George C. Eickwort, professor and chair of the Department of Entomology at Cornell, died July 11, of injuries sustained in an automobile accident earlier that day while vacationing on Jamaica. He was 54.

A specialist in the morphology, systematics and behavior of wild bees and mites, Eickwort was a member of the College of Agriculture and Life Sciences faculty since 1967 and department chairman since 1993.

He was driving from Montego Bay airport to a hotel in Ocho Rios Monday afternoon when his rental car collided with a tractor-trailer, according to the American consul there. Eickwort died Monday evening in a nearby hospital.

Associate Dean of Agriculture and Life Sciences Brain Chabot noted Eickwort’s distinguished reputation as a classroom teacher and researcher: “Students came first for George, and he always was available to visit with them and provide whatever help was needed,” Chabot said of Eickwort, whose primary teaching responsibility was the introductory course in insect biology. “As a result, his impact as a mentor and friend went well beyond the classroom. He delighted in challenging graduate students during their oral exams to describe what they knew about an insect, which he just happened to have brought with him.”

In 1986 Eickwort received the Distinguished Achievement Award in Teaching from the Entomological Society of America. Besides Cornell, Eickwort also had taught at the Rocky Mountain Biological Laboratory, University of California at Davis, University of Arizona, University of Texas and Cornell Adult University.

Eickwort had recently begun his service as department chairman, and already “was impressing everyone with the diligence and commitment he was putting into that job,” Chabot continued. “At the same time, he was providing positive leadership to bring together the large group of insect biologists at Cornell and the Boyce Thompson Institute for Plant Research. His leadership and enthusiasm in all those roles will be greatly missed.”

Eickwort’s research made him a frequent sight on campus, hovering over locations of ground-nesting bees and observing their behavior. His research centered on the systematic and
Eickwort Memorial Symposium

Greetings fellow Eickwortians, Colleagues, and Friends:

The Cornell University Biological Science Community* is hosting a memorial symposium to posthumously honor Professor George Campbell Eickwort. This two-day symposium hosts five research topics and several subtopics that reflect the research interests of George Eickwort. We encourage you to participate in this symposium by presenting a talk and a manuscript in the area that reflects your own research interest. Your manuscript will be submitted for peer review to the Journal of Insectes Sociaux, prepared by Bill Weislo, Ulrich Mueller, John Vandenberg, Janet Shellman-Reeve and Ted Schultz.

April 22, 1995 - Saturday
Evolution and systematics of wild bees and other arthropods:

Subtopics:
- a. Biogeography and natural history of wild bees
- b. Molecular phylogeny
- c. Behavioral Phylogeny

Organizers: (a) Bryan Danforth (b) Mike Engel and (c) Ted Schultz

Pulmonary biology of wild bees and other life history attributes

Organizer: John Vandenberg

April 23, 1995 -- Sunday
Morphology: The Queen of Sciences

Organizers: Rex Cocroft, Mike Engel, Nancy Jacobson, Mike McDonald, Ted Schultz

Social behavior of vertebrates and invertebrates

Subtopics:
- a. The behavioral ecology of prsosocial and eusocial species
- b. Sex ratio theory

Organizers: (a & b) Janet Shellman-Reeve and (b & c) Ulrich Mueller

Select one topic or subtopic and submit your request along with your name, talk title, short abstract, and e-mail or regular address to the section organizer, in care of Eickwort Memorial Symposium, Comstock Hall, Department of Entomology, Cornell University, Ithaca, NY 14853. State your preference for a 15 or 25 minute talk. An informal evening reception will be held on Friday, April 21.

An evening banquet will be held on Saturday, April 22, and requires a $30.00 cover charge from each guest.

Special requests: The Department of Entomology seeks to establish a memorial fund to be named in George's honor. A donation made in the name of the "Eickwort Teaching Fund", dedicated to innovations in teaching, is greatly appreciated.

* Our special thanks to the Dean and Associate Dean of Agriculture and Life Sciences, Director of Biological Sciences, Griswold Fund, Entomology, Neurobiology & Behavior, Genetics, and Ecology & Systematics, Boyce Thompson Institute, and the Cornell Experimental Station for supporting the Eickwort Memorial Symposium.

Eickwort Memorial Book

Sandy Lednor

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Brooktondale, New York 14817, USA
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1. I, like you, have spent much time recently in shock and in contemplation of what could be done as a tribute to George. I plan to compile an informal book containing friends' thoughts about George, and a few pictures. I will photocopy and spiral bind it, and give a copy to each of his children, and to anyone else who wants one.

If you are interested in participating, please write out your thoughts about George: why he was so special, or an anecdote that typifies him, a poem, a song, or whatever. It would be nice to mention who you are and how you knew George, as I'm sure his children (and other friends) do not know all his friends by name. I would like you to limit your thoughts to that format, ready to be photocopied directly into the book. You may include a photograph (print), but be sure to leave space for it within the page or pages you submit. I would prefer pictures and writing I can keep, to simplify things, but if you would like the materials returned, please write me a note to that effect.

I would like to receive input for this book by October 16 - that should give people who are impossible to reach during the
summer enough time when they return in the fall. I would also like to know if you would like a copy of the book.

If so many people submit thoughts and want copies that this venture turns out to be huge, I may ask for a couple of dollars from each person to help cover costs - but I will deal with that when I know the scope of the project.

Since George’s first love was always his children, I think he would appreciate us doing something for them. I also think those of us who miss him dearly would like to have something more personal to remember him by.

**GENERAL NEWS**

Non-Apis Guild Survey Extension

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Fifteen more responses were received to the survey and accompanying article which appeared in Melissa 7 (March, 1994):1-3. This is 41% percent of the original response. A majority of these were from outside of the USA, including Germany, France, Israel, Russia, and several other countries. Unfortunately, in keeping with the blind nature of the compilation, I did not maintain the return addresses of all the respondents, so an exact tally of nationality is not possible. Aside from the delayed nature of the responses, however, this apparent bias in nationality is an obvious feature by which to compare the responses with those tallied earlier. The discussion which follows will emphasize differences between the results of the initial survey and those of the late respondents.

Most of the late respondents are (also) researchers, although there are similar proportions of hobbyists, students, conservation consultants, teachers, retirees, commercial developers, and administrators (not mutually exclusive) compared to the initial respondents. Fewer of the late respondents concern themselves with honey bees (20% vs. 53%) and fewer consider themselves “gainfully employed” in non-Apis work (4% vs. 60%). On average, late respondents have been employed in non-Apis related work nearly twice as long (21 vs. 11 years) and have fewer students and staff working with them (average 1.6 vs. 3.5). They carry out an even greater portion of their work in spare time (42% vs. 19%) and on personal funds (35% vs. 25%). Nearly half of the late respondents cited no particular threat to their existing programs (47%) among initial survey respondents, only 18% felt no threat. Those that did feel a threat cited increased responsibilities in other areas, loss of position, and decrease or loss of funding. Five out of 13 late respondents reported nonspecific negative changes in numbers of full-time positions in their institutions during the past 5 years. Of those reporting specific figures, 4 were zero, 2 were positive and large (increases of 20 and 30 employees) and 2 were negative and large (-10 and -25). The resulting mean is +1.9 compared to a mean of -5.8 in the initial survey. As a group, the late respondents feel 44% sure that they would find a similar position if they lost their current one (cf. 21%). A somewhat greater percentage of late respondents have contributed to volunteer projects in the field (53% cf. 68%) and would be willing to volunteer in the future (93% cf. 85%). A greater proportion felt that eating more blueberry pie might help the mission of the non-Apis “guild” (21% vs. 13%).

Late correspondents seem to comprise a more stable and optimistic group relative to length of employment, prospects for future work, and hiring/firing of institutional colleagues. Their working groups appear to be smaller and they are perhaps more fanatic in terms of work done in spare time or personal funds. Despite these observations, the more recent results mostly reinforce the conclusions of my previous write-up.

I will send a copy of the complete response summary and analysis to anyone who requests one. Thanks again to all those who participated in the survey.

Mail Service to Cuba

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RARE Center for Tropical Conservation, a non-profit conservation organization based in Philadelphia, has recently started a program of scientific information exchange with Cuba. The long-term goal of the program is to develop the Caribbean region’s capacity to conduct biosystematic research and training. One of the services RARE Center is offering through this program is an express mail service to Cuba, which is designed to reduce the time (often several weeks) it takes for scientific correspondence to reach Cuba. DHL packets are sent regularly from RARE Center’s office in Philadelphia to Havana, Cuba. If you would like to use the service, correspondence should be addressed to Cuban colleagues and mailed in an envelope not exceeding eight ounces to the address listed above.

RARE Center will also receive faxes at (215) 735-3515 and include the hard copy in the DHL packets. Please include a brief note to RARE Center explaining the nature of the correspondence (e.g., scientific paper to be reviewed) so that we can document the service.

Cuban biologists may send letters addressed to US colleagues to:

Orlando Garrido, Scientific Advisor, RARE Center, Museo Nacional de Historia Natural, Capitolio Nacional, Habana, Cuba.
ASC and Cuba: A Request for Scientific Literature

Do you have scientific books or journal series that you no longer use and would like to donate for distribution to Cuba? The Association of Systematics Collections (ASC) is developing a program to exchange systematics and biodiversity information between North American institutions and Cuban institutions. Please contact the ASC office with the titles of books, journals, or reports in systematics/biodiversity (especially related to Caribbean biota) that you are willing to donate, and we will arrange to ship the materials to an appropriate institution in Cuba. For more information and to contribute contact: Elizabeth Hathaway, ASC, 730 11th Street, NW, Second Floor, Washington, D.C. 20001-4521, (202) 347-2850, fax: (202) 347-0072.

COLLECTING NEWS

On the True Meaning of "Sweat Bee" or - An Account of a Collecting Trip to Northern India

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Bees of the subgenus Eurylaxus have long been my favorite subjects for intellectual pursuit. With brood cells often arranged in a cluster in a cavity and nests rarely much more than a foot deep, they require less effort in physical pursuit than the deeper nesting Halictus or the irritatingly narrow-burrowed Dialictus. All of the common Western European species have been studied, to some extent, as have most of the Eastern North American species. In Northern India (and adjacent Pakistan) quite a few species and several species groups occur for which no "social" data are available. Consequently, I decided to spend three months of 1990 (from March to May) in India, collecting specimens, trying to make superficial observations of sociality and obtaining samples for electrophoretic studies.

To guide my choice of collecting localities I had seen the collections of Nurse made around the turn of the century and those of Dr. Suzanne Batra from the late 1960's. Some potentially interesting localities included between March and May. When I arrived it was very cold. Huddling under six thick wool blankets it took me over a half an hour to stop shivering and this was fairly soon after sunset! I had not come with clothing equipped for such cold. On the following day it was warm enough to encourage a few bees to fly but 10km of walking failed to produce any of the Eurylaxus 1 desired (indeed, the only halictids were a couple of Seladonia and Sphenodes) and the next day it snowed. So, I decided to descend to the nearest valley and went to the hot sulphur springs resort of Tatapuni.

Tatapuni, which is Hindi for "hot water" is a small place. The only potable, bottled fluids I could find were purchased from the "English wine shop", an odd name as all that they sold was whisky! The "tourist hut" where I was staying ran out of coffee after the second cup and had a choice of pea curry or potato and mushroom curry for dinner (on the third day they ran out of peat). Nonetheless, the manager was good enough to order in large quantities of soft drinks for me from a nearby larger village. This man is a strict vegetarian and devout Hindu. I wondered what he thought of me killing bees for fun and profit (well, expenses at least). He told me that it was OK to do these things as it was my job - though he pointed out that it might have long-term consequences for my karma. I stayed in Tatapuni for four days - the last day involuntarily as the bus on which I was leaving broke down. On the last day I came across a dead vulture which I surveyed for carrion bees (I guess this made me a tertiary detritivore). It was during these four days that I first started realising the true meaning of sweat bee: this was where I started regularly paying more for bottled (non-alcoholic) fluids than accommodation. One worn specimen of L. (Eurylaxus similansae) was discovered here, interesting, perhaps, that I should collect at higher altitude.

Next I moved on to Mandi and stayed at the Raj Mahal Hotel. This is a converted Rajah's palace, with superb, old furniture (I had an antique sword for a towel rack) and a bargain at the price - though the staff were somewhat surly. Here I discovered some red Dialictus from Tatapuni by the light of an antique lamp which I had to hold upside-down to throw enough light on the subjects. Surprisingly, I found the spermatheca in eight of the ten bees I cut up. Three long days of walking around Mandi produced very few bees and no Eurylaxus. Indeed, there were so few bees that I enthusiastically jumped through a thorn bush fence for a mere Bombus. Bee safely in cyamde jar I started to wipe off the blood from my arms and legs when two citizens calmly asked me what on earth I was doing.

During one of my days in Mandi I experienced the Holi festival. As the guide book says "Holi is one of the most colourful Hindu festivals". This is because everyone spends the day throwing paint over everyone else. Now a white tourist stands out in India and a 6 ft inch one stands out more than most especially when waving a bug net around. Now imagine the same conspicuous entomologist covered in paints of a wide variety of colours trying to collect unobserved in public gardens.

From Mandi it is only a few hours travel along the Beas River (appropriately pronounced bee-as) to Kulu. Here I caught two species of Eurylaxus on the first day (similansae and catiligna), but only in very small numbers and all were worn. So I went further up the Kulu valley to Naggar and stayed at the gorgeous Naggar Castle Hotel. Within the grounds of this

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...in the form of a swarm of bees carrying a slab of rock from a nearby mountain. This piece of rock forms part of the temple and its dimensions are 6ft x 8ft x 6 inches. I wonder whether a huge migrating swarm of Apis dorsata could have been the impetus for this legend. A short way further up the mountainside from the caste I caught large numbers of what appeared to be *L. (E.) marginatum* all unworn and some obviously looking for nest sites. Several hours search failed to reveal any active nests. I also found some *L. (E.) similans* here. Later that evening a thunderstorm started which lasted for 20 hours and included a reasonable amount of early morning snow. This was the beginning of a series of enormous storms which eventually resulted in the Kulu valley receiving three times the normal monthly rainfall in March - a total of over 30cm! The road was washed away in places or made impassable by mud slides. At the first available opportunity I collected a sample of sp. *marginatum* put them in a vacuum flask with two broken up popsicles and embarked upon a grueling 14 hour overnight bus journey to New Delhi.

Before I left for India I had written to some contacts at the Indian Agricultural Research Institute in New Delhi requesting some ultra-cold freezer space. This was duly provided and my colleagues there got used to having this eccentric visitor arrive early in the morning looking completely dishevelled and returned with a cold and damp-induced bronchial infection which peaked during a return walk even at the end of an exhausting day bee collecting. There then followed more rain, more snow and more storms which eventually resulted in the Kulu valley receiving three times the normal monthly rainfall in March - a total of over 30cm!

...I stayed at the edge of the lake with beautiful views all around and a spectacular display of fruit bats just after sunset. The collecting in the large public gardens around the town was quite good with several *Seladonia* species, and some nomines. It was hot and thirsty work, I drank at least 5 liters of bottled water than on food and lodging combined - the true meaning of sweat bee was becoming clearer! Here I excavated my first Indian halictine nests - those of a *Lasioglossum* species with the unusual habit of placing its cells end to end. I also played at being a real tourist for an afternoon and went to the spectacular Jain temples at Dilwara well worth the 12km return walk even at the end of an exhausting day bee collecting. I thoroughly recommend this site to anyone visiting India. I also took a brief camel ride which with my high centre of gravity was a little nerve racking.

A few days later I collected another thermos full of halictids and suffered another overnight bus journey to New Delhi. It took two weeks for the bruises on my back to disappear after this "deluxe" bus ride!

I spent most of the rest of my time in India in Mussoorie where I found reasonable numbers of *L. similans* and *marginatum* (but found no nests of either of them), excavated two nests of *Halictus* (*Seladonia*) vicinus and collected specimens of additional halictines. A gut almost kept me in bed in New Delhi for a week when I was expecting to return to the Kulu valley. The temperatures at the time were around 42°C and I had a fever associated with this ailment which peaked during a power failure which meant that the fan in my room did not work. Just as well I like warm weather.

I loved India, the people, the scenery, the culture and the heat (but not the cold and damp weather) and really hope to go back there for an extended trip some time in the future. Finding sweat bees there was much more difficult than I expected and finding nests was more difficult there than anywhere else I had ever attempted this most noble of activities. In contrast, I took a short vacation to Nova Scotia the following July and marked 300 halictine nests in two hours as opposed to finding about ten nests in India in three months! Nonetheless, there are clearly many interesting species here that are worthy of study, but perhaps next time I will try and travel by taxi and train rather than by bus and bicycle.

I will take this opportunity to express my gratitude to my colleagues at the Indian Agricultural Research Institute in New Delhi, the numerous other friendly people I met during my travels and also to Father A.W. Ebmer for identifying *Lasioglossum* (Evylaeus) similans and catilipes.
A Desert Waif on the Shores of the Gulf of Mexico

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In early October of 1991, George Eickwort, Ron McKinley and I were invited to join a Cross Expedition to the Alabama Gulf Coast coordinated by Richard Brown of the Mississippi State Entomological Museum. By that time of year, the weather is once again hospitable on the Gulf Coast, and a bloom of fall wildflowers colors the dunes. Indeed, the short stature and even spacing of the vegetation and of course sand reminds one of a desert habitat. So do some elements of the flora, such as the two species of Polygonella and various yellow coms, or the species of Peridina and hoped-for Campopila. Among the bees we did collect was a surprise, a species of Hesperapis that resembled H. carinata. All other members of this group occur far to the West, mostly in the deserts of the United States and Mexico. Roy Snelling, who has been revising the genus, believes this to be a new species.

Subsequent sampling by Linda Kervin and me reveals that this bee is restricted to a single species of Balduina (Asteraceae) which sometimes blankets the dunes with its orange-yellow flowers in late September. Although this floral host occurs inland where relicual dune areas exist, we have only seen the bee within a km or less of the coastline. Furthermore, the bee’s latitudinal range appears to be bounded by the Apalachicola River and Mobile Bay, a mere 150 km that is largely developed with tourism with only sporadic waterfront under federal or state protection. Perhaps for this reason, the U.S. Fish and Wildlife Service has renewed modest support for research with this bee because of its rarity and the threatened habitats in which it flies.

The northern Gulf Coast, as well as some of the interior dune areas of the Florida peninsula, host other plant and animal species that represent taxa that are otherwise distributed in the western deserts of North America. To my knowledge, however, these affinities have never been formally summarized in a biogeographical study.

Hunting for a Glacial Relict Sweat Bee in Arizona and Utah

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In August 1992 I went to Arizona and Utah with a range of objectives – i) to collect Lasioglossum (Dialictus) boreale from the extreme south of its range, ii) to try and find Mexalic­ tus arizonensis and perhaps even to find its nest, iii) to attend the International Workshop on non-Apis bees, sponsored by the U.S.D.S. at Logan, Utah, August 10-13 and iv) to spend some time with George Eickwort who was on sabbatical at the University of Arizona, Tucson.

I had seen some L. boreale from Arizona among the collections made by Lubomir Masner in 1990. With my terrible memory I could not recall the precise locality from whence the specimens came, but did remember that Mount Lemmon was one of the localities he had sampled. So, on August 1st, George and I went to Mt. Lemmon in search of boreale and Mexalic­ tus – the latter definitely having been collected there in 1917. We collected in Marshall Gulch, near the settlement of Summerhaven at 7,500 ft and then at the summit at 9,150 ft. Neither of our desired species was found despite almost perfect weather.

The next day we went to Miller Canyon in the Huachuca mountains. The longest series of M. arizonensis had been collected here on the 7th of August 1974 at altitudes between 6,700 and 7,000 ft. Most of the mountain ranges we collected in during the week had roads going practically to the summit – just the kind of montane collecting conditions I like. Miller Can­ on was different – we actually had to walk a long way up this one and this was very thirsty work. Various Lasioglossum s.str. and Dialictus were collected on the way up and there was some confusion in our minds as to whether L (D) rai­ donensis, the largest and darkest of the latter, was Mexalic­ tus – even with a pocket magnifying lens it is difficult to tell whether the apical wing veins were weak or strong! Back on the way down I saw a Lasioglossum s. str. and took a swipe at it. When I looked into my net I found two males that were ob­ viously Mexalic­ tus along with the Lasioglossum. These two specimens of Mexalic­ tus were the only ones collected that day.

August the 3rd had been set aside for the intellectually exact­ ing task of Dialictus nest digging. Because of the heat, we started at an uncivilized early hour. George, Axel Munoz and I began excavating separate nests soon upon arrival at the site – just adjacent to the University of Arizona ranch. These Dialic­ tus (an undescribed and probably undescribable species) were small, even for this taxon of insignificant small bees. We had to dig down several feet before any brood cells could be lo­ cated. After over two hours of digging in the intense heat a loud whooshing sound was heard, one of us, who will remain nameless, had struck water. A plastic irrigation pipe had been breached by our digging activities and soon a large puddle formed. This attracted large numbers of aculeates and several
Polistes duties discharged, George returned, one nest excavation was surface to imbibe. George drove off to try to locate the owners of the water pipe to inform them of the accident. Meanwhile, Axel and I filed in the hole, carried on excavating the remaining two nests with occasional breaks from the physical exertion to collect insects in the immediate vicinity. I was quite pleased to get reasonable numbers of the Palo Verde bug completed (the other lost) and we beat a hasty retreat. Axhel and I filled in the hole, carried on excavating to the rock - OK, I know these are common - but not in Canada! Ethical duties discharged, George returned, one nest excavation was completed (the other lost) and we beat a hasty retreat.

The following day the three of us aimed for the highest point in southern Arizona - the Graham Mountains, some three hours drive away and necessitating another early start. As soon as we got up below 9,000 ft it was clear that we were in a Rocky mountain type habitat, quite different from the peak of Mt. Lemon. We stopped at the Shannon campground at around 10,000 ft. It was cool with only intermittent sunshine. Nonetheless, the first bee caught was an Evylaeus and of just the right habitat for boreale. Over the next hour a large sample of this species was collected, comprising females of both the overwintering and the overwintered generations and larger numbers of males. The weather deteriorated and attempts at collecting additional samples at high altitude elsewhere along the Graham Mountain range were not successful. Driving down the mountain we soon got out of the inclement weather. Upon my insistence we stopped to enable me to photograph a rattlesnake that was crossing the road. At this point the brakes on our rental car overheated. While waiting for them to cool down I caught a spectacular looking Callosopsis male with facilitate wings, bright red markings on the abdomen, bright yellow legs and patches of white pubescence, a truly beautiful creature which George had not seen before. My enthusiasm as to the possibility of this being a new species was somewhat dampened when, upon describing its appearance to Mich at the Logan conference, I was informed that he had described it over 20 years earlier - I should have guessed! On the way back to Tucson we drove into a sand storm at Wilcox, for me this was quite a new experience.

On the 5th I set off for Madera Canyon in the Santa Rita mountains in another search for Metallicus. Lobo had caught one male here from the "Bog Springs Trail". From the nearest parking area it was a stiff hike up to this locality, but it was worth it as immediately behind the sign announcing "Bog Springs" at 6,600 ft, I found one male Metallicus. Several more hours searching both here and further up at Kent Springs failed to reveal any more specimens. This was not altogether surprising as it was raining gently most of the time. The weather got worse as I descended the mountain and for much of the walk back it seemed as if I was dodging thunderbolts - quite scary.

On the 6th of August I headed southwest, deeper into the desert and collected along the Ajo Way. The August rains were somewhat late and there were not many flowers but I was rewarded with a nice series of Protocentrus linguitalis and a photograph of a road sign announcing that a certain stretch of the Ajo Way was cleared of garbage care of the "American Atheists Association, Tucson Chapter".

The next few days were spent driving north to Logan. The scenery was spectacular, especially the painted desert. And, unlike in the moister climates I am used to, there were no trees to block the views. We spent some time wandering around "Brian Head", near Cedar Breaks National Monument in southern Utah, which despite the altitude of 1,350 ft failed to produce any L. boreale and ecologically it certainly did not look right for the species.

After the conference I spent some time driving around Utah observing the scenery and collecting bees. Lasioglossum boreale was found in reasonably large numbers at high altitude in the Uinta range and Lasioglossum (Evylaeus) comagenensis (maybe these bees are niger, maybe the two are conspecific - our studies currently in progress should tell us the answer to this) was found sympatrically. Both species were located predominantly in the area - those flowerheads of which were formed as a result of inclement weather - it was cold and cloudy most of the time.

Biogeographically, the arid southwest seems fascinating. Metallicus arizonensis is certainly an odd bee to find in what is predominantly a desert region as it seems to be restricted to damp, cool forested areas. Several of the Lasioglossum s. str. species are also restricted to cooler areas at higher elevation whereas others such as Lasioglossum appear to be ubiquitous. Detailed genetic studies comparing population structures of the isolated montane species with those of other more general occurrence would seem potentially very interesting. This is an area I certainly expect to visit again in the near future.

My thanks to George Eckworth for his generous help in organizing this field trip, to Axel Meseau for help in the field and to the personnel of the Logan Bee Lab for a wonderful workshop which I hope will be repeated in the near future.

RESEARCH NEWS

Bee Research in Mexico

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Mexico has one of the richest bee faunas in the world. About 1600 species have been described and 153 genera and 8 families are represented in its territory (1). Mexico is also the second exporter and the fourth producer of honey in the world (2). On the other hand, the cultivation of stingless bees is a very ancient activity in several regions of the country (1). Bees, then, are very important to this country in many aspects. However, surprisingly very few Mexican researchers and/or institutions are currently carrying out projects dealing with basic or applied aspects of bee biology. I will try to summarize those permanent projects of which I have information:

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The Programa Cooperativo sobre la Apiflora Mexicana (PCAM) is probably the research project best known to Melissa readers. Five expeditions have been completed (the most recent to Baja California) and reports of the first four have appeared in Melissa (3,4,5,6). The Mexican scientist directly involved with this project is also well known to many of the readers of Melissa. He is Dr. Ricardo Ayala, who works with the Universidad Nacional Autonoma de Mexico, at the Estacion de Biologia Chamela (Jalisco). Ricardo is the only Mexican taxonomist studying Apoidea. His Master's thesis was a revision of stingless bees of Mexico (7) and his Ph.D. Dissertation was a revision of Centridini (Anthophoridae), at the nogen specific level (9).

The Universidad Autonoma de Yucatan (UADY) is a State University and has a Veterinary School where most of the bee research has been done in the past. This is in a common situation in Mexico, where many Vet Schools take over Beekeeping courses and, when a research program dealing with bees is established, these schools carry it out. UADY just opened a Master of Science program on Management and Conservation of Tropical Natural Resources (10). This program comprises a section on Tropical Beekeeping, which trains the student to manage African Honey Bees and is also an introduction to meliponiculture. Research lines related to Apoidea include: (a) Development of technology to use native stingless bees, (b) Management and uses of honey bees in the tropics, and (c) Arthropods of economic importance in the Peninsula of Yucatan. Dr. Carlos Echarzarena is the person in charge of the program. Carlos worked with Dr. Robert Paxton on the reproductive biology of Apis drones. Another person working at UADY is Jorge Gonzalez A., who has cultivated stingless bees for many years and participated for a short time in a project from the U. of California (Riverside) one of whose goals was to establish a sustainable system of stingless bee's exploitation. Jorge, with more three people, organized a local association of Meliponiculturists and published a Bulletin called U'T AN YIK'EL KAB (Mayan for "a window into the native bees world") of which 6 issues appeared between January 1991 and October 1992.

2. USDA-Foreign Agricultural Service. 1991. World Honey Production Atlas. USDA. 1987 a cooperative program between SARH and USDA was started and several American universities participated doing research in different places in Mexico. The cooperative program ended in 1990. After that, the PCMAA has organized, together with the National Beekeepers Association (UNAPI), National Beekeepers' Seminars, which serve as a forum where most of the national research is presented. In 1994 the eighth seminar will be held in San Luis Potosi.

3. US Department of Agriculture. In 1984 a presidential decree declared the problem of Africanization of public interest and a national program for the control of African Bees (Programa Nacional para el Control de las Abejas Africanas; PNCAA) was established. In the initial phase the program dealt with setting up a bait hive network to capture and kill swarms. A few research projects were carried out in association with this program. In 1987 a cooperative program between SARH and USDA was started and several American universities participated doing research in different places in Mexico. The cooperative program ended in 1990. After that, the PCMAA has organized, together with the National Beekeepers Association (UNAPI), National Beekeepers' Seminars, which serve as a forum where most of the national research is presented. In 1994 the eighth seminar will be held in San Luis Potosi.

3. The Centro de Investigaciones Ecologicas del Sureste (CIES) is a federal institution that has been working since 1974. In 1986 the CIES started research on Apoidea of the Sonomusco region (Chiapas). Between 1986 and 1991 the scientist in charge was Ignacio Cuadriello A., a biologist trained in Mexico. During this time I surveyed the species of Bombus in the State of Puebla, and for next year I am preparing to carry out a study on diversity, abundance and seasonality of bees in the Valley of Tehuacan, a desertic area in the eastern part of the State of Puebla. I have been also collecting Apoidea in other localities in Puebla. I am in the process of identifying the specimens to the generic level and will need help with the specific determinations. I expect this information to be useful for people wanting to do research with bees in Mexico or just visiting. People needing more information on the subject can contact me at the address that appears below my name.

References:

4. The Programa Cooperativo sobre la Apiflora Mexicana (PCAM) is probably the research project best known to Melissa readers. Five expeditions have been completed (the most recent to Baja California) and reports of the first four have appeared in Melissa (3,4,5,6). The Mexican scientist directly involved with this project is also well known to many of the readers of Melissa. He is Dr. Ricardo Ayala, who works with the Universidad Nacional Autonoma de Mexico, at the Estacion de Biologia Chamela (Jalisco). Ricardo is the only Mexican taxonomist studying Apoidea. His Master's thesis was a revision of stingless bees of Mexico (7) and his Ph.D. Dissertation was a revision of Centridini (Anthophoridae), at the nogen specific level (9).

2. The Universidad Autonoma de Yucatan (UADY) is a State University and has a Veterinary School where most of the bee research has been done in the past. This is a common situation in Mexico, where many Vet Schools take over Beekeeping courses and, when a research program dealing with bees is established, these schools carry it out. UADY just opened a Master of Science program on Management and Conservation of Tropical Natural Resources (10). This program comprises a section on Tropical Beekeeping, which trains the student to manage African Honey Bees and is also an introduction to meliponiculture. Research lines related to Apoidea include: (a) Development of technology to use native stingless bees, (b) Management and uses of honey bees in the tropics, and (c) Arthropods of economic importance in the Peninsula of Yucatan. Dr. Carlos Echarzarena is the person in charge of the program. Carlos worked with Dr. Robert Paxton on the reproductive biology of Apis drones. Another person working at UADY is Jorge Gonzalez A., who has cultivated stingless bees for many years and participated for a short time in a project from the U. of California (Riverside) one of whose goals was to establish a sustainable system of stingless bee's exploitation. Jorge, with more three people, organized a local association of Meliponiculturists and published a Bulletin called U'T AN YIK'EL KAB (Mayan for "a window into the native bees world") of which 6 issues appeared between January 1991 and October 1992.

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References:

8
Native Bees in Seventeenth Century Latin America

Charles D. Michener
Snow Entomological Museum
University of Kansas
Lawrence, Kansas 66045-2119, USA

Dr. Christopher K. Starr of the University of the West Indies in Trinidad has called my attention to a book by Samuel Purchas (1657) that summarizes the information then available on bees in the American tropics. Since it was not cited by Schwarz (1948) who reviewed a vast amount of material on the biology of meliponine bees and the history of our knowledge of them, I call attention to Purchas' summary here. It is available in the Library of Congress, Washington D.C.

This old book tells much of what was known in 1657 about the European honey bee, its biology, life history and anatomy (without illustrations) and about bee keeping, based partly on the author's observations and experience, with "meditations and observations, theological, and moral, upon the nature of bees," and with numerous marginal references indicating the sources of items outside the author's experience. "Political flying-insects" of the book title means social flying insects, principally bees and wasps. There are chapters on wild (solitary) bees (two pages), wasps, hornets, humble-bees, grasshoppers (because some of them fly in swarms) and finally, Chapter 32 on American bees (pp. 203-207). The last concerns only tropical America and meliponine bees, except for comparative comments on European ("Spanish" or "English," depending on the source) bees, or simply "bees," meaning Apis mellifera. At one point European bees are said to have been formerly rare in the "ladies," but now in many places, common. Thus Apis had presumably been introduced, but no details as to where or when are provided. There is no mention of bees north of Mexico.

Bees are reported to be absent from Hispaniola, in contrast to the many kinds on the mainland. This situation is well known today, although another report, clearly an error, is of stingless bees the size of flies being common on Hispaniola.

Comments by various writers concern bees in such places as the following: Tucumán (Argentina), "Assumption in the River Plate" (Asunción, Paraguay), Brazil, Province of Guayaquil "not far from Quito" (Ecuador), "Cartagena" (= Cartagena, Colombia), "Isla of Cumaná" (Venezuela), and the "Island of Cozumel" (Yucatán, Mexico). Other localities on the River Plate (Plata), in Peru, and not far from Quito (Ecuador) are also mentioned.

The accounts by travelers are repetitious, brief, sometimes careless. They repeatedly reported on bees without stings, mostly the size of flies although some kinds were the size of gnats, or much smaller than flies, while others were larger than flies or even than European honey bees. Honey combs were reported with cells four times as large as those of European bees, even though bees were small; these were the storage pots of meliponines. Combs were reported in tree trunks, in branches (teens of dirt, presumably exposed nests), in roots near trees, in the ground, etc. Honey is reported from these sources, sometimes white, but often black; in some cases it "candies not, but is always liquid like oil." A few tubular nest entrances are described.

Nearly all references can be attributed to Trigona in the broad sense of Schwarz (1945). At some localities several kinds were recognized. Larger bees that must have been Melipona were among many kinds in Brazil. The mention of stinging bees probably is a reference to wasps of the genus Brachygastera or possibly to Oxytrigona, meliponine bees that bite venom into the skin.

That some species do not limit their feeding to floral resources was clearly known for a Brazilian species. "They come in multitudes to the fire, ... where they eat whatsoever flies or even gnats, or much smaller than flies, while others were larger than flies or even than European honey bees. Honey combs were reported with cells four times as large as those of European bees, even though bees were small; these were the storage pots of meliponines. Combs were reported in tree trunks, in branches (teens of dirt, presumably exposed nests), in roots near trees, in the ground, etc. Honey is reported from these sources, sometimes white, but often black; in some cases it "candies not, but is always liquid like oil." A few tubular nest entrances are described.

There is no clear mention of maintenance of bee colonies or of any significant use of bees or bee products by native peoples. However, in writing of Cozumel, "which is near the coast of Yucatán," Purchas says "there are many Hives of Bees like those of Spain, but less, and much bony, and wax ... ." Probably this refers to Melipona colonies maintained by the Mayas.

References:
Bombus hyperboreus Schönher in Labrador

Robert S. Jacobson
Department of Pathology & Lab Med
ECU School of Medicine
Greenville, NC 27858, USA

While sorting through some undetermined Bombus at the Field Museum of Natural History (Chicago, IL), I discovered a female of the parasitic bumble bee Bombus hyperboreus Schönher in Nain, Labrador on the Anwałak Bay by A. C. Weed as part of the Rawson-MacMillan Expedition. To the best of my knowledge this species has not been recorded from the mainland of eastern North America, as Milliron (1973) showed no localities south of Greenland and Hafflin Island while Laverty and Harder (1988) don’t include it in their list of species from eastern Canada. However, both publications include the host species Bombus polaris Curtis from Labrador, and a male in the series shares the same locality and date (10 August 1927), along with several other species.

Bombus hyperboreus is unusual in that, from what is known of its biology, in North America it produces no workers, and it and its host B. polaris inhabit virtually any ice-free land in the high arctic region. Its biology resembles that of Psechrurus, a genus of obligatory inquilines that likewise produce no workers but are morphologically distinct from Bombus.

It is hoped others will watch for additional records of B. hyperboreus, especially from northern Quebec and around the Hudson Bay.

Literature cited:

Biogeography and Phylogenetics of Evylaeus (Halictidaceae)

John S. Taylor
Department of Biology
York University, 4700 Keele Street, North York, Ontario, CANADA, M3J 1P3

My Masters project included a biogeographical study of Lasiolemma (Evylaeus) boreale (family: Halictidae) and phylogenetic studies of the subgenus Evylaeus. The following is a brief description of these projects and a summary of my summer 92 collecting trips.

L. (E.) boreale was described by Svensson et al. (1977) from material collected in Abisko (northern Sweden), Mt. Taianetu, (Sapporo, Japan) and has since been reported from Inuvik (Northwest Territories, Canada) (Sakagami and Toda 1986), Mt. Washington (New Hampshire, USA) and to Inuvik to collect L. (E.) boreale. This fall I have been compiling specimens from Inuvik, Mt. Washington, the Uinta mountains (Utah, U.S.A.), and the Graham Mountains (Arizona, U.S.A.) biochemically using protein electrophoresis. The specimens from Utah and Arizona were collected by Dr. Laurence’s trip to Utah (Laurence’s trip to Utah and Arizona elsewhere in this newsletter). Lasiolemma(E.) boreale probably followed the retreating Wisconsin ice sheet as it moved northwards around 15,000 years ago. If the montane populations were sequentially isolated as the ice sheets retreated, then the Inuvik and Arizona populations are likely to show the greatest level of differentiation. In 1993 I hope to be able to obtain specimens from Japan and Sweden as well as samples from the rockies between Yak and Utah.

For the phylogenetic component of my thesis, I propose to add five North American Evylaeus species to a phylogeny of Old World Evylaeus (Packer 1991). The resulting phylogeny will be used in a study of the evolution of social behaviour in Evylaeus.

Mt. Washington (6,288 feet above sea level) is the highest mountain in the Presidential Range which extends in a south-southwest direction from Graham, New Hampshire. Approximately 7.5 square miles of continuous tundra exists in the Presidential Range in an area which includes the top of Mt. Washington. During a visit in June I caught several female Evylaeus in the "alpine garden" (approximately 5000 feet above sea level). Interestingly, or not, the highest wind speed ever recorded (231 mph) was recorded on the summit of Mt. Washington.

In July I drove to Yukon (six days on the road). At two sites in the vicinity of Whitehorse (Mt. McIntyre and Pilot Mountain) I caught several more female Evylaeus. On July 26 I captured approximately 50 male sweat bees near Dawson City (approximately 7 km up the Dempster highway) which I later identified as L. (E.) comagenense and L. (E.) boreale. In the town of Inuvik (approximately 750 km up the Dempster highway and three days north of Whitehorse) I found male L. (E.) boreale flying around, and walking on, a long yellow steel road barrier (meanwhile, Laurence was collecting the same species in southern Arizona). In four days I collected over 100 specimens. This road barrier was only mo­

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Richard extended Bedford van which cost $1,100!

Many thanks to a Northern Scientific Training Grant, the Science Institute of the Northwest Territories, Yukon Tourism (Heritage Branch), the Yukon Department of Renewable Resources, the Arctic Institute of North America, the Kluane National Park Reserve, Heidi Grant, Julie and Sylvia Frich, Dr. Richard Ring and Dr. Andrew Pullin.

* L. (E.) boreale may be conspecific with L. dasiphorae which was described from high altitudes in New Mexico and California by Cockrell in 1901.

References:


Schrottky Type’s Mystery: Any Clues?

Fernando A. Silveira
Snow Entomological Museum
Snow Hall
The University of Kansas
Lawrence, KS 66045 - USA
beeman@ukanvm.bitnet or beeman@ukanvm.cc.ukans.edu

The types of the species described by him while he was working in São Paulo are, for the most part, in the collection of the Museu de Zoologia da Universidade de São Paulo. I found some specimens of Exomalopsis identified by him among the bees of the Museu de La Plata, and insects collected by him are said to be at the Instituto Oswaldo Cruz, in Rio de Janeiro. Holotypes of Exomalopsis subgenysis, E. elephanotopsis minor and E. spirangensis are at São Paulo; the types of E. hiberna, E. melochiae, E. paraguayensis, E. rufipes and E. vernoniae, however, are lost. There are specimens identified by Schrottky of E. hiberna, E. elephanotopis and E. vernoniae, from or from near their type localities, that are good potential neotypes. However, there is some information suggesting that types of Schrottky may still be recovered.

It is interesting that, although Townes & Townes (1966) and Grisell (1979) have cited an obituary, published in 1958 by Sachtleben, none of them commented explicitly on an important piece of information given there: according to Sachtleben, the remaining bees of Schrottky’s collection were acquired by someone called Hans Jacob, who lived in Hohenau, near Con­cepción, Paraguay.

Recently, I heard that part of Schrottky’s collection has been kept in a Paraguayan bank and that it was recently transferred to a Panamanian University or Museum.

It is extremely important that the collection maintained by Schrottky in Paraguay is found and studied, if any part of it still exists. I am, thus, trying to find people in that country who could give me any clue about it. Any information leading to such a person or to Schrottky’s collection will be most welcomed.

Bibliography:


COLLECTION NEWS

Renovation Nearly Completed at the UMMZ

Mark O’Brien
University of Michigan Museum of Zoology
mbobrien@umich.edu

After over a year of moving, demolition, construction, and renovation work, the Insect Division is almost back to a nor­mal state. The Insect and Herpetology Divisions have been un­dergoing the phased renovation since March of 1993, and although there are still some rooms that have to be finished, those renovations are minor in comparison to what we’ve en­dured for over 14 months.

Our new alcohol range was completed in January, and we moved in over 70,000 vials and jars into the new space. That room has a nice work area, and a 6 ft. fume hood for large-vol­ume work.

We moved back into our largest range in early May, and we were able to move all of the insect cases back in within 5 days. Of course, due to the nature of the move, none of the cases are in their original order, so we’ll have to move nearly all of the drawers - luckily all of them are numbered sequentially within each order, so it won’t be such a formidable task. The new
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range has a full-length work area with about 6 workstations, lots of lighting, and will be an inviting place for us and for visitors to the collection to work.

The old alcohol range has been turned into a pinned range, and will house the Odonata, Neuropteroids, Hemiptera, and minor orders, as well as our Odonata library. That room also features a very nice work space, and I expect that we'll be finished moving into there by the middle of June.

Barry O'Connor, one of our curators, should be moving back into his renovated space by mid-June, and will welcome the move from his cramped quarters in the insect "live room". That room will have some minor renovations that will provide a better work area for graduate students and researchers. Other rooms will also have minor renovation work, and they ought to be done by July 1.

The National Science Foundation funded our collections enhancement grant, and we'll be putting in new insect cabinets and thousands of new drawers this summer and fall. The University is wiring the entire museum for ethernet, and every one of our ranges and offices will have ethernet connections. The College is providing new computers and networked printers, so we'll be in good shape this fall. A large Novell Netware server will be provided for the museums, but I expect that in the beginning, the Insect Division will be using an AppleShare server until we need to migrate specific services to the Netware server.

It's been quite a year - and there have been many physical changes in the Insect Division. We are open for business - and we welcome your loan requests, searches, and visits. We have extensive holdings of Coleoptera, Diptera, Odonata (3000+ species), Orthoptera, Acari, and substantial holdings of Hymenoptera, Hemiptera, Neuroptera, Arachnida, and Lepidoptera.

For more information via email: mfobrien@umich.edu; phone: 313-747-2199; fax: 313-763-4080.

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Dr. Fred Stehr and his band of merry entomologists have done much in the past several years to begin reorganizing the collection. Loans are again being sent out. Before I left (in January to start work as the Collection Manager at University of Colorado in Boulder) I did a "fast and dirty" inventory of the Hymenoptera in MSU's Insect Collection. Basically, I counted the number of Cornell drawers of each group, dividing them into two categories: determined and undetermined. It should be noted that most drawers of undetermined material are packed to the point of near explosion. Drawers of determined material aren't quite that full. A table of the bees follows.

---

### Michigan State Bee Collection (Cornell Drawers)

<table>
<thead>
<tr>
<th>Family</th>
<th>Determined</th>
<th>Undetermined</th>
</tr>
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<tr>
<td>COLLETIDAE</td>
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<tr>
<td>other genera</td>
<td>&lt;1 drawer</td>
<td>each</td>
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<tr>
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<tr>
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<td>Nomineae</td>
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<td>Halictinae</td>
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<tr>
<td>MELITTIDAE</td>
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<td>.5</td>
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<tr>
<td>MEGACHILIDAE</td>
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<tr>
<td>Lithurginae</td>
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<tr>
<td>Megachilinae</td>
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</tr>
<tr>
<td>Anthidini</td>
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<td>0</td>
</tr>
<tr>
<td>other genera</td>
<td>&lt;1 drawer</td>
<td>each</td>
</tr>
</tbody>
</table>

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Michigan State University's Insect Collection

Virginia Scott
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scottv@spot.colorado.edu

The Insect Collection at Michigan State University contains several million specimens. There's some history I'm not going into here, but Dr. Roland Fischer did a lot to increase the holdings of the collection. We all know there was a period of time when specimens were all but impossible to get on loan from MSU. Whether this was due to a lack of funding or idiosyncrasies is no longer important. What is important at this time, is to let researchers who are unfamiliar with this collection know what is at MSU.
Michigan State Bee Collection (cont.)

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<tr>
<td>Nomadini</td>
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<tr>
<td>Ceratiniinae</td>
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</tr>
<tr>
<td>Xylocopini</td>
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<td>Bombinidae</td>
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</tr>
<tr>
<td>Meliponinae</td>
<td></td>
<td>2.5</td>
</tr>
</tbody>
</table>

MSU is the Land Grant Institution in Michigan, and of course Michigan insects represent a good part of their holdings. However, there is a surprisingly large amount of material from the Western US, Mexico, Central and South America (Chile especially). Other parts of the world are represented much more irregularly, but it’s still worth asking about.

Unfortunately, after two moves, some of the bees were found to be a bit disorganized a few years ago ("Anthophoridae" and Halictidae). Most of my time was spent returning bees Fischer had on loan from other institutions in order to make room in the cabinets for MSU’s bees. As a result, much of MSU’s material still needs work. The collection is fabulous, but needs some heavy duty grunt work, particularly in the Apidae. Anyone willing to sift through some extra material in order to locate specimens for their research will be duly rewarded (just ask Fernando Silveira at the University of Kansas).

Loan requests can be directed to Dr. Fred Stehr, Department of Entomology, 243 Natural Science Bldg., Michigan State University, East Lansing, Michigan, 48824-1115.

Evans’ Old Field Bee Data Available

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We have recently completed transferring Francis Evans’ records of the bee fauna of the E.S. George Reserve, from his notebooks to a computer database. These records span 40 years (1949-1990) of ecological research by Francis C. Evans at an old field (known as Evans’ Old Field, or EOF) on the E.S. George Reserve, a square-mile preserve and research area in southeastern Michigan (Livingston Co.), owned by the University of Michigan and administered by the Museum of Zoology.

The database, in FileMaker Pro format, contains 4,059 records for 180 species of Apoidea. It provides the bee taxa, flower records, sex of bee, date of collection, type of activity, and other relevant information. All of the material has been checked or verified by specialists, and is housed in the UMMZ Insect Division.

This database has many potential uses - pollination studies, ecological relationships, fandmic surveys; and it may be the only long-term study of its kind. We will eventually provide the data via the Internet, and will be accessible as a Gopher or WorldWideWeb database. For now, users may request searches or copies of the datafiles (specify FM Pro, .dbf, SYLK, or tabbed text file) via email (mfobrien@umich.edu).

A goal is to eventually catalog all of the insect fauna of the E.S. George Reserve, and the bee list from the EOF area certainly gives us a start on such a project.

KANU Announces E-mail Access to Kansas Plant Database

Meredith A. Lane and R. L. McGregor
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mlane@kubh.cr.ukans.edu

The Kansas Plant Database, produced jointly by the R. L. McGregor Herbarium and the Kansas Biological Survey at the University of Kansas, contains 111,000 records of herbarium label data of vascular plants in Kansas. Vouchers of these specimens are housed at the R. L. McGregor Herbarium (KANU). The KPD will be available for interactive access in the future, but in the interim, queries may be directed via E-mail to ANU@KUHUB.CC.UKANS.EDU.

Additional information about the database (fields, table structure, etc.) can be obtained by sending request for such information to ANU@KUHUB.CC.UKANS.EDU.

Please include in your e-mail query the following: Your e-mail address, your institutional street address, a brief explanation of the use of which the information obtained from the Kansas Plant Database will be put, a statement that you will

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properly attribute your data source in any publication that might result from your work, and your query. The R. L. McGregor Herbarium and the Kansas Biological Survey are committed to the ideal of scientific openness as long as endangered species or other sensitive taxa are in no way compromised.

During this initial stage of implementation, there may be a 24-hour to several-day delay between the submission of a query and the return of data because we are conducting quality control on a query-by-query basis as a check of our system. The Kansas Plant Database comprises seven linked tables, maintained in a DOS environment using Paradox for Windows (Boyard) as the database management system. Queries are performed using the query-by-example features of Paradox. Examples of regularly asked questions are: What is the distribution of a particular taxon within Kansas? How many taxa have been collected in a particular Kansas county? Which taxa have been reported in county A but not county B? What species were collected by a given collector during a given period? Etc.

Query replies will be returned as ASCII files via E-mail to your specified address, or as Paradox for Windows version 1.0 reports on disk, or as hard copy. Data returns are free of charge, except in the case of exceptionally large query results, in which case there may be a small handling fee.

CURRENT PROJECTS

Barry J. Donovan, Donovan Scientific Insect Research, Canterbury Agriculture and Science Centre, Gerald Street, Lincoln, Private Bag 4704, Christchurch, NEW ZEALAND {Donovanvb@crop.cri.nz}.

"In mid 1992 Government-funded bodies that undertook scientific research in New Zealand were disestablished, and most staff were re-organised into ten Crown Research Institutes. The former Department of Scientific and Industrial Research, the Technical branch of the Ministry of Agriculture and Fisheries, and the Forest Research Institute were disbanded, along with some smaller organisations, and most biological researchers were assigned to the Forest, Horticultural, Agricultural, Crop and Food, and Landcare, Crown Research Institutes. These Institutes are commercial companies, the shares of which are owned by the Government, representing the Crown (in the Monarchy). Each Institute has a Board appointed by our Minister of Science and Minister of Finance, which, in turn, is responsible for choosing a Chief Executive, who, in his/her turn, hires the staff. As the names suggest, the CRIs are each aligned to a major agricultural or horticultural sector of the economy, or to the natural environment. The Department of Conservation remains intact.

The bulk of the funding for the Institutes is obtained from the Government-funded Foundation for Research, Science and Technology, through a competitive bidding process, but income can be earned from any source through normal commercial practices. Although the Institutes are owned by the Government, they are independent entities whose primary objective is to be commercially successful (ie pay big dividends to the Government).

What were the consequences of this revolution for researchers? Most of course transferred to the new Institutes, but many did not. Entomologists suffered particularly badly, as their fields of research were split among the CRIs, with many scientists and technicians being made redundant or taking "early enhanced retirement". My colleagues Ron Macfarlane who worked on bumble bees, Dan Pearson who had studied honey bee pollination of clovers in mountain pastures, and An­stey Ferguson who researched on kiwifruit pollination, all lost their jobs. I survived for four months in the Landcare CRI on the basis of my biological control of warsps research, but then was made redundant "because of a lack of funds".

So, I at once wrote up two bids to the Foundation, one for further work on warps control, and another for the continuation of my revision of the native bees of New Zealand. Most fortunately for me I was lucky enough to win both bids, and what is more, both were funded for three years. I am now working as what is called here a sole trader, an independent worker. I hire office and laboratory space and all services from the Crop and Food CRI here on the Lincoln campus of the Canterbury Agriculture and Science Centre, where everything is available to me as long as I pay! I am free to undertake any research I like (the best type is of course that which I am both interested in, and which people are willing to pay me for). My bid for the native bee revision is for one-third of my time per year, and at the moment (June) I am approaching the end of my first 12 months. To date 13 species revisions have been completed, including species descriptions, flower visiting records, notes on biology including nests sites, inked drawings of genitalia, and distribution maps. The native bees, of which there are about 35 species, will be completed in another two years, but I plan to bid for further funding to include the introduced bees, of which there are eight species that have been purposely introduced, and a couple which are adventive. If all goes well, the revision of the Apoidea of New Zealand will be printed in about 1998 as part of the fauna of New Zealand series which is produced by Landcare Research.

A number of other researchers in different fields are now operating in this way. In turn it is turning out that the changes we have gone through have not been all bad by any means. For the first time in my life I am my own boss, of which some of the greatest benefits are that I now attend only those meetings that are of direct relevance to me, and I can choose to follow any research path I like. The revolution in the way that science research is organised in New Zealand is being followed with much interest by bureaucrats in some other countries. Good luck!

D. Elskowitch, Department of Botany, George S. Wise Faculty of Life Sciences, Tel Aviv University, University Campus, Ramat Aviv, Tel Aviv 69978, ISRAEL. -- CURRENT PROJECT: (with Amir Michael, Tel Aviv University) Pollination ecology of Wild Almonds (Amigdalus communis) in Israel. HELP: Will need any additional information on localities...
of Wild Almonds throughout the Mediterranean region, their blooming period, pollinators, etc. Every way of collaboration will be welcomed.

Michael Engel, Department of Entomology, 3126 Constock Hall, Cornell University, Ithaca, New York 14853, USA (e-mail: me18@cornell.edu).—CURRENT PROJECTS: I am working on a molecular phylogeny of the Augochlorini as part of my dissertation research. I am also working on a combined molecular and morphological analysis of the Augochlora complex. HELP: I can use any specimens of Augochlorine genera in 90-95% ethanol for DNA analysis. Especially specimens of the more uncommon genera from Brazil, Argentina, or Chile.

Julio Antonio Genaro, Curator of Hymenoptera, Museo Nacion de Historia Natural, Academia de Ciencias, Capitulio Nacional, Ciudad de la Habana, C.P. 10200, CUBA.—CURRENT PROJECTS: Thanks to the RARE Center for Tropical Conservation I had the opportunity to visit in May and June of 1994, some U.S. Museums, i.e., Academy of Natural Sciences of Philadelphia, AMNH, MCZ, USNM, American Entomological Institute and the Florida Department of Agriculture & Consumer Services (Gainesville). I was comparing Cuban specimens with other neotropical species and I am finishing revisions of Cuban Coelioxys (with two new species of the subgenus Borracoelioxys and Cyrtocoelioxys), Chalcidomina and Epeolinit (with two new species). I am indebted to Drs. Ron McGinley, Jerome Rosen, Jr., Arnold Menke and Karl Krombein for their advice and hospitality during my visit. I also thank the RARE’s staff — John Guarroncia, Jennifer Niese and Christine Piconcels for their generous kindness.

Noel Pabalan, Department of Biology, York University, 4700 Keele Street, North York, Ontario M3J 1P3, CANADA.—CURRENT PROJECTS: 1) Comparative morphology and histology of the ovaries and spermathecae of halictid and megachild bees. 2) An investigation of the factors affecting ovarian development and resorption in halictid females.

COMMENTS: These studies form the beginning of my Ph.D. research under the joint supervision of Drs. Ken Davey and Laurence Packere at York University.

Catherine Reed, Entomology Dept. 219 Hudson Hall, University of Minnesota, St. Paul Minnesota 55108. Phone: 612-624-3423. E-mail: creed@d.umn.edu.—CURRENT PROJECTS AND HELP: I am doing a major study on the effects of prairie burning and other management techniques on insects, at the request of prairie managers. I’d appreciate any studies, or even impressions, on the impact of burning, grazing and mowing on bees. Also, I’ll be making a list of insects which are prairie obligates. Both studies will emphasize the northern great plains. I’m still thinking about the relationships between plant and bee species richness, and would like to be in touch with others who are studying this.

John Taylor, Department of Biology, York University, 4700 Keele Street, North York, Ontario M3J 1P3, CANADA.—CURRENT PROJECTS: 1) An electrophoretic analysis of population structure and biogeography of the glacial relic species Lasioglossum (Evylaeus) boreale (see accompanying collection notes by myself and Laurence Packere). 2) An electrophoretic study of the phylogenetic relationships among some North American and European Evylaeus species. HELP: My main study species is holarctic and is found in subarctic tundra and alpine montane localities. I have samples from Churchill, Manitoba; Inuvik, NWT; Yakso, the Uinta Mountains, Utah; the Graham Mountains, Arizona and Mount Washington, New Hampshire. I badly need additional specimens of Evylaeus from high altitude in the Rocky mountains or at high latitudes from Norway across to Sibeia and across Northern North America. Anyone who may be able to collect samples for me can be provided with a liquid nitrogen container by contacting me at Dept. Biology, York University, 4700 Keele St., N.York, ONT. M3J 1P3, CANADA. I can cover shipping charges and, perhaps, some contribution to travel costs if discussed sufficiently in advance.

María Fernanda Trucoo Aleman, Museo Argentino de Ci. Naturales, "Bernardino Rivadavia", Av. Angel Gallardo 470, 1405 Buenos Aires, ARGENTINA.—CURRENT PROJECT: revision of the collad genus Brachyglossula (Paracoleitini). The project is in the stage of species sorting and preparation of illustrations. I am planning to complete the study with a key and a cladistic analysis of the group. I am working under the direction of Dr. Arturo Roig Alhira. HELP: need any additional Brachyglossula specimens for inclusion in my work.

Bill Welcsh.—NEW ADDRESS: Smithsonian Tropical Research Institute, Uni 0948, APO AA 3402-0948 USA; or, STRI, Apartado 2072, Balboa, Republic of Panama. NEW FAX NUMBER: (507) 32-5978. NEW E-MAIL ADDRESS: srew123@svim.siu.edu. CURRENT PROJECTS: My most current project involves moving to Panama, where I will start a new job as a staff scientist in animal behavior at STRI. I plan to focus on halictid bees (although I will take advantage of especially interesting opportunities to work on less noble creatures). My general goal is to study the relationship between behavioral flexibility, especially learning, and evolutionary diversification. Other CURRENT PROJECTS are not too different from a previous issue of MELISSA, since several of those are still in progress. HELP NEEDED: Bryan Danforth (Entomology, Cornell University) and I are preparing an invited review for the Annual Review of Entomology on the evolutionary ecology of solitary bees. If anyone wants to send reprints of recent papers, it would be greatly appreciated, and YOUR important studies would not be overlooked!
MELISSA

ELECTRONIC MAIL NEWS

Bee Worker E-Mail Addresses
Compiled by Ron McGinley
Department of Entomology
National Museum of Natural History
Smithsonian Institution, NHB-105
Washington, D.C. 20560, USA

This list was compiled with input and help from Rob Brooks, Sydney Cameron, Jo Cardale, Howell Daly, Bryan Danforth, George Eckworth, Laraine Ficken, Abraham Hefetz, Glynn Maynard, Beth Norden, Chris Plowright, Virginia Scott, Edward Southwick, Kevin Strickler, Vince Tepedino, Robbin Thorp, Bill Weislo, and Paul Williams. Many thanks to all for helping to pull this together. Please look over for corrections and please send in any additions you might come across. Updates will be included in future issues of MELISSA. Upon request I can send updates as an ASCII text file via e-mail. Thanks again.

Agren, Lennart: iargen @semax51
Alexander, Byron: byron @kuhub.cc.ubc.ca
Arnbruster, Scott: FFWSA@aurora.alaska.edu
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Ayasse, Manfred: V.BANSCHBACH
Bambara, Stephen: sbambara @ent.ncsu.edu
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Bishop, Jon: FJAB@aurora.alaska.edu
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Daly, Howard: hwdaly @nature.berkeley.edu
Danforth, Bryan: bndl @cornell.edu
Day, Liz: lday @glon.phy.affl.edu
De Jong, David: genebee @sol.fmp.usp.br

Dibble, Alison: 10711993@MAINE.maine.edu
Diniz, Nilza: nmdiniz @fox.cce.ubc.ca
Dobson, Heidi: Dobsonhe @whitman [problem?Ron McG]
Donovan, Barry: DonovanB @crop.ccri.nz
Drumon, Patrice: pdrumon @brup.amsp.br
Dyer, Fred: f.dyer @msu.edu
Else, George: gelse @nhm.ac.uk
Engel, Michael: me18 @cornell.edu
Fairey, Daphne: FAIREYD @abersb1.agr.ca
Ficken, Laraine: L.Ficken @nhm.ac.uk
Frohlich, Don: Frohlich @ccit.arizona.edu
Garofalo, Carlo: pdrumon @brup.amsp.br
Gates, John: JOATES @galaxy.gov.bc.ca
Giblin-Davis, Robin: rmg @gov.ifas.ufl.edu
Griswold, Terry: andrena @cc.usu.edu
Hefetz, Abraham: hefetz @ccsg.tau.ac.il
Hopper, David: dhopper @zoogute.zoo.hawaii.edu
Hunt, Jim: C4926 @UMSLVMA.UMSL.EDU
Inouye, David: d5 @email.umd.edu
Kapyla, Markku: kapyla @tukki.yu.fi
Kevan, Peter: pkevan @uoguelph.ca
Kinsley, Lynn: BOHART @UCDAVIS.edu
Kippskotov, Vadim: vk @sociasm.spb.su
Kokuh, Penny: bk @selway.umt.edu
Kunze, Jan: jkunze @fub66.zedat-feu.berlin.de
LalBerge, Wallace: winberge @den1.lis.gu.uiuc.edu
Lepore, Antonio: antoletta @ssup1.sissp.it
MacKenzie, Kenna: k.mackenzie@nserke.ca
McInnes, Lynn: Lynn @cornell.edu
Messor, Radoslav: messel @auctor.esaraf.ru
Messer, Adam: dpmsn @usaid.gov
Michener, Charles: byron @kuhub.cc.ubc.ca

[Via Byron Alexander]

Mincleker, Bob: minclke @ag.uburn.edu
MorWa, Robin: romol1434@mailarts.uz-TU-Berlin.DE
Mueller, Uwe: um11 @cornell.edu
Munoz, Axhel: honeybee @ccit.arizona.edu
Netz, Jack: bocke755@ups.informino [problem?--Ron McG]
Nelt, Fernando: fennoll @fox.cce.ubc.ca
Norden, Beth: mnhen011 @sivm.si.edu
Nasr, Medhat: MNSAR @evbhort.uoguelph.ca
POLPAL-L: A Pollination Bulletin Board

Peter Kevan
Department of Environmental Biology
University of Guelph
Guelph, Ontario N1G 2W1, CANADA

POLPAL-L is an electronic bulletin board for scientists and others interested in Pollination Biology, Palynology, and Plant Breeding Systems. It is intended to provide a forum for the exchange of information, news, and views of interest to subscribers. The bulletin board has been in operation for over a year and has subscribers worldwide. Exchanges to date have ranged from recipes for pollen germination, through palaeopalynology, floral biology and plant breeding systems, to concerns about the biophysics and meteorology of allergenic pollen and spore dispersal in the atmosphere.

To join, send a message to LISTSERV@UOGUELPH.CA with the text SUBSCRIBE POLPAL-L YOUR REAL NAME and you will automatically be enrolled. To post a message, the address is POLPAL-L@UOGUELPH.CA

Material for Bibliography on Bumblebee Rearing

Chris Plowright
[From The Bumblebee List, 3 August 1994 - via the University of Ottawa; bombus@csi.uottawa.ca]

The Bombus List is being inundated with requests from people who want to join because they wish to learn how to rear bumblebees. This was not my main objective when I started the list, and although I appreciate that Internet lists have a "mind of their own" (which doesn't necessarily have any detectable relationship to the original intentions of the people who started them), I am anxious not to let the Bombus List grow too large (I forecast to our system administrator that the list will reach 500 subscribers).
Tips for E-mail Beginners

Alan Cady
Department of Zoology
Miami University-Middletown
Middletown, Ohio 45042, USA
ACADY@miavx3 mid.mousio.edu

Electronic Mail (= E-Mail) is becoming a primary means of communication in science, industry, and business. For those reluctant to enter the world of E-mail, take heart... most systems are setup to make using E-mail fairly straightforward.

The tips here are NOT designed to instruct you on the use of E-Mail; just to acquaint you with finding help and getting started.

Most colleges and universities are connected to BITNET or INTERNET, which are two of many possible ways to access the "Net". Some users have private accounts with commercial network services (e.g. COMPUSERVE, PRODIGY). Any of these interfaces usually allow connection with practically any one else using the same network services; NetNews, Government access, and a myriad of "bulletin boards" (BBBS).

Each user on a service has an "address" which consists of a "nodename" followed by an "address". There is usually an "at" sign (= @) between the nodename and address. Thus, ACADY@MIAVX3 would read "A CADY AT MI Ami VaX3. This is the standard syntax for a Bitnet address. Internet addresses are usually longer. For example, the above Bitnet address - this will help you locate colleagues.

ACADY@MIAVX3.MID.MUHIO.UED. Unfortunately, there is no consistent way to translate addresses from one network to another. This depends on naming conventions adopted by system operators at each local site. However, the final name of an Internet address tends to identify the institution (EDU, GOV, COM, ORG).

The best way to get going with E-mail is to contact your local system operator. Ask if you are connected to any of these major networks. You may have to install a special network circuit board and software into your personal computer. Also ask for explicit instructions on how to access the various networks.

Once you get into "MAIL" on your system, the "Help" files there are available to help with specific commands.

Good luck with getting started! Give yourself time to learn how to use the system. Remember how fast and direct E-mail is, and how this tool opens a whole new world. Do not be afraid to ask other "wannabees" for assistance. Enjoy!

MELISSA MAILING LIST

Compiled by Ron McGinley
Smithsonian Institution

The MELISSA mailing list as of 23 August 1994 is presented below - this will help bee workers locate colleagues. While most individuals listed are bee specialists many are not. This is a dBASE file and a subset (554) of a much larger Directory (approximately 9,000 records). Most fields are self-explanatory but the following points should be noted. As an example, the entry for McGinley:

McGinley, Ronald J. - Department of Entomology, HBB mail stop 105, Smithsonian Institution, Washington, DC, 20560, USA. TEL: 202-357-2834. FAX: 202-786-2894. EMAIL: mhen0110@sivm.si.edu ORDER: HYM. INTERESTS: systematics. MAILINGS: SIR#5 Mel IaCoHym. Sph RJM 03/22/94.

The only "INTEREST" descriptor used is "systematics" - this because we anticipate sending out a detailed questionnaire for taxonomy types in the entire Directory. "MAILINGS" are simply the group mailing list codes for MELissa, SPH, IcoHym, etc. The final two fields indicate that McGinley (RJM) validated this record on March 22. If there is no evidence of validation this will appear as "? ?".

The MELISSA mailing list is probably the fastest way to improve the data-
base. Please send updates to McGinley (preferably via e-mail at mcshendd11@svim.siu.edu). Many thanks.

Directors/Curators - Central Bee Research and Training Institute, Haidt and Village Industries Commission, 1133 Guawinshik Road, Pune, 410 016, INDIA. TEL: MAILINGS: Mel IMU //.

Director/Curator - Instituto de Entomologia Agraria, Universidad de los Andes, Via Amelia 165/A, Bari, 70126, ITALY. TEL: MAILINGS: Mel IMU //.

Director/Curator - Bibliotheca der Nederlanden Entomologie, Vereeniging Plantage Middenlaan 84, Amsterdam, 1018 DH, NETHERLANDS. TEL: MAILINGS: Mel IMU //.

Director/Curator - BLOSS, U.K., Garforth House, 54 Micklegate, York, North Yorkshire, YO1 1LF, UK. TEL: MAILINGS: Mel IMU //.

Director/Curator - Royal Entomological Society of London, 41 Queen's Gate, London, SW7 5HU, UNITED KINGDOM. TEL: MAILINGS: Mel IMU //.

Director/Curator - American Entomological Institute, 3005 SW Sixth Avenue, Gainesville, FL, USA. TEL: (904) 377-6458. EMAIL: Viren @ USSFC MAILINGS: Mel IMU //.

Director/Curator - California Academy of Sciences, Golden Gate Park, San Francisco, CA, 94118, USA. TEL: MAILINGS: Mel IMU //.

Abbott, John C. - 1030 Dallas Drive #623, Denton, TX, 76205, USA. TEL: INTERESTS: systematics. MAILINGS: Mel ICNews MIU 04/94.

Abrahamovich, Alberto H. - Division Entomologia, Museo de La Plata (UNLP), Paseo del Bosque s/n, La Plata, Buenos Aires, 1900, ARGENTINA. TEL: 21-880-21-8217 en 9096-3-1925 inter. 55. INTERESTS: systematics. MAILINGS: Mel IMU //.

Achterberg, Kees van - Rijksmuseum van Natuurlijke Historie, Postbus 9517, 2300 RA Leiden, THE NETHERLANDS. TEL: MAILINGS: Mel IMU //.

Aguilar, Joao B. V. - Departamento de Ecologia Geral, Instituto de Biociencias, USP, 05.508, Sao Paulo, SP, BRAZIL. TEL: MAILINGS: Mel IMU //.


Alekseev, John - Department of Zoology, Arizona State University, Tempe, AZ, 85287, USA. TEL: 602-965-7304. MAILINGS: Mel TSU RWC //.


Allen, Mark F. - Entomology Department, Rothamsted Experimental Station, Harpenden, Hertfordshire, AL5 2QG, UK. TEL: 05827-63133. MAILINGS: Mel IMU //.

Amezcua, Maria C. - Department of Zoology, IBEMA - UNESP, Rubiões Junior, Bonete, SP, 18600, BRAZIL. TEL: MAILINGS: Mel RM 12/1691.


Antón, Bonnie B. - Department of Biology, Angelo State University, San Angelo, TX, 76909, USA. TEL: 915-942-2189. INTERESTS: systematics. MAILINGS: Mel IMU 12/16/91.

Anderson, Deni L. - ISIR, Entomology Division, Mt. Albert Research Centre, Private Bag, Auckland, NEW ZEALAND. TEL: 90-803-660. MAILINGS: Mel RM 12/16/91.


Argueso, Daniel A. - Zoological Museum, University of Chile, Riquelme 200, SANTIAGO, CHILE. TEL: 21-885-3-1925 inter. 55. INTERESTS: systematics. MAILINGS: Mel IMU //.

Armbruster, W. Scott - Department of Biology and Wildlife, and Institute of Arctic Biology, University of Alaska, Fairbanks, AK, 99775-0100, USA. TEL: (907) 474-7416. EMAIL: FPW5A@aurora.alaska.edu ORDER: DIPT. MAILINGS: Mel ICNews IMU //.

Asonio de la Sierra, Enrique - Jefe del Servicio de Investigacion Agraria, Apartado 172, San Antonio de los Banos, CUBA. TEL: 2815. INTERESTS: systematics. MAILINGS: Mel ICNews IMU //.

Asensio Barriga, Ricardo - Estacion de Biologia Chamela, UNAM, Avenida de la Plata (UNLP), Paseo del Bosque s/n, La Plata, Buenos Aires, 1900, ARGENTINA. TEL: 21-885-3-1925 inter. 55. INTERESTS: systematics. MAILINGS: Mel ICNews IMU //.

Auyanet, Mark - Department of Zoology, Rothamsted Experimental Station, Harpenden, Hertfordshire, AL5 2QG, UK. TEL: 05827-63133. MAILINGS: Mel IMU //.

Avery, Mark J. - Entomology Department, Rothamsted Experimental Station, Harpenden, Hertfordshire, AL5 2QG, UK. TEL: 05827-63133. MAILINGS: Mel IMU //.

Ball, Brenda V. - Entomology Department, Rothamsted Experimental Station, Harpenden, Hertfordshire, AL5 2QG, UK. TEL: 05827-63133. MAILINGS: Mel IMU //.

Bambara, Stephen B. - Department of Entomology, North Carolina State University, Raleigh, NC, 27695, USA. TEL: 919-737-3140.
Sammataro, Diana - 7011 Spieth Road, Medina, OH, 44256, USA.

Sampson, Blair J. - Department of Entomology, 301 Funchess Hall, Saure, Christoph - Gitschiner Str. 90, D-1000 Berlin 61, Germany.

Sazima, Marlies - Dept. Botanica.lnst. Biologia, Universidade Schemske, Douglas W. - Department of Biology, The University of Scholten, Fred - Koninklyk Instituut voor de Tropen, Museum Department, Mauritskade 63, Amsterdam, 1092 AD, Netherlands.


Schweizer, Michael P. - School of Biological Sciences, Flanders University, OPO Box 2100, Adelaide, SA, 5001, Australia. TEL: 61-8-201-2280. FAX: 81-307-201. EMAIL: Steve@sex.flin-dencers.edu.au MAILINGS: Mel RJM 06/09/94.


Scott, Cynthia D. - Department of Environmental Biology, University of Guelph, Guelph, Ontario, N1G 2W1, Canada. TEL: 519-824-4120 MAILINGS: Mel IMU /.


Seger, Tor - Department of Entomology, University of Utah, Salt Lake City, UT, 84112, USA. TEL: 801-581-4785 801-328-4613. FAX: 801-581-4666. EMAIL:tger@ bugnet.berkeley.edu ORDER: HYM. MAILINGS: Mel ICNews IntSocHym. Sph RJM 06/29/94.

Scher, Cynthia D. - Department of Environmental Biology, University of Utah, Salt Lake City, UT, 84112, USA. TEL: 801-581-4785 801-328-4613. FAX: 801-581-4666. EMAIL:tger@ bugnet.berkeley.edu ORDER: HYM. MAILINGS: Mel ICNews IntSocHym. Sph RJM 06/29/94.

Schmitz, Michael - Ruckertstr. 12, Hannover, 30169, Germany.


Sheppard, Walter S. - Department of Entomology, BARC-East Bldg. 476, Beltsville, MD, 20705, USA. TEL: 301-504-8570. MAILINGS: Mel IMU /.

Shimanski, Hartmut - Unl-IA-RKS, Beneficial Insect Laboratory, Building 476, BARC-East, Beltsville, MD, 20705, USA. TEL: 301-344-2205. EMAIL:HSIMANUKI@ARs.usda.gov MAILINGS: Mel IMU /.

Shimanuki, Hacbiro - USDA-ARS, Beneficial Insects Laboratory, 28, D 7400 Tubingen 1, Germany. TEL: ORDER: HYM. MAILINGS: Mel ICNews IntSocHym. Sph RJM 06/09/92.

Shanks, Sandra C. - 1381 31st Ave, San Francisco, CA, 94122, USA. TEL: EMAIL:sladybug@well.ca.co ORDER: HYM. INTERESTS: systematic. MAILINGS: Mel ICNews IntSocHym. Sph RJM 05/20/94.

Shanks, Thomas Dyer - Section of Neurobiology and Behavior, University of Kansas, Lawrence, KS, 66045, USA. TEL: 913-864-1011. ORDER: HYM. MAILINGS: Mel ICNews IntSocHym. RJM 05/20/94.

Sheppard, Walter S. - Department of Entomology, BARC-East Bldg. 476, Beltsville, MD, 20705, USA. TEL: 301-504-8570. MAILINGS: Mel IMU /.

Shanks, Sandra C. - 1381 31st Ave, San Francisco, CA, 94122, USA. TEL: EMAIL:sladybug@well.ca.co ORDER: HYM. INTERESTS: systematic. MAILINGS: Mel ICNews IntSocHym. Sph RJM 05/20/94.

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MELISSA

Williamson, Kristina R. - EPO Biology, University of Colorado, Boulder, CO, 80309-0334, USA. TEL: 303-492-7687. MAILINGS: Mel IMU / /

Williamson, Norrie H. - Department of Natural Sciences, Florida State University, Tallahassee, FL, 32305, USA. TEL: 904-392-1721. MAILINGS: Mel IMU / /

Williams, Paul H. - Department of Entomology, The Natural History Museum, Cromwell Road, London SW7 5BD, ENGLAND. TEL: EMAIL: TEL: ORDER: HYM. INTERESTS: systematics. MAILINGS: SIBreg Mel IMU RM 06/25/94.


Winston, Martin L. - Department of Biological Sciences, Simon Fraser University, Burnaby, BC, V5A 1S6, CANADA. TEL: 604-291-4459, 291-4475. EMAIL: winston@sfu.ca ORDER: HYM. MAILINGS: Mel IMU / /


Woodward, David R. - Apairy Section, Department of Agriculture, GPO Box 1671, Adelaide, South Australia 5001, AUSTRALIA. TEL: ORDER: HYM. MAILINGS: Mel IMU / /


Yamane, Seiki - Dept of Biology, Faculty of Science, Kagoshima University, Kagoshima, 890, JAPAN. TEL: 0992-54-7141 ext 4371. ORDER: HYM. INTERESTS: systematics. MAILINGS: Mel IntSocHym. Sph RWC / /.

Yanega, Douglas A. - Snow Entomological Museum, Department of Entomology, University of Kansas, Lawrence, KS, 66045, USA. TEL: 913-744-2032. EMAIL: kuento@kuhub.cc.ukans.edu ORDER: HYM. INTERESTS: systematics. MAILINGS: SIRreg Mel ICNews IntSocHym. RJM 04/29/94.

Zavortink, Thomas J. - Department of Biology, University of Malaya, Kuala Lumpur, 59100, MALAYSIA. TEL: 03-7555466. INTERESTS: systematics. MAILINGS: Mel IMU / /.

Zimmerman, Michael - Department of Biology, Oberlin College, Oberlin, OH, 44074, USA. TEL: 216-773-8517. MAILINGS: Mel IMU / /

Zucchi, Ronaldo - Fac. de Filosofia Ciencias e Letras, Dept de Biologia (USP), 14100 Ribeirao Preto, Sao Paulo, SP, BRASIL. TEL: 016-634-52-05 R44. EMAIL: padronume@braspamp.br ORDER: HYM. MAILINGS: Mel Spb RWC / /.

Zucchi, Ronaldo - Departamento de Biologia, Faculdade de Filosofia, Ciencias e Letras (USP), Campus da USP, Ribeirao Preto, Sao Paulo, 14100, BRAZIL. TEL: ORDER: HYM. MAILINGS: Mel IMU / /.

MELISSA COMMUNICATIONS

Please send communications for distribution to Ron McGinley at the address listed on the masthead of this issue. Documents sent via e-mail are greatly appreciated because they can be easily downloaded to WordPerfect and ultimately transferred to Ventura. That number is mnhen011@sivm.si.edu.

Among other items, MELISSA-9 will include corrections/additions to the Bee Directory presented in this issue as well as the usual Recent Literature section.

Please help MELISSA stay alive by sending in your informal bee news.

No. 8 - AUGUST 1994
New Bee Discussion Group?

Ron McGinley
Smithsonian Institution

On 30 August 1994, I sent the following message about the possibility of setting up a new bee discussion group to 40 colleagues. Twenty positive responses were received and five came in on the negative side (I think three of the negatives didn't understand that MELISSA hardcopy would be continued as well). After looking over my original message and the preliminary responses presented below, send in your vote to <mnhn011@svim.si.edu>.

Fellow bee workers: With each distribution of MELISSA I am continually asked about the possibility of putting it up on the Internet. I have been hesitant because there already are bee discussion groups on the Net - while these are excellent resources, they focus primarily on Apis and Bombus. DO YOU THINK HAVING A "NON-APIS" DISCUSSION GROUP WOULD BE WORTHWHILE? I would continue to produce the MELISSA hardcopy, but the discussion group could deal with items in a more timely fashion - plus, it would provide some fodder for hardcopy distribution. I personally envision this as a low activity mailing group, best used for quick questions/answers, e.g., "Does anyone know where Dr. X has moved to?" - does anyone have specimens of X?" I would love to be able to send out a message saying "MELISSA hardcopy is going out next month, forward contributions as soon as possible." PLEASE LET ME KNOW YOUR OPINION ON THIS. With enough interest I will ask our computer people to form a mailing group. Thanks!

Positives:

I like this idea of a non-Apis (mostly) discussion group very much. This would be a much speedier way of fostering communication amongst melittologists around the world. Most people are getting online these days. The only bee discussion group I participate in is Plovright's on Bombus. That one is too narrow to suit my eclectic bee/pollination tastes ... Form a "real bee" mailing group!! Who knows, in a few years it could grow into something really cool like a client on the World Wide Web!!! Now, that would bee exciting. Thanks for e-mailing me with these exciting prospects.

It is my opinion that an e-mail bulletin board devoted to bees other than Apis and Bombus would be the greatest thing since sliced bread and the scoop. I do subscribe to the Bombus list, primarily for the pollination information. As an inflammatory suggestion, why not call the bulletin board REALBEES, analogous to the REAL CHEESE logo that the American Dairymen's Assoc. uses? Ho, what furor that action might wreak!

You know what I'll always say about such things - SIGN ME UP! I don't think that there's necessarily a lot of evidence that people share an awful lot on these newsgroups regarding their work, but in terms of asking for help with questions, location of specimens, and so forth, it would be nice to have someplace where a LOT of bee folks would see it at one time. Myself, I see no reason not to include SPHECOS-oriented folks into the fold, to increase the size of the user base (and bees, after all, are Sphecoids). I've noticed that the utility of a group tends to increase with a broader definition, but only up to a point. In this case, the general interests of wasp workers are not likely to generate a lot of stuff bee folks would be annoyed by, and vice-versa, whereas that might not be the case if this were the social insect group, the pollination group, or the Bombus group. Most of the traffic is likely to be regarding behavior, systematics, and so forth, so the users differ primarily in taxa of interest, not topics of interest. What you should give some more serious consideration to is a WWW site, which could serve as MELISSA archives, and a repository for other such things, like the Hymenopteran Catalog, the PCAM Database, and other large-scale resources. Now THAT would be a real step forward. It's only a matter of time before someone does it, the Smithsonian is a logical choice. Think about it.

If you send it over internet, there are some of us who can make our own hardcopy if you want to save some mailing expenses (although graphics won't transfer easily to all subscribers. Why not call it "the Pollen Bee" discussion group? Suzanne Baras and I have been suggesting that term since the Non-Apis meetings in Logan, since non-Apis defines the vast majority of bees in negative terms. Pollen bee focuses on the pollination role of bees, and on their need for pollen to reproduce, and while honeybees also pollinate and collect pollen, they have been selected to collect much more nectar than other bees. The term was originally suggested by James Thomson at the Logan meeting. (Admittedly, not everyone liked the term. Vince Tepedino suggested several alternatives to me: gentle bees, free bees, busy bees, pizzazz bees, glory bees ...). I think that Suzanne has a paper in one of the honeybee journals suggesting the term. There have been several times this past summer when I would have liked to contact a number of pollen bee people at once to brain storm about studies of M. rotundata behavior, or to ask about bee IDs, but there was no easy vehicle for doing so.

Yes I think an internet non-Apis bee discussion group would be nice. I currently do not subscribe to Polpal or Bombus because there's too much "uninteresting" stuff I'd have to wade through. And, face it, if you subscribe to enough lists you end up spending your entire day at the computer - mostly hitting the delete button. I can see occasionally using it to ask informal questions that I want a quick response to. But PLEASE don't get rid of the hardcopy MELISSA. I'm not sure how much action this discussion group would actually generate. Might be worth trying it, and if there's not enough activity then drop it. How much work would it be for you?!!!

The idea of having MELISSA on the net sounds very interesting. I think it will be especially useful for people like me, working in a place where mail is very inefficient and relatively expensive. I'd vote yes to the idea.

In response to your last e-mail regarding MELISSA on-line. I think it would be nice to have an electronic MELISSA version. It would be a nice way for bee researchers to keep in touch with one another and communicate more directly and more frequently with one another (all depending on how often they use...).
their e-mail, of course). Well, that is my vote for what it is worth.

I just read your e-mail about the network discussion group. I think this is a great idea, but I also like the hardcopy, I don’t check my e-mail very often.

Yes, I think an e-mail discussion group for non.Apiis and non-Bombus researchers would fill an important gap, in addition to hardcopies of MELISSA.

Regarding melissoid communications electronically - I guess this is the shape of the future, though my email takes up enough of my time already - so my comment - A begrudging yes!

Yes, am interested in an "other bee" new network. but, do not know how often I would use it. Let’s try.

Sounds good to me, if you have the time. Yes, definitely, that is! I’m for it, as long as it isn’t inundated by applied pollination messages/responses.

I would be interested in receiving MELISSA and a non-Apiis discussion group.

The non-Apiis network is an excellent idea. Please count me in.

I believe it would be an excellent idea and would love to see MELISSA offered in this manner. Good idea!

I support the idea of a bee discussion group.

I think it is a great idea and would be an active contributor.

Not in the habit of reading bulletin boards, but if you put MELISSA up on the Internet I just might start doing so. I wouldn’t pull you to do this, but probably would use it if you do.

Negatives:

It’s all I can do to keep up (or better, try to keep up) with the groups that we already subscribe to. I have mixed feelings about putting MELI on e-mail for the purpose of electronic communication. On the other hand I think it would be valuable to distribute MELISSA BY e-mail instead of hard copy to those who are connected to the net. And there is no doubt that there are times when it is nice to able to go out over the net for advise. But frequently the net (for other groups anyway) tends to get clogged with posts that might be best sent directly to a particular scientist. So, after all this vacillating I guess I’d come down (just barely) on the no side. But if you decided to form one I’m sure we’d subscribe! "Dr. X" feels the same way "bout it.

I talked to "Dr. Z" this morning and he agrees with what I wrote yesterday (When I told him of a possible non-Apiis non-Bombus bee network he closed his eyes, leaned back in his chair, and gently shook his head). It would be great to distribute MELISSA but do we really need it?

Wow Ron....as much time as I spend in cyberspace, I don’t think I’d like the idea of MELISSA on Net. The reason is I have this real deep-seated need to curl up on the sofa with MELISSA on paper and browse through it the way I want to, when I want to. I think if you put it on Net I would also like to still get hardcopy too. Besides, I don’t keep my email forever so if I wanted to refer back to something later I’d have to be downloading it. Just one (admittedly strange) person’s opinion.

I prefer receiving MELISSA as hardcopy.
More and more, molecular data are being used in the study of apoids. Quite a bit of work has been done with *Apis* and some with *Bombus*. A scattered but growing number of studies are dealing with "non-Apis" bees. Over lunch recently, Richard Rust and I (McGinley) agreed it would be helpful to know about these projects, where labs are set up, what approaches are being pursued, etc. The following list of questions was pulled together based on input from Rust, Sydney Cameron, Bryan Danforth and Michael Engel. If interested, please forward information to Ron McGinley (Smithsonian via snail-mail or at mmhen011@svms01.edu). A summary will be presented in the next issue of MELISSA. NOTE: this is intended to cover ALL bees, including apis.

1. What general questions are you working on: population structure, parentage analysis, relatedness, phylogenetic systematics, etc. and what taxa are involved?

2. What techniques are you using, such as RAPD, multilocus fingerprinting, sequencing, microsatellites, etc.?

2a. For fingerprinting: Are you doing single or multilocus fingerprinting? What probes are you using? What restriction enzymes are you using? Are you finding sufficient genetic variation for the question you are investigating?

2b. For microsatellites: what types of loci are you identifying (dimers, trimers, tetramers...) and what probes did you use to screen the library with. How many loci have you identified? How many alleles are there per locus?

2c. For sequencing: what genes are you sequencing? Are these nuclear or mitochondrial? Are you gathering data from introns or exons or both? What primers are you using?

3. Are you willing to share primers and or probes?

4. Do you need help obtaining specimens? Which ones and how should they be preserved?

5. What papers do you have in press or in prep?

Responses: