrysididae (2) [Remarks on some Chrysididae (2)]. Ent. Ber. 15:133-135.
- 1955 Biologie van Melittobia acasta Walker (Hymenoptera, Chalcididae) [Biology of Melittobia acasta Walker (Hymenoptera, Chalcididae)]. Tijdschr. Ent. 98:29-42.
- Chrysis brevitarsis Thoms. en Chrysis fulgida var. immaculata Buysson (Hym., Acul.). Ent. Ber. 15:423-424.
- De Nederlandse Spilomena-soorten (Hym. Sphecidae) [The Dutch species of Spilomena (Hym. Sphecidae)]. Ent. Ber. 15:525-527.
- Een nest van Xylocopa violacea (L.) [A nest of Xylocopa violacea (L.) (Hym. Aphid.)]. Ent. Ber. 15:452-454.
- 1956 Merkwaardige nesten van Dolichovespula saxonica (F.) [Remarkable nests of Dolichovespula saxonica (F.) (Hym. Vesp.)]. Ent. Ber. 16:33-35.
- Notes on Epeolus (Hymenoptera Aculeata, Aphidae). Tijdschr. Ent. 99:31-46.
- Hoplomerus (Hoplomerus) spinipes (L.) en Hoplomerus (Spinixoca) reniformis (Gmel.) (Hymenoptera aculeata, Eumeninae). Ent. Ber. 16:259-263.
- 1957 On the biology of Chelostoma florisomne (L.) (Aphidae, Megachilinae) and its parasite Sapyga clavicornis (L.) (Sapygidae, Sapyginae) (Hymenoptera). Tijdschr. Ent. 100:115-123.
- On the behaviour of Chaetodactylus mites (Acar., Tyr.) in the nests of Osmia rufa L. and Chelostoma florisomne (L.) (Aphidae, Megachilidae). Ent. Ber. 17:197-198.
- 1958 Opmerkingen over Chrysididae (3) [Remarks on Chrysididae (3)]. Ent. Ber. 18:231-232.
- 1959 Contribution to the knowledge of the Indo-Australian Pseninae (Hymenoptera, Sphecidae); Part I. Psen Latreille. Zool. Verh., 39:1-69.
- 1960 Opmerkingen over Chrysididae (4) [Remarks on Chrysididae (4)]. Ent. Ber. 20:209-212.
- 1962 Contribution to the knowledge of the Indo-Australian Pseninae (Hymenoptera, Sphecidae); Part II. Psenulus Kohl, 1896. Zool. Verh., 52:1-118.
- 1964 Aantekeningen over de leefwijze van Odynerus (Symmorphus) debilitatus (Sauss.) (Hymenoptera aculeata, Eumeninae). [Notes on the biology of Odynerus (Symmorphus) debilitatus (Sauss.)]. Ent. Ber. 24:256-262.

- 1965 Contribution to the knowledge of the Indo-Australian Psenini (Hymenoptera, Sphecidae); Part III. New species of the subgenera Psen Latreille and Mimumesa Malloch and a review of East-Asiatic and Indo-Australian Psen Latreille, s.l. Zool. Verh. 73:1-80.
- 1966 The group of Psenulus pulcherrimus (Bingham) (Hymenoptera, Sphecidae). Tijdschr. Ent. 109:35-48.
- 1967 Contribution to the knowledge of the Bornean Psenini (Hymenoptera, Sphecidae). Tijdschr. Ent. 27-15:20.
- 1968 Contribution to the knowledge of the Indo-Australian, South Pacific and East Asiatic Psenini. Genus Psen Latreille (Hymenoptera, Sphecidae). Tijdschr. Ent. 111:89-135.
- 1969 Descriptions of some Indo-Australian Psenulus and revision of the group of Psenulus pulcherrimus (Bingham) (Hymenoptera, Sphecidae, Psenini). Tijdschr. Ent. 112:197-212.
- 1970 The Psenini collected by the Noona Dan Expedition in the Philippine and Bismarck Islands (Insecta, Hymanoptera, Sphecidae). Steenstrupia 1:91-105.
- 1972 Contribution to the knowledge of Oriental Psenulus (Hymenoptera, Sphecidae, Psenini). Tijdschr. Ent. 115:153-203.
- 1973 Notes on palaearctic Psenini (Hymenoptera, Sphecidae). Ent. Ber. 33:113-119.
Psenini from Nepal (Hymenoptera, Sphecidae). Tijdschr. Ent. 116:123-143.
- 1974 Revision of the Psenini of the Ethiopian Region, including Malagasy (Hymenoptera, Sphecidae, Pemphredoninae). Tijdschr. Ent. 117:39-101.
Notes on palaearctic Psenini. V - VIII (Hymenoptera, Sphecidae). Ent. Ber. 34:196-199.
- 1975 Neotropical species of Psen and Pseneo (Hymenoptera, Sphecidae, Psenini). Tijdschr. Ent. 118:1-41.
New neotropical species of Pseneo (Hymenoptera, Sphecidae, Psenini). Ent. Ber. 35:170-173.
- 1976 Pluto rufibasis (Malloch) (Hymenoptera, Sphecidae, Psenini). Ent. Ber. 36:154-158.
New species and records of Indo-Australian Psenini (Hymenoptera, Sphecidae, Pemphredoninae). Tijdschr. Ent. 119:79-122.
- 1977 Notes on neotropical Psenulus (Hymenoptera, Sphecidae, Psenini). Ent. Ber. 37:45-58.
- 1978 Psenini from Sri Lanka (Hymenoptera, Sphecidae, Pemphredoninae). Tijdschr. Ent. 121:1-12.
A Brazilian Psenulus (Hymenoptera, Sphecidae, Psenini). Ent. Ber. 38:91-94.

1979 Notes on palaearctic Psenini IX - XIII (Hymenoptera, Sphecidae). Ent. Ber. 39: 150-153.

The New World genus Pluto (Hymenoptera, Sphecidae, Psenini). Tijdschr. Ent. 122:127-239.

H. Wiering

ERKKI VALKEILA (1922-1979)

Erkki Valkeila died in Hameenlinna in central southern Finland on June 13th 1979 in an age of only 57.

Erkki never married. He devoted his entire life to insect studies, starting with Lepidoptera, but he is primarily remembered as one of the best collectors and most excellent experts on Northern European Aculeate Hymenoptera, especially within Sphecidae, Apidae, Pompilidae, and Chrysididae. His collection comprised more than 40,000 extraordinarily neatly prepared specimens, primarily from localities throughout Finland. His collection, library, together with a long series of papers in preparation, is now deposited at the Department of Agriculture and Forest Zoology, University of Helsinki SF-00710, Helsinki 71, Finland. Two of these papers are of special interest since they are 1) a key to species of Northern European Chrysididae, and 2) a key to the Northern European species of Crossocerus (Sphecidae).

Erkki was an excellent collector, and he also studied nest-construction, pre-imaginal stages, prey, parasitoids, and predators in many aculeate wasp species. His knowledge and ability to recognize species in nature was exceptional, but only among friends he communicated his extensive knowledge and experience. He wrote 30 scientific papers of high standard and was highly esteemed among European hymenopterists. He corresponded with all contemporary specialists in Europe but also in Eastern Asia where numerous European sphecid species have an additional occurrence. Of his most important papers the following are especially noteworthy: 1) Donnee pour un atlas des Hymenopteres de l'Europe occidentale XI. Pemphredon (Sphecidae) from Belgium and elsewhere. Bull. Rech. agron. Gembloux (1972) 5:695-706, written in co-operation with Jean LeClercq. 2) Mitteilungen uber die nordeuropaischen Spilomena - arten. Ann. Ent. Fenn. (1957) 23:163-178. 3) Zur Lebensweise von Belomicrus borealis Fors. (Hym., Sphecidae). Ann. Ent. Fenn. (1963) 29:231-236. He described sixteen new species of Sphecidae, Apidae, and Chrysididae, and reared a series of new parasitoids associated with Spilomena enslini and the gall-making chloropid fly Lipara lucens.

Erkki appeared as a very modest, quiet, and a somewhat contemplative man, deeply engaged in entomological problems. Therefore, perhaps, he never achieved the appreciation he deserved - at least among Finnish entomologists. But at home in Hameenlinna, he was always very kindly, obliging, and loved to talk about wasps. The early death of Erkki Valkeila leaves a great loss, exceedingly difficult to compensate for in Finnish entomology.

Veli Vikburg

(translated from Finnish to Danish by Mrs. L. O. Martin, then to English by Ole Lomholdt).

CHARLES FREDERIC JACOT GUILLARMOD (1912-1979)

Charles Frederic Jacot Guillarmod was born in South Africa in the Ladybrand district of the Orange Free State on 24 August 1912 and died at Grahamstown, Cape Province on 22 September 1979. His parents were of Swiss and French origin and owned a trading store at Mamathes near Teyateyaneng in Lesotho (formerly Basutoland), his maternal grandfather having come to that country as a missionary after the Franco-Prussian War.

Jacot Guillarmod went to school in Bloemfontein and then to the University of Pretoria, where he obtained his B. Sc. in Zoology and M. Sc. in Entomology. Inspired by J. C. Faure, he acquired a lifelong interest in Thysanoptera and described numerous thrips from South Africa. In 1939 he published a catalogue of thrips of that country and for many years worked assiduously on a monumental Catalogue of the Thysanoptera of the World, of which five parts have already appeared and a sixth is in press.

To his friends and colleagues Jacot Guillarmod was known as Charlot. He was a fine naturalist and systematist, and, in addition to his interest in Thysanoptera, had a wide knowledge of the Hymenoptera of South Africa. Charlot was an excellent collector and built up a large collection of aculeate wasps, which he donated to the Albany Museum, Grahamstown, of which he was Director from 1965 until his retirement in 1977. He was also editor of the Annals of the Cape Provincial Museums from 1964 to 1978. His special love was for the tiphioid-mutilloid wasp complex, and his nephew Denis J. Brothers, in his masterly study of the aculeate Hymenoptera, acknowledged thanks in particular to Charlot, who first introduced him to "the wonderful world of wasps".

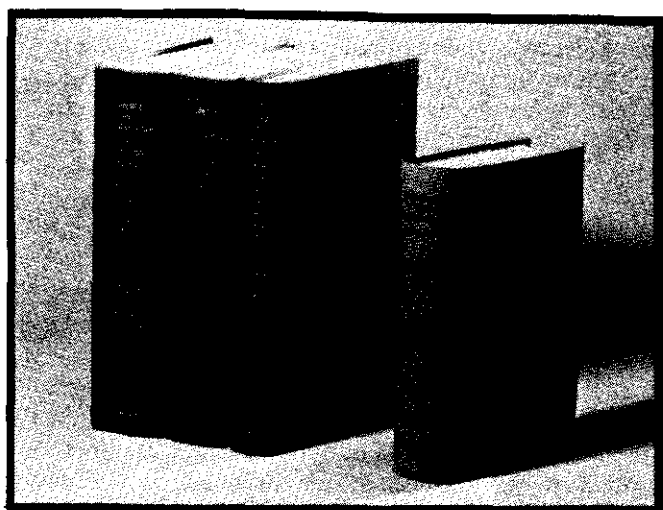
A Fellow of the Royal Entomological Society of London and a member of many other scientific societies, Charlot was one of the founders of the Entomological Society of Southern Africa and its President in 1955 and again in 1968. It has been said that he provided the spark which led to the formation of the Society by suggesting the idea to J. C. Faure. Following a preliminary meeting, the Society was inaugurated in 1937 at the University of Pretoria with Faure as President, Charlot as Treasurer, and some 80 foundation members. Now after 42 years the Society's membership numbers several hundreds.

Charlot was always accessible and ever generous in his help on taxonomic and other problems and in contributing to specialists specimens from his own collection. Regrettably, he published little himself on aculeate wasps, part from synonymical notes on African Tiphidae and a discussion of Peter Cameron's types in the Albany Museum, and one or two other papers. His revisional study of the African Tiphidae, on which he worked for many years, remains uncompleted. Charlot spent two years 1962 and 1963 at Cornell University, where he worked altruistically on scoliid wasps with J. C. Bradley and J. G. Betrem, resulting in part in the latter's monograph on the African Campsomerinae.

I first met Charlot in December 1952, when with my family I visited him, his wife Amy and son Francois at their home in Lesotho. He has many entomologist friends who visited him there, among others J. C. Bradley and O. W. Richards. As a newcomer to South Africa, I found him a wonderful source of information and drew heavily on his extensive knowledge during my 12 years at Rhodes University. We continued to correspond after I moved to Australia, and it was my good fortune to visit him in Grahamstown in 1974 and again in 1979 a few months before he died, when I saw him on numerous occasions and sought his aid in studying aculeate wasps. He had little difficulty in naming the scoliids and tiphiids I collected on coastal sand dunes. I have many happy memories of my friendship with Charlot, and his numerous friends will remember with affection his outstanding characteristics, perhaps above all his kindness and helpfulness. He will be greatly missed by his family and friends.

E. McC. Callan

Catalog of Hymenoptera in America North of Mexico



The three volumes of the new Catalog beside the single volume of the 1951 Catalog.

This three-volume Catalog was published by the Smithsonian Institution Press during 1979-1980. It is an updated, revised edition of Hymenoptera of America North of Mexico--Synoptic Catalog, U.S. Department of Agriculture, 1951.

The new edition features greatly expanded informational content, including more complete listings of hosts, parasites, prey, and pollen and nectar sources of many of the 17,429 species of Hymenoptera, and annotations on the content for the numerous biological, taxonomic, and morphological references.

The authors are associated with the Smithsonian Institution's Department of Entomology (K.V. Krombein, P.D. Hurd, Jr., C.F.W. Muesebeck), the Systematic Entomology Laboratory, USDA (D.R. Smith, B.D. Burks, P.M. Marsh, R.W. Carlson, E.E. Grissell), and the University of California, Riverside (G. Gordh).

Volume 1, pp. 1-1198, contains Symphyta (sawflies) and Apocrita (Parasitica) (braconids, ichneumonids, chalcidoids, and proctotrupoids).

Volume 2, pp. 1199-2209, contains Apocrita (Aculeata) (ants, wasps, and bees).

Volume 3, pp. 2211-2735, Indexes, presents separate indexes to the taxa of Hymenoptera and to their hosts, parasites, prey, predators, and pollen and nectar sources.

The Catalog is not available gratis from the Smithsonian Institution Press nor as an exchange from the Smithsonian Institution Library. Individual volumes may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at the following prices:

Volume 1, Stock no. 047-001-00139-7.....\$30.00

Volume 2, Stock no. 047-001-00140-1.....\$28.00

Volume 3, Stock no. 047-001-00138-9.....\$20.00

"Errors in nomenclatural grammar in Krombein et al.,
Catalog of Hymenoptera in America North of Mexico (1979)."

- p. 41 - Aneugmentus floridella should be A. floridellus.
- p. 68 - Nematus kukukiana should be N. kukukianus.
- p. 69 - N. equina should be N. equinus.
- p. 79 - Amauronematus itelmena should be A. itelmenus; the specific epithet is from the name of a Siberian people known as Itelmen and is an adjective when the ending -a is added.
- p. 108 - Zaschizonyx montana and Z. pleuricineta should be Z. montanus and Z. pluricinctus; the Greek word onyx is masculine.
- p. 109 - Aglaostigma jocosa should be A. jocosum.
- p. 159 - Atanycolimorpha dissitus should be A. dissita.
- p. 161 - Atanycolus triangulifera should be A. triangulifer.
- p. 174 - Phanomeris propinquus should be P. propinqua; the Greek word meris is feminine.
- p. 223 - Orthostigma crassinervis should be O. crassinerve; Greek stigma is neuter (O. monotonum is therefore correct).
- p. 224 - O. ovalis should be O. ovale; O. terryvillensis should be O. terryvillense.
- p. 257 - Microgaster femoralamericanus should be M. femoralamericana. Inasmuch as the specific epithet is a replacement for femoralis + americanus, both of which should be concordant with the feminine Microgaster and therefore be femoralamericana.
- p. 259 - Microplitis is a compound of Greek micros + hoplitis 'female armed being'. Therefore M. coactus, M. confusus, M. crenulatus, M. laticinctus, M. maturus, M. montanus, M. nigratus, M. perplexus, M. quadridentatus, M. rugosus, M. scutellatus, and M. striatus should be respectively M. coacta, M. confusa, M. crenulata, M. laticincta, M. matura, M. montana, M. nigrita, M. perplexa, M. quadridentata, M. rugosa, M. scutellata, and M. striata.
- p. 385 - Idiogramma fraterna should be I. fraternum. Inasmuch as the generitype was established by monotypy with the species name eurypops, the gender-choice between Greek gramme, fem., and gramma, neuter, was not made. Because the great majority of Greek nouns transcribed into classical Latin with the ending -ma are neuter, it seems logical to select the neuter form in this case.
- p. 417 - Endasys auriculiferus should be E. auriculifer because the correct masculine form of Latin words ending -fer, -fera, or -ferum does not have the -us ending.

- p. 507 - Amblytelesina should be Amblytelina; the stem of Amblyteles used in forming family-group names is Amblytel-. [Note by Bob Carlson: Amblytelina is preoccupied in Coleoptera].
- p. 582 - Xenoschesis limatus and X. solitarius should be X. limata and X. solitaria because the Greek schesis is feminine.
- p. 583 - Homaspis interruptus and H. rhadinus should be H. interrupta and H. rhadina because Greek aspis is feminine.
- p. 598 - Scopesis rufonotatus should be S. rufonotata because the generic name is the simple Greek feminine noun skopesis in classical Latin transcription.
- p. 720 - Campocraspedon truncatus should be C. truncatum because Greek kraspedon is neuter.
- p. 754 - Tomocerodes americana should be T. americanus (see International Code of Zoological Nomenclature, Art. 30, a, ii, examples)
- p. 787 - Cyrtogaster trypherus should be C. tryphera; Greek gaster is feminine.
- p. 786, Sphegigasterini, Miscogasterinae, and Miscogasterini should be respectively
787 Sphegigastrini, Miscogastrinae, and Miscogastrini because the stem of Greek gaster is gastr-.
- p. 809 - Sceptrothelys intermedia should be S. intermedius because Greek thelys is masculine (theleia, fem.; thelyn, neuter).
- p. 830 - Heteroschema aeneiventris, H. punctata, and H. rugosopunctata should be respectively H. aeneiventre, H. punctatum, and H. rugosopunctatum because Greek schema is neuter.
- p. 833 - Zatropis is not a grammatical formation because the prefix za- is used only with adjectives. The word is not in Greek dictionaries, but the word tropis 'keel' is well-known and is of feminine gender; therefore Z. incertus, Z. nigroaeneus, and Z. perdubius should be respectively Z. incerta, Z. nigroaenea, and Z. perdubia.
- p. 849 - Evoxysoma brachyptera should be E. brachypterum because Greek soma is neuter.
- p. 876 - Orasema is neuter because Greek sema is of that gender; therefore, O. aureoviridis, O. coloradensis, O. minuta, O. neomexicana, O. occidentalis, O. texana, O. tolteca, O. violacea, and O. viridis should respectively be O. aureoviride, O. coloradense, O. minutum, O. neomexicanum, O. occidentale, O. texanum, O. toltecum, O. violaceum, and O. viride. The subfamily name should also be Orasematinae.
- p. 880 - Eusandalum hyalipennis should be E. hyalipenne.
- p. 932 - Eusemion longipennis should be E. longipenne because Greek semeion (classical Latin transcription semion or semium) is neuter.

- p. 940 - Paralitomastix and Pentalitomastix are feminine because Greek mastrix is of that gender; therefore, Pentalitomastix plethoricus should be P. plethorica.
- p. 979 - Myiotropis is feminine, and is the original combination by Thomson (cf, Zatropis, p. 833 and above); therefore, M. melleus should be M. mellea.
- p. 981 Pseudolynx and Mirolynx are masculine, as Girault indicated in the original combination of Pseudolynx flavimaculatus, not P. flavimaculata.
- p. 1004, Syntomosphyrum silvensis should be S. silvense. The specific epithet
1005 esurus is non-classical and is to be treated as a noun.
- p. 1010 - Enaysma clypeata should be E. clypeatum. The generic name should have been transcribed from Greek as Enausma, but may not be emended.
- p. 1030 - Patasson gerrisophaga should be P. gerrisophagus.
- p. 1047 - Aspiceratinae should be Aspicerinae; the form with -at- would be proper if the genus-name on which it is based were Aspiceras instead of Aspicera.
- p. 1053 - Hexacola subaperta should be H. subapertus; the Latin formative -cola yields masculine names.
- p. 1093 - Antron is neuter, as correctly treated in some of the species-names, but A. acraspiformis should be A. acraspiforme.
- p. 1095 - Sphaeroterus melleus var. crassior and S. rydbergiana should respectively be S. m. var. crassius and S. rydbergianum. See also note for p. 1957.
- p. 1156 - Psilanteris reticulatus should be P. reticulata because Green anteris is feminine.
- p. 1161 - Teleasinae should be Teleinae because the stem of Teleas is Tele-
- p. 1314, Campsomerinae and Campsomerini should be Campsomeridinae and Campsomeridini
1315 because the Greek meris has the stem merid-.
- p. 1334 - Ctenopyga texanus should be C. texana because Greek pyge (Latin transcription pyga) is feminine.
- p. 1335 - Ampliyopene oregonense should be A. oregonensis.
- p. 1401 - Tetramorium spinosus and T. s. hispidus should be T. spinosum and T. s. hispidum.
- p. 1402 - Ochetomyrmex auropunctata should be O. auropunctatus.
- p. 1478 - Leptochilus gibberus should be L. gibber because the Latin adjective gibber, m.; gibbera, f.; gibberum, n. does not have -us ending in masculine.
- p. 1507 - Eumenes crucifera should be E. crucifer.

- p. 1621 - Ancistromma is neuter because Greek omma is of that gender; therefore A. aurantia, A. corrugata, A. distincta, A. granulosa, A. platynota, and A. portiana should respectively be A. aurantium, A. corrugatum, A. distinctum, A. granulosum, A. platynotum, and A. portianum.
- p. 1957 - Lasioglossum criterior should be L. citerius because Latin comparative adjectives in -ior in the masculine are regularly in -ius in the neuter. See also note for p. 1095.
- p. 1983 - Lithurge gibbosus should be L. gibbosa.

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