

JULY 1994

SPHECOS 27

A FORUM FOR ACULEATE WASP RESEARCHERS

Thank you, thank you, thank you!!!!

In *Sphecos* 26 I outlined the financial crisis that threatened to stop production of this newsletter. My appeal for donations to help defray the cost of reproducing future issues was met by an amazing outpouring of support from the readership. Money began to come in from all corners of the globe in amounts ranging from \$5 to \$250! Some people simply sent cash in the mail, others sent checks, or even foreign currency. Many sent in more than the suggested \$5 donation. We even received donations from Russia and other east European countries in spite of all the financial hardships that people in those nations have. My wife Nancy had actually put up the money to pay for the reproduction of *Sphecos* 26, and within a few weeks the incoming donations reimbursed her outlay. The money has continued to arrive in the mail and we have now built up a sizeable fund to cover the reproduction of the current issue and at least two more! Your generosity is very much appreciated and it will insure the continuance of *Sphecos*. It is very satisfying to know that the efforts of Terry Nuhn and myself are so appreciated.

Donors to the *Sphecos* reproduction fund are listed here in chronological order. Terry, Nancy and I want to thank each of you for your support. We even got \$5 from Bill Ashmead!

A.S. Menke – Editor

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hard job for me. I hope to find some taxonomists with better collections than mine, who would like to identify some of the difficult groups for me or confirm my identifications. For example, Prof K. Schmidt (Karlsruhe, Germany) is preparing a revision of the palearctic *Cerceris* and he is very happy to study my material. On the other hand, identifying groups I do not know very well might be the best way to learn much about this group. And I know there is enough for me to learn!"

Massimo Olmi (Dipartimento di Protezione delle Piante, Univ. degli Studi Tuscia, Via S. Camillo de Lellis, 01100 Viterbo, Italy) reports, "My revision of the world Embolemidae is in press."

Monica Russo (1 North Skilling, RR4, Arundel, Biddeford PO, Maine 04005) is collecting wasps from trap nests, and collecting burrowers, diggers and clay-users from open, sandy/clayey areas in Maine. She would be glad to provide specimens to anyone who asks.

Bram Willink (Instituto Miguel Lillo, Miguel Lillo 205, 4000 S. M. de Tucuman, Argentina) writes: "In June I hope to go to Buenos Aires and stay there several weeks working with Arturo Roig; we will see then if it would be possible to finish our *Pachodynerus* work this year. We are now getting to the more difficult and smaller problems related with new species, or doubtful species. We think that the American species are more or less settled, with *acuticarinatus* a synonym of *pulverulentus*, with a darker and a yellower form. *Astraeus* is a synonym of *praecox*. We may write a short paper on the status of the USA species."



HELP NEEDED

Sphecophaga records

Dr. Barry Donovan, a "Science Provider" in New Zealand and formerly of the D.S.I.R., is working on the control of very noxious vespoid wasps with a natural enemy. Dr. Donovan would appreciate distribution and host records

for *Sphecophaga* species (Hymenoptera: Ichneumonidae: Cryptinae) in North American collections. Please e-mail your responses to me and I will send the information to Dr. Donovan. Thanks.

Steven Krauth
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Namibian Wasps

In November and December of this year I plan to travel to Namibia and of course I will collect bees and wasps there. As I am not experienced with the southern African fauna, and especially since the G. ARNOLD papers are quite old, I would like to ask if there are any colleagues willing and able to determine Namibian wasps. Raymond Wahis was offered to look at the pompilids.

Michael Kuhlmann
Am Stockpiper 1
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Germany.

The Monterrey Collection - PLEASE HELP!

Some time ago I received on sub-loan a collection of Pompilidae from Prof. Stehr of the Entomology Museum, Michigan State University. The depository is known only as "Monterrey, Mexico". Some specimens bear det. labels of Dreisbach, 1958. Most specimens are labelled "Monterrey, N.L., Méx." and bear the following collectors' names: M. BERMUDEZ, José CASTILLO, P. CORDERO, Eduardo DIAZ Rubio, Wm.W. GIBSON, S. GONZALEZ, Cesar H. HINOJOSA, R. IGLESIAS, Coronado LEOPOLDO, J. MATHIEU, J.J. McKELVEY, J.S. NIEDERHAUSER, Alejandro ORTEGA, F. PACHECO M., D. PEREZ Ruiz, J.L. SEDDGNO, S. Arturo VALLE, Ricardo YEPIZ R. Can anyone tell me to whom these specimens belong, please?

Colln R. Vardy
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NEW ADDRESSES

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Robert B. Parks: 5301 N. County Road 13, Fort Collins, Colorado 80524-9446.

Robert J. Paxton: Ecological Research Station of Uppsala University, Ölands Skogsby, S-386 93 Färjestaden, Sweden (until 30 September 1994).

Virginia Scott: Museum, Henderson Building, Campus Box 218, University of Colorado at Boulder, Boulder CO 80309-0218.

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John W. Wenzel: Department of Entomology, Ohio State University, 1315 Kinnear Road, Columbus, OH 43212-1192.



as an assistant professor of entomology that same year.

He is survived by his wife, Kathleen Eickwort, of Muskegon, Mich.; a daughter, Alex, and a son, Jeffrey, both of Madison, Wisc.; another son, Robert, of Colorado; a brother, John, and his mother, both of Long Island.

from the Cornell Chronicle
July 14, 1994



George Carlos Wheeler
(1897-1991)

George C. Wheeler was a leading authority on ants. He studied under the legendary William Morton Wheeler (no relation) at Harvard University where he received his doctorate in 1921. Along with his research colleague and wife, Jenette N. Wheeler, he published numerous articles on the morphology and systematics of ant larvae, essentially establishing the field from scratch. They also published on the larvae of other social Hymenoptera, including a chapter in *The Social Insects*, edited by H. Hermann (1979) (See *Sphex* 4, p. 40, 50). When I was a graduate student I was fortunate to meet them when they decided to drop by and retrieve a loan from me while visiting the area. I got a frantic call one morning from my major professor telling me they were here and looking through my ant collection! I rushed over to the campus and had time for a short visit. I found him to be kind, gentle person that I could respect as a human being as well as a scientist.

Terry Nuhn



Katsuji Tsuneki¹
(September 12, 1908-February 2, 1994)

The world of wasp research has lost one of its giants, and Japan has lost its most prolific hymenopterist. Katsuji Tsu-

¹In the next *Sphex*, we hope to present an English translation of Dr. Tsuneki's autobiography "Recollection of my Life", published in 1987 in his *Hymenopterists Communication*, vol. 27.

neki, of Mishima, Japan, who had had health problems for some time, succumbed to a heart attack, February 2, 1994, at the age of 85. He had been revising the Japanese bee genus *Sphex*, but the work remains unfinished. Dr. Tsuneki is survived by his wife Sumiko and three sons Tetsuya, Teruo and Sei.

Katsuji Tsuneki was born in Saitama Prefecture, and his parents were Tataro and Masa Tsuneki. He attended elementary and middle school in Saitama Pref., and then went to Tokyo Higher Normal School. He taught at the Utsunomiya girls high school and Keijo high school. Tsuneki worked at the Zoological Institute of Hokkaido University from 1944 to 1952. He received a Ph.D. there in 1950. From 1952 until his retirement in 1973, Dr. Tsuneki was Professor of Zoology at Fukui University in Fukui, Japan.

In 1931-1932 he was a "general soldier", serving as a meteorological observer in the Japan Air Force. From 1937 to 1940 during the Japanese occupation of China, Tsuneki was stationed in northern China and Inner Mongolia. In his "leisure hours", he studied the behavior of ground nesting wasps. Much of this work was published in a 1942 book: "A Naturalist at the Front", Nippon Publishing Co., Osaka (in Japanese). The same year he also published "A Naturalist's year in Inner Mongolia" (in Japanese).

Dr. Tsuneki published his first paper in 1929, some biological observations on a species of *Eumenes*. His last publication apparently was a taxonomic paper on Philippine Mutillidae which constituted issue 41 of the *Special Publications of the Japan Hymenopterists Association* (May 20, 1993). Dr. Tsuneki was a prodigious worker. The total number of publications generated during his lifetime can only be approximated but it exceeds 600.

In his early years he was a student of behavior, and until the late 1940's, nearly all of his papers dealt with the biology of wasps and other insects. In 1946 he published a book in Japanese titled "The Japanese hunting wasps, their ecology and psychology", Northern Publishing Co., Sapporo. In 1948 his extensive behavioral studies of *Bembix niponica* resulted in a book titled "A Research Account of the Japanese Long Nosed Wasp, *Bembix niponica* Smith". The behavioral work carried out by Tsuneki in these early years was first

rate. As he expanded his observations he discovered that much taxonomic work had to be done before he could determine the species that he was studying. Thus he eventually began taxonomic studies of wasps, particularly Sphecidae, but also Chrysididae, Tiphiidae, Mutillidae, Scollidae, Pompilidae, Vespidae and bees. Tsuneki's work centered on the Japanese fauna initially, but he published extensively on the wasp faunas of Taiwan, the Philippines, Korea, Mongolia and southeast Asia.

Dr. Tsuneki was dedicated to Japanese natural history, and in 1957 he started a serial publication entitled *The Life Study*, which contained articles in Japanese for and by Japanese students on all sorts of subjects. In 1973, after 17 issues (or volumes), *The Life Study* came to an end. The following year Dr. Tsuneki initiated *The Hymenopterists Communication*, another Japanese language periodical. This journal was designed as a vehicle for papers by Japanese students on Dr. Tsuneki's favorite animals, wasps. Of course, he included his own research in both journals. The last issue of *The Hymenopterists Communication* appeared in 1987 and contained an autobiography of Dr. Tsuneki in Japanese.

While at Fukui University, Tsuneki started a journal titled *Etizenia*, the first issue of which appeared in 1963. *Etizenia* primarily contained taxonomic papers on wasps and was in English. When Dr. Tsuneki retired, *Etizenia* came to an end at 66 issues. Within two years he initiated another journal, the *Special Publications of the Japan Hymenopterists Association*. It appeared from 1976 to 1993 with a total of 41 issues. Most of the papers in it were authored by Tsuneki so that in essence it was his private journal. Papers were in English. During his writing career Dr. Tsuneki published in Japanese, English, German and French.

In the 1960's and 1970's Dr. Tsuneki published many papers on the behavior, biology and breeding of canaries and other birds. In 1971 the Ornithological Society of Japan gave Tsuneki an award in recognition of his ethological and psychological studies of canaries. He also published popular books on spiders and ants.

Some of the major behavior/biology papers by Tsuneki include studies of *Bembix*, *Cerceris*, *Pemphredon*, *Sphex*, and color vision in ants. He published

return home at 3 p.m., so I walked with him to the monorail station to Tokyo where we said our final farewells.

He did not attend the International Congress of Entomology in Kyoto in 1980, and I was unable to visit him. During the early '80s we corresponded frequently on research progress. I was able to assist his revisionary studies by the loan of types and other identified species, especially Oriental *Tiphia* and Philippine Trypoxylini and Larrini, and also by furnishing Xerox copies of literature not available to him. Not all of his waking hours were devoted to revisionary studies, and late in March 1983, he wrote that "spring has come to my little garden and many flowers, including hundreds of camellias, have begun to bloom."

Early in December 1984 he wrote that when his study of Japanese *Tiphia* was completed he would send in increments his collection of Japanese Hymenoptera. During the following February he asked me to send 50 cardboard shipping boxes, saying that "they will move to and from between you and me like space shuttle." During May 1985 he said that he had packed 50 boxes, and would be sending them by airmail. He also mentioned that for some years he had suffered from temporary cerebral thrombus, and that during a recent attack he had suffered a ruptured disk in the lower spine. He was receiving medical treatment, and was able to continue light work. He hired some local help to finish the packing, and get the cartons to the post office. During June and July we received the 21 cartons containing Tsuneki's generous donation.

Subsequently, he wrote of his concern about providing for his wife who was some years younger. We negotiated the purchase of his Taiwanese collection of Sphecidae, Pompilidae, Mutillidae, Scoliidæ, Tiphidae, and miscellaneous Vespoidea and Apoidea made during his two visits in 1966 and 1968. It contained some 7300 specimens, and included the extensive type series of the taxa described in his revisionary papers on those groups of wasps. He sold his large collection of Oriental Chrysididae elsewhere. His final donation to the Smithsonian in 1993 was of the holotypes of some 50 taxa of Philippine Sphecidae and Mutillidae described in several of his most recent papers.

We continued our correspondence and cooperative loans 1985 through

1992. Concerning his health as of August 1992, he wrote that he had "chronic disease of lumbar severance [disk problem ?] and cerebral arteriosclerosis" and was taking medications. He added, "... now for the daily life there is no serious hindrance and am enjoying the wasp study." Actually, he was laboring most of the time on a revision of the Japanese *Sphcodes*, the parasitic halictine bee with bright red abdomen that has such a wasplike appearance, but that study was not completed at the time of his death. The parasitic bees that resembled wasps were his only taxonomic interest among the bees, and earlier (1973) he published what amounted to a large revision of the Japanese *Nomada*.

Tsuneki's long scientific career fell into two phases. At the beginning he was particularly interested in the natural history of solitary wasps. The early technical papers, 1929-1943, were almost entirely on the nesting and other behavior. His systematic papers began in 1945 with short lists of Korean crabronines and chrysidids, but the bulk of his output through the 1940s continued to be natural history studies. His difficulties in providing identifications for the wasps whose behavior he studied led to increasing output of revisionary studies beginning with his treatment of *Pemphredon* of Japan and adjacent regions in 1952. He continued publication of occasional studies of wasp behavior, and his last in 1982 was on the nesting and cocoon construction of *Gorytes tricinctus* that lived "...generation after generation in my little garden." Beginning in 1960 he published predominantly systematic studies including a series of substantial revisions of the Taiwanese and Philippine wasp faunas.

I remember my friend Tsuneki as a generous person, a thoughtful host, and a dedicated scientist who published extensive, well illustrated taxonomic contributions on the Oriental wasp fauna, as well as notable behavioral studies of *Bembix niponica* and various species of *Sphex*.



Souvenir de Paul Maréchal (1889-1973)

par

Jean Leclercq

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Arnold Menke et d'autres amis voudraient que j'agrémenté *Sphecos* de mon histoire personnelle. Cela m'embarrasse parce que je ne vois pas bien comment éviter les excès d'égoïsme ou de modestie. Mais je sais par quoi commencer mon devoir.

Je ne serais probablement pas devenu naturaliste, surtout pas entomologiste et hyménoptériste si je n'avais pas connu Paul Maréchal comme professeur de biologie à l'Athénée Royal de Liège où je fis mes humanités classiques de 1933 à 1939.

Ces humanités, je ne l'ai jamais regretté, attribuaient une importance primordiale à l'étude du latin, du grec et d'au moins deux langues germaniques, tandis que la musique, la chimie et la biologie étaient les moins importantes des branches secondaires. Le programme officiel de la biologie comportait surtout la description et l'anatomie de types tenus pour représentatifs de la diversité des Animaux et des Végétaux. Maréchal avait un certain talent pour présenter ça mais il voulait aussi montrer que la science est affaire de gens curieux et méthodiques, même de modestes amateurs. Je fus très impressionné par la première leçon qu'il nous donna en 1934; j'avais 13 ans.

Pour Maréchal, il était essentiel qu'on commence par apprendre que *les animaux et les végétaux ont un nom scientifique et une place dans la classification, conformément à des règles Internationales dont les premiers principes ont été indiqués «par le grand savant suédois Charles Linné»*. Je l'entends encore nous dicter à peu près ceci:

«Un nom scientifique est composé nécessairement de trois noms: le genre, l'espèce et le parrain (*sic*). Le nom du genre et le nom de l'espèce doivent être en latin; le nom du genre avec une majuscule. Exemples: *Canis familiaris* Linné, *Felis domestica* Brisson. Quand un savant trouve une espèce inconnue (et il y a encore beaucoup d'espèces inconnues), il lui donne un nom qui doit être différent des autres noms d'espèces déjà donnés dans le genre en

mort au front, en mai 1940, de son premier et brillant disciple le biospéologue Robert Leruth; pendant l'Occupation, il refusa de publier mais il continua à étudier les Aculéates, discrètement. Il fut de nouveau actif dès 1945, surtout en militant pour la protection des sites exceptionnels, particulièrement riches en Orchidées et en Aculéates, qu'on trouve de part et d'autre de la frontière entre Liège et Maastricht, dans ce qu'on appelle en Belgique la Montagne Saint-Pierre, dans les Pays-Bas Sint-Pietersberg. Dans cette oeuvre, il fut secondé par son autre disciple hyménoptériste Jacques Petit, qui a continué à surveiller les Hyménoptères de ces sites du côté belge, Virgilius Lefebvre s'en occupant aussi des deux côtés de la frontière.

La vie et l'oeuvre de Maréchal ont fait l'objet d'éloges dans quatre publications dont voici la référence. Mais on n'a publié nulle part la liste de ses travaux; je suis reconnaissant à Sphecos d'accepter la partie de cette liste qui concerne particulièrement ou partiellement des Hyménoptères.

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1932. Quelques remarques sur l'oeuvre et la collection biologique de feu L. Chevalier. *Bull. Soc. Sci. Seine-et-Oise* (2) 13(6/7):85-89 (*Tachysphex*, *Pemphredon*, *Trypoxylon*...).
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1935. Notes biologiques (15-19). *Lambillionea* 35:78-79, 97-100, 123-126 (*Meqachile circumcincta*, *Coelocrabro ambiguus*, *Psammochares cinctellus*, oeufs transportés par des Sphérides...).
1935. Sur la *Melitta* (ou *Cilissa*) *budensis* Mocs. (Hym. Apidae). *Bull. & Ann. Soc. ent. Belg.* 75:197-165.
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FORUM

Subgenus vs Group of Species
(that is, "species group" sensu
Sphecos 10:11-13, 11:11-13, 26:5)
by

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I vote against the group of species and in favor of the subgenus, more-over, in favor of a number of subordinate categories between genus and species (subgenus, infragenus, section, etc.), for the following reasons:

(i) The International Code of Zoological Nomenclature (London, 1985) does not mention the group of species (also known under the name of species group, but don't confuse with the species group in sense of the Code!) under the genus group (Article 42a) or the species group (Article 45a). Indeed, the group of species is a surrogate taxon lacking its own name and using the name of its type species instead. Therefore this taxonomic category falls out of the scope of the Code which is defined as operating on the names of taxa, not the taxa themselves (most explicitly: ICZN, Preamble, p. 3; Article 1a).

(ii) Among the key elements basic to the ICZN, and of zoological nomenclature generally, the first cited is "(1) The Code refrains from infringing upon taxonomic judgment, which must not be made subject to regulation or restraint" (ICZN 1985: xiii). Therefore, if I need to have a series of nested taxa subordinate to genus to organize the system of a particular group properly, I should be free to use them.

Response to Rasnitsyn

It is not clear to me why Alex is unhappy with the species group category since he seems interested in using a variety of other infragenic categories. It is true that the Code does not address the species group (or "group of species" in Rasnitsyn's terminology) but that is because there is no need to. That is the beauty of the concept. Species groups convey information without cluttering our huge list of genus-group names. Subgenera have their place, but that taxon is often used to excess when the species group would convey just as much information.

A. S. Menke

SCIENTIFIC NOTES

**Concerning Michael Prentice's
Observations on Aculeate Wasps
in Lebanese Amber.**

by
Alexandr P. Rasnitsyn

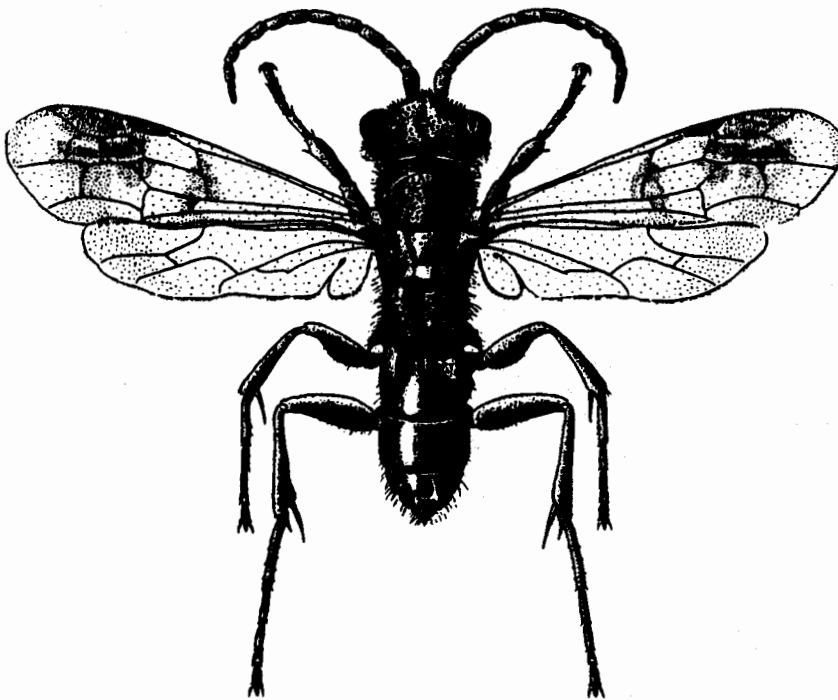
Lebanese amber Hymenoptera represent an ancient and interesting gap in the hymenopteran fossil record.

Hymenoptera have been known to occur in this amber at least since Hennig (1969) (who mentioned an ant, probably erroneously, on p. 366) and Schlee & Dietrich (1970) (who mentioned Terebrantia and Aculeata). Yet Prentice's note (Sphecos 26:8) is the first meaningful information for a quarter of century.

The report of 15 aculeates found in the amber may be comparatively many, or equally may be few. Unfortunately we are not told of the size of the total collection. This is of importance, for some fossil resins give higher percentages of Hymenoptera than others, and their distribution in these ambers is not completely chaotic (Rasnitsyn, 1980: 160, Table 5). This could also prove true for Aculeata specifically.

The composition of the fauna reported by Prentice after a cursory examination of the difficult amber material (Scolebythidae, ?Dryinidae, Bethyidae, and Sphecidae) does not contradict my expectations very much. The absence of Chrysididae is unexpected since this family is common in other known Cretaceous fossil resins. More attention might be given to the Scolebythidae, as the case of *Cretabythus Evans* indicates (despite the general and venational similarity to Scolebythidae it was found to belong elsewhere (Rasnitsyn, 1988)).

The finding of Ampulicinae in this amber is significant. The only other Lower Cretaceous Ampulicinae known are two discovered in the Aptian (middle Lower Cretaceous) of Santana Formation, Brazil. One of them is described as an ant, *Carindris bipetiolata* (Brandao a.o. 1989), another as an unnamed member of Ampulicinae(?) (Darling & Sharkey, 1990: 147). To my mind, both are closely related but distinct at least at the species level. The third Cretaceous ampulicine is *Galbosphex cretaceus* Schlüter (1978: 83) from the Lower Cenomanian (lowermost Upper Cretaceous) of NE France. These findings support the Aptian rather than Neocomian age of the fossil resin at Jezzin in Lebanon (Whalley, 1976).



Dipogon variegatus Spinola (Linnaeus), male. (Pompilidae, Europe, North Africa)

***Podium plesiosaurus* (Smith): the
Second Known Specimen
(Sphecidae)**

by
Arnold S. Menke

This wasp was described in 1873 from a single female taken at Ega (= Tefé), Brasil, and since then apparently has not been collected. I found a specimen of this elegant creature while sorting through tree fogging material collected in Peru by Terry Erwin and his associates. It is a female and agrees with notes and sketches that I made in 1972 while studying Smith's holotype (see Menke, 1974). The locality is Rio Tambopata Reserve (30km SW Puerto Maldonado), 290m, Madre de Dios, Nov., 7, 1983. This specimen is in the National Museum of Natural History, Washington DC.

Menke, A. S., 1974. A preliminary review of the *agile* group of *Podium* Fabricius (Hymenoptera: Sphecidae). J. Wash. Acad. Sci. 63:147-153.

**Further Records of
Neotropical *Pison***

by
Arnold S. Menke

Pison gnythos Menke

PERU, Madre de Dios: Rio Tambopata Res, (30 km sw Puerto Maldonado), 290m,

March 9, 1984, T. Erwin, one female.

This is the first record from Peru for this wide ranging species. The specimen is in the National Museum of Natural History.

***Larra godmani* in southern Texas**

by
Arnold S. Menke

Larra godmani Cameron is recorded from central Mexico to Argentina and Uruguay (Menke, 1992). Recently I identified some miscellaneous *Larra* for Lionel Stange, Florida State Collection of Arthropods, Gainesville, Florida. Among the material were two females of *godmani* collected in Hidalgo County, Texas by Charles Porter. These specimens represent the first US record for this species. Both were taken at the

McAllen Botanical Garden in McAllen, Texas in May 1973 and November 1983. The abdomen is completely red in these specimens and the upper interocular distance = 0.40X the lower interocular distance.

Menke, A. S., 1992. Mole cricket hunters of the genus *Larra* in the New World (Hymenoptera: Sphecidae, Larinae). J. Hym. Res. 1:175-234.

**Identification of Lee's (1986)
new species of**

***Vespula* and *Dolichovespula*
(Vespidae, Vespinae)**

by

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In 1990 Professor Lee Tiesheng lent me material of the new taxa that he described in 1986. These specimens enabled me to clarify their status (Archer 1993). Professor Lee (1993) has just published a book on the Vespidae of China and other parts of Asia, but apparently my analyses of his taxa appeared too late for inclusion in the book since no mention is made of them. I have seen holotypes of only two of Lee's species, the other material being paratypes. Thus I can only positively identify two of Lee's species. But based on the specimens examined, all of his species, with one exception, appear to be synonyms. The status of Lee's 1986 species is outlined in the list that follows.

Vespula kingdonwardi Archer, 1981

syn.: *V. hirsuta* Lee, 1986 (paratype queen seen).

V. rufa (Linnaeus, 1758)

syn.: *V. obscura* Lee, 1986 (paratype queen seen).

Dolichovespula asiatica Archer, 1981

syn.: *D. xinjiangensis* Lee, 1986, p.p. (allotype male seen).

syn.: *Vespula yichunensis* (paratype male seen). See note below speculating that this specimen may be *Vespula rufa schrenchii*

Radoszkowsky, 1861.

D. lama (du Buysson, 1903)

syn.: *D. nyalamensis* Lee, 1986 (two workers seen).

D. media (Retzius, 1783)

syn.: *D. borealis* Lee, 1986 (paratype worker seen).

D. stigma Lee, 1986 (holotype worker seen).

NEW SYNONYMY *D. sinensis*

Archer, 1987

D. sylvestris (Scopoli, 1763)

syn.: *D. xinjiangensis* Lee, 1986, p.p. (paratype worker seen).

Paravespula koreensis (Radoszkowski, 1887)

NEW SYNONYMY *Vespula*

hainanensis Lee, 1986 (holotype worker seen).

P. flaviceps (Smith, 1870)

syn.: *Vespula gafcilia* Lee, 1986 (paratype worker seen).

The only real ambiguity in the above list is the identification of the male specimen of *Vespula yichunensis* Lee. According to Lee (1986) the male of this species is unknown! The description and illustrations given by Lee (1986) do not agree with the specimen I have seen. The data on the label do not agree with that given in Lee (1986) but do agree with the label data of *D. xinjiangensis*. I suspect that there has been some misplacement of data labels. Thus I have probably not seen *V. yichunensis*. As I indicated earlier (Archer, 1990), *V. yichunensis* is probably a synonym of *V. rufa schrenchii*, but until authentic specimens are seen this view is speculative. I have raised this matter with Professor Lee, but so far I have had no reply.

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Archer, M.E., 1993. Further news on *Dolichovespula* and Lee's nine 'new' species of *Vespula* and *Dolichovespula* (Vespinae). Sphecos 24:12.

Lee, Tiesheng, 1986. Notes on the genus *Dolichovespula* from China (Hymenoptera: Vespidae). Sinozoologia 10(4):195-200.

Lee, Tiesheng, 1986. Notes on the genus *Vespula* from China (Hymenoptera: Vespidae). Sinozoologia 10(4): 201-206.

Lee, Tiesheng, 1993. The development & utilization of the hornet resources in China. Science Press, Beijing, China. 170 p.

TECHNIQUES

I have one "publishable" comment on Vardy's Chloroform Gun. I have heard about it, and even tried to use an "improved" apparatus. But the thing doesn't work very well, probably due the substitution of the chloroform by ethyl acetate when I tested it. Also, I firmly believe that the *Centris* male (see my report of my collecting trips in *Sphex* 25:16-20) and the *Podium rufipes*, for instance, would fly away in the same way if I had used the C. Gun. They are too fast for a normal human being; one could guess that they had a kind of turbine or rocket somewhere in the body. However, I have to admit that if I had tried to use chloroform instead of any other thing, it could work with creatures that are not as fast, as *Trypoxylon* or *Polistes*. But it won't work with "rocket propelled" sphecids and bees. Another problem would be the large amount of chloroform that I would have to transport during one month, in a van completely filled with all kinds of traps, vials, Berlese funnels, alcohol gallons, axes, a pick and all the stuff that one could imagine for a team composed of myrmecologists, apidologists, termitologists and aculeate hunters. Anyway, I intend to try the C. Gun again in my next collecting trip. That is, if I have more space to transport more things.

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COLLECTING REPORTS

Spring Collecting in the
California Coast Ranges
by
Arnold Monke

The focus of this trip was the Spring wasp fauna of the Coast Ranges of California, particularly the sphecid genus *Ammophila*, which is being revised by me. In early May, my wife Nancy, and I flew to San Francisco, rented a car, and

drove south to the hamlet of Parkfield in southeastern Monterey County, an isolated area accessible only by secondary roads, some of which are unpaved. We approached Parkfield from Coalunga. Driving west from Coalunga on highway 198 we reached a dirt road called the Parkfield Grade which winds its way over a mountain and down into the valley where Parkfield is located. The views along this road are pretty nifty, and spring wildflowers were in abundance, but collecting was poor. Parkfield, elevation 1500+ feet, consists of a one room schoolhouse, a small country inn, a cafe, a Santa Fe caboose converted into a store, and a few dwellings. It is situated in a valley containing Little Cholame Creek which flows southward. We stayed at the Parkfield Inn four week-day nights, and were the only guests! Peace and quiet for sure.

Parkfield calls itself the "Earthquake Capitol of the World" because the San Andreas Fault is very close by. A laser beam station has been operating there for about 10 years, monitoring shifts in the fault. We were fortunate to go on a special tour of the laser facility that is perched on a hill just south of town. The tour was given by Duane Hamann, the local school teacher, who operates the station. He has discovered that the Pacific Plate shifts back and forth. Movement is not just northward. The fault runs directly under the 60 year old road bridge just south of Parkfield, and the bridge has a very obvious bend in it due to Pacific Plate movement.

Nancy and I first collected along the edge of Ranchita Canyon road a few miles southwest of Parkfield. *Eriogonum* and other plants were in bloom attracting various Hymenoptera. At this time last year Nancy and I had noted numerous *Ammophila murrayi* here, a coastal endemic, but we had no collecting gear. This time we were prepared. We managed to take *murrayi*, *parkeri*, *karenae*, and *pruinosa*, but collecting was slow. The next day we drove up Slacks Canyon road in Bear Valley, to a spot about a mile beyond the end of the pavement, where Cholame Creek crossed the road. Bear Valley is just west of Parkfield on the other side of the ridge. Initially we collected in the ravine formed by the creek and were rewarded by collecting various wasps and bees. An acrocerid fly, *Turbopsebius diligens* (Osten Sacken) [det. Norm Woodley], was very common at isolated spots in the ravine, and

Nancy and I bagged over 100 of them. We followed the dry creekbed upstream until it more or less ended in a broad meadowy pasture the hilly edges of which were covered with much white sand. An obvious wasp site! We were soon picking up all kinds of wasps along the surface of a dirt road, among them the metallic blue *Dryudella caerulea*, and *Podalonia caerulea*. *Ammophila* were fairly plentiful and we returned to this site the next two days. Species taken here included *Ammophila murrayi*, *parkeri*, *pruinosa*, *parapolita*, *nearctica*, and *strenua*. *A. nearctica* proved to be fairly common and we captured many — the species is not common in collections. During our four days we took 111 *Ammophila*, not a large haul, but we got some fine species.

We greatly enjoyed our stay at the Parkfield Inn. It was so quiet that all you could hear were birds and the breezes in the trees. The local peacock serenaded (?) us at times, and once a herd of escaped cows came through the grounds of the Inn, providing Nancy and me with a few minutes of fun. At \$45 a night for two, the rooms are very reasonable. A continental breakfast is included. The cafe across the street provides great eats and you can play horse shoes out back if you want to. Acorn woodpeckers abound and their chatter often fills the air. We especially enjoyed the morning sun while sipping coffee on the steps of the Inn's veranda. Parkfield is a fine place to get away from it all and enjoy some pretty good collecting, fine scenery and peace and quiet.

We drove back to San Francisco and stayed two days with Woj and Veronica Pulawski. During our stay they organized a dinner get together with Michael Prentice, a grad student at the University of California, Berkeley, who is conducting a landmark cladistic analysis of Sphecidae, and his fiancé Kim Brett. This permitted the three of us to discuss various classificatory problems, and for Woj and I to learn first hand of some of the exciting findings that Michael has made so far.



color by Helmut Riemann. Vol. 2 includes several papers by specialists in which new taxa are described. Of interest to aculeate wasp workers is one on the Bethyliidae by Martin Sorg, one on Chrysididae by Walter Linsenmaier, and one on Pompilidae by Heinrich Wolf.

Of the 319 species treated, 42% are endemic, but the percentage rises to 59% when subspecies are included, bringing the total taxa for the islands to 369. Wasps (including ants) constitute nearly two thirds of the aculeate fauna, with 199 species. There are 120 species of bees.

The introductory and overview material at the beginning of the first volume is in German and Spanish which will make it accessible to a wider audience.

A. S. Menke

The Bee Genera of North and Central America (Hymenoptera: Apoidea). Charles D. Michener, Ronald J. McGinley and Bryan N. Danforth, 1994. Smithsonian Institution Press, Washington D.C. x + 209 p. \$45

This book is primarily an identification guide to the 169 genera and higher taxa of bees of North and Central America, and it achieves this in an admirable fashion. Over half of the book consists of identification keys that are presented in a two column format. The left column is in English, and the right column is in Spanish. This two-language format will make the book user friendly to a much larger audience. The keys are illustrated with high quality line drawings, shaded drawings, photographs, and scanning electron photomicrographs. These figures are scattered through the keys so that they are optimally located for the user. In the introduction users already familiar with bees are told how to streamline their use of the keys. The authors state that the keys have been reviewed and tested by various bee experts. Thus the keys should generally work well.

The introductory section includes information on how to recognize a bee, collection and preservation of specimens, importance of floral records, and terminology, the last very well illustrated.

Following the keys is a section titled "Notes on the genera". Here the user is provided with descriptive notes and distinguishing features for each family and

genus; a synopsis of the classification of each family; and citations of publications containing keys to species, generic studies, etc. For each genus the distribution is summarized, flight periods indicated, and the number of species given. Habitus photographs illustrate species of representative genera, although sometimes drawings are used.

Several appendices at the end of the book include a brief summary of changes in classification and nomenclature (some being newly inaugurated in this volume), a classification of the bees of North and Central America in a tabular format, and anticipated classificatory changes. In the last appendix, we learn that Anthophoridae should be included in Apidae.

This a fine looking, reasonably priced book and it should facilitate identification of bee genera for many people, something that here-to-fore has not been a simple matter. It should also serve as a model for others to follow when developing similar identification guides.

A. S. Menke

Identification Guide to the Ant Genera of the World. Barry Bolton, 1994. Harvard University Press, Cambridge, Massachusetts. 222 p. (Order from the Press at 79 Garden Street, Cambridge, Mass. 02138-9983; USA FAX: 800-962-4983, International FAX: 617 495 8924). List price is \$65, but the book is on special discount at \$52 until November 1, 1994.

This book provides identification keys to the 16 subfamilies and 296 genera of ants. The introduction gives the user a general overview of ants. Bolton estimates that there are about 15,000 species, only two thirds of which have been described. He provides the reader with references to general works on ants, including catalogues, and then presents an overview of classificatory problems, an outline of zoogeography and a discussion of how to properly mount ants. Finally Bolton offers helpful suggestions on how to use the keys. He points out that they are based entirely on workers, and that reproductives are too poorly known for some genera (or even unknown in some groups) to produce useful keys to them.

A diagnosis of the family Formicidae introduces the main part of the book. A

key to subfamilies follows this. The bulk of the book consists of thorough individual subfamily treatments. Each starts with a tabular list of characters, followed by keys to genera (which are by zoogeographic regions in the larger subfamilies), a synopsis of infrasubfamily classification, an accounting of geographic distribution, annotated taxonomic references, and ends with scanning electron photographs of faces and side views of the thorax and abdomen of selected genera. The photographs are quite striking and splendidly display the amazing variety of forms found in Formicidae. The 522 photographs, which are referenced throughout the keys, should enable anyone to identify ant genera. Unfortunately for the user, none of the photographs have generic name identification labels. It would have been more work to label the figures, but it would have been very beneficial.

Other features of the book include a synopsis of extinct subfamilies, references to faunistic papers by country or region, an illustrated glossary of morphological terms, and a terminal bibliography. The glossary is near the end of the book instead of the more traditional position. Terms are given in boldface with "acceptable alternatives in parentheses", however, Bolton is inconsistent. The synonymous terms Flagellum (of the antenna) and Funiculus are both listed in boldface with their counterpart in parentheses. I suppose this is a concession to common usage. Ant workers use "alitrunk" for the mesosoma (or thorax), but as ant classification seems to be based largely on wingless workers, alitrunk is something of a misnomer. Bolton could have advised, as he did for the archaic term epinotum, that the name is used only by myrmecologists. He could have also suggested, as he did under epinotum, that ant workers adopt mesosoma (or thorax), which is nearly universally used in the rest of hymenopterous morphology. These are minor items, however, and in no way diminish the landmark nature of this book. It should be on the shelf of any hymenopterist.

Harvard University Press is to be congratulated on publishing this companion volume to their earlier production, *The Ants*, by Hölldobler and Wilson. Both volumes are quite reasonably priced.

A. S. Menke

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Arpactophilus mimi Naumann,
female.
(Sphecidae,
Northern Territory,
Australia)

