University of California, Riverside No. 23, Summer 2004

Friends of the Entomology Research Museum

Newsletter

Editor: Rick Vetter Proofing Editors: G. Ballmer, D. Hawks, D. Yanega

Area Code and Prefix Changes for UCR

Although most members of FERM live around Riverside and are fully aware of the upcoming changes, many of our members are not and we wish to let them know of impending changes in the phone lines.

Starting July 17th, the area code for Riverside is changing from 909 to 951. Both area codes will work starting on that date. On October 30th, only the 951 area code will continue to work.

Similarly, all UCR phone numbers used to have the 787 prefix but, due to a dearth of available new numbers, they had to get more in the form of a 827 prefix. (827 spells UCR on a touch tone phone). Starting July 17th, you will be able to call into UCR using either prefix. That is, if you are used to calling 787-5555 to reach someone, you will be able to also reach them by dialing 827-5555. However, on October 30th, all 787 prefixes will be eliminated and you will need to dial 827 instead. The last four digits will remain the same.

For those of you who still use phones, we figgered you'd

The FERM Newsletter is published quarterly and contains articles written by FERM members. If you would like to submit an article, please send it as a Word/Wordperfect file using one of the following two methods: (1) an attachment via email to the editor (see below) or (2) a hard copy version on disk. Submissions will be published in the order they are received in accordance with space availability and relevancy to the FERM general readership. If you have questions please contact the FERM Newsletter editor:

Rick Vetter (vetter@citrus.ucr.edu)

Southern California fires and the Federally Endangered Quino Checkerspot

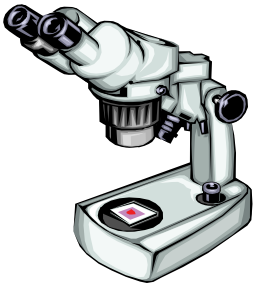
by Gordon Pratt

Probably everyone remembers the fires that scourged the southland last fall. One of the greatest worries by Lepidopterists was what happened to butterflies such as the Quino Checkerspot (QCB). Despite its being a fire adapted species, there was good reason for this concern. Much of its habitat burned, its range is now less than 5% of original size, and firemen controlling the fires spent more time protecting homes than species from extinction. Unfortunately, we can't afford to lose any more Quino Checkerspot habitat.

This spring I was able to observe a number of locations where QCB habitat had been damaged by fire. Fortunately, the small annuals that dominate this habitat provide little fuel for fires and the dominant shrubs, such as *Eriogonum fasciculatum,* on these occupied sites are not as flammable as chaparral oaks and chamise. For this reason many QCB populations seem to have escaped the fires, while areas surrounding them were totally burned.

An interesting observation was that *Antirrhinum coulterianum* (white snapdragon), a known QCB food plant, responded positively to the fires. This spring it was found in burned areas that had been heavily vegetated by dense brush last year. For example, a large stand of the large white snapdragon was apparent at one such burned site just east of Lake Skinner, where Jessica Turner (UCR laboratory assistant) found one larval cluster, while Alison Anderson (United States Fish and Wildlife Service biologist) found another on this snapdragon species.

Continued on page 4



NEWS FROM THE MUSEUM

by Doug Yanega, Senior Museum Scientist

This spring quarter turned out to be a bit disappointing as far as field work goes (aside from several collections of rare Xyelid wasps, some of which may be new species), but a lot of progress was made in curating the collection, thanks in large part to several student helpers; (1) Jeremy Allison processed and incorporated a major donation (several thousand specimens) of insects from a survey of the El Segundo Dunes made prior to the expansion of LAX airport - basically, a pile of insects (a few which are now rare or endangered) from a habitat that no longer exists, making the specimens especially valuable. These specimens were collected by Rudy Mattoni and others, and passed along to the ERM by Jeremiah George; (2) we now have a databased inventory of over 1000 of our bulk samples in alcohol (Alex Harman was the latest worker on this ongoing project); (3) the database of Deep Canyon material now has records for over 17,000 specimens, and we're still hoping to submit an NSF grant to accelerate and expand these efforts; (4) most of our unsorted insects were sorted to order by Clare Casteel; (5) a number of visiting curators came by and helped us out.

One such visitor was James Pitts, who sorted out several drawers of nocturnal mutillid wasps, and took a large number back to Utah on loan. This included a number of specimens in alcohol, from which he has already begun to get DNA sequences, enabling him to make associations of males and females of some species - a real challenge in this group of wasps, most of which are described only from males, since the two sexes are completely different in appearance, and females are not only impossible to match up with their respective males based on appearance, but almost impossible to tell from females of other species. This is one case where DNA is going to be essential in unraveling the taxonomy, after centuries of confusion, and we're hoping to have James write up an article for a future FERM newsletter about this work. We also were visited by a team of scientists working on Mirid bugs, including Toby Schuh and Michael Schwartz, who went through our entire - and very large - Mirid collection and pulled out over 10,000 specimens which they will be borrowing, to identify and database as part of a large project on the world Miridae - and that's for just one subfamily!

The Museum's regular database has grown considerably, to over 73,000 specimens, and the authority file now has almost 157,000 species names and some 25,000 genera. The world catalog of Sphecid wasps is one of the major recent additions, with over 9,000 species, and the Coleoptera files have been updated to reflect the numerous changes in taxonomy in the recent "American Beetles" volumes by Arnett et al., which were recently purchased for the Museum. At over 15% of the known Insecta, we now have one of the world's largest general insect name authority files, and if we can obtain the world lists of Diptera, Orthoptera, and Neuroptera (which are potentially available, but require some negotiation), we would probably have THE largest such database of names in existence, which is not too shabby for something being done without any funding or student help. It's also reaching that point where for many groups of insects, we can now use the authority files to organize and re-curate the collection (mostly name updates), and start compiling an accurate and complete checklist of the ERM's holdings (for example, I presently have checked off 4263 species and 2486 genera, NOT including the checklists of Chalcidoidea and Meloidae that are already on the Museum's web pages). Over time, this listing will become increasingly complete and valuable, and put us among an elite few museums with such a detailed inventory that can be made easily accessible to the scientific community.

Got an idea for a FERM article???

Do you have anything buggy-related that might be of interest for the FERM newsletter? We really would be tickled pinkish if you would send "stuff" in. Remember, this newsletter won't have much in it unless we have material submitted from you folks that we can publish. Feel free to send in photos, articles, recent publications related to insect taxonomy or natural history and even stories about how the Entomology Research Museum has assisted you in your bug-related endeavors. Send them to vetter@citrus.ucr.edu, preferably as attachments (not in email text). Additional information is on the front page of this newsletter.

Deadline for submission of material for next Newsletter is Sept 15th

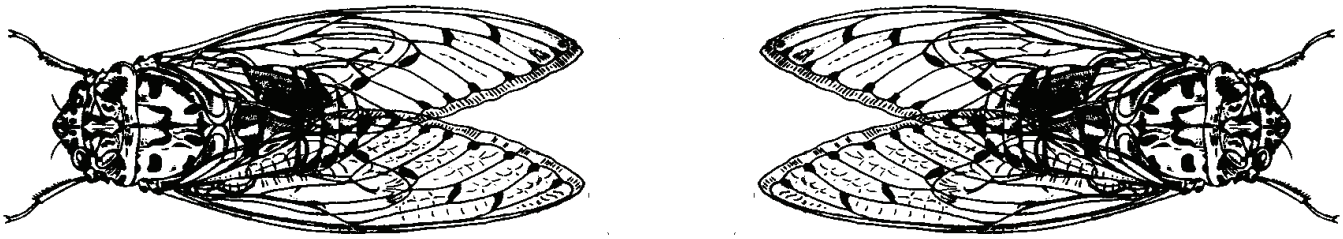
FERM Doing Dandy, but Dues Due, Again!

By Dave Hawks, FERM Treasurer

FERM is still growing (slowly but surely)! We've gained a few new members since June 2003, and we're now 168 members strong.

Most of our expenditures during the past year went towards the printing of Newsletters, Annual Meeting costs, two FERM collecting/research grants, and some incidentals. Our balance has grown to approximately $24,000 (nearly to the level prior to our assistance with Museum compactor expenses). FERM continues to be a strong support group for the UCR Entomology Research Museum.

It seems like only yesterday (well, not really), but it's true that dues are due again as of 1 July 2004. Any of you who have contributed since the start of 2004 are current. However, for those of you who haven't written out a check to FERM since 2003, please cut out or photocopy the dues form in this (or any other) issue of the FERM Newsletter and send it along with your check to me. Your contributions will continue to keep FERM viable so that we, in turn, can continue to provide the support the UCR Entomology Museum deserves. Thanks!!



Friends of the Entomology Research Museum
Membership Form

☐ Check here if you are renewing (renew by July each year)

Name _____

Address _____

Interests _____

Telephone _____ Email _____

MEMBERSHIP CATEGORIES:		**Please Check**
Basic Membership	$10.00	☐
Sustaining Member	$25.00+	☐
Donor	$100.00+	☐
Benefactor	$500.00+	☐
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Submit your membership form and dues to:

David C. Hawks, Treasurer
Friends of the Entomology Research Museum
Department of Entomology - 041
University of California
Riverside, CA 92521-0314

Dues and other contributions are payable by check to the **UCR Foundation,** noting "**Entomology Museum**" on the memo line on your check. (It is very important to note "Entomology Museum" in order for your donation to be deposited in the Friends' UCR Foundation account.)

Continued from page 1

The fires actually helped to create potential new QCB habitat by eliminating dense brush, thereby allowing for the growth of hostplants where none occurred previously. However, use of *A. coulterianum* by QCB may be restricted to Riverside County, because this plant has not been observed at QCB sites elsewhere. But this spring I discovered another *Antirrhinum* species, *A. nuttallianum*, throughout much of the San Diego County QCB habitat. In areas where thick stands of chamise burned, dense stands of *A. nuttallianum* subsequently appeared. Although I was not able to find QCB larvae on this plant in the field, prediapause larvae fed and grew well on it in the lab. A similar laboratory observation with *A. coulterianum* had indicated its potential as a larval host prior to its confirmation in the field. In addition, I found many buckeye larvae, which share many food plants with QCB, using this plant. I also found QCB prediapause larval clusters very close to *A. nuttallianum* plants.

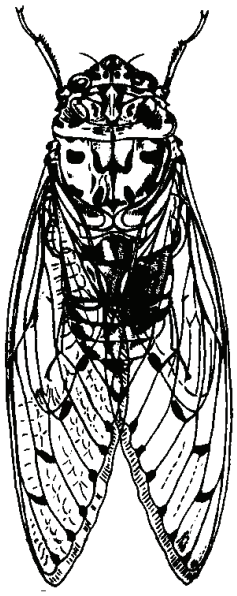
Although it appeared to be a poor season for QCB because of low rainfall, the butterfly did quite well around Anza. In one location south of Durasno Valley I observed about 40 QCB females flying through an open redshank woodland. By the end of the day I estimated seeing approximately 500 adult QCBs. Almost every butterfly seemed to be migrating through the area much like painted ladies. These observations reminded me of the old descriptions of Quino Checkerspot outbreaks near San Diego. It seems these relatively high elevation populations may be much larger than once thought and may be more important for the survival of the species.

Finally, two other sensitive butterflies, Thorne's hairstreak and Hermes copper, both of which are confined to San Diego County, also survived the southern California fires. Ken Osborne observed the first *Mitoura thornei* on Otay Mountain, while other observers such as Mike Klein observed many more. The original concern was that there were not enough mature Tecate cypress trees remaining for the species to use as larval food, but it turns out that sufficient trees survived the fire. The welfare of the Hermes copper is of great concern because this species is evolutionarily unique and restricted to the food plant *Rhamnus crocea* within a relatively small area (compared to other butterfly species) in San Diego County. Recently the Hermes Copper has been observed by Alison Anderson on USFWS preserves. Many areas that have the food plant for the Hermes Copper did not burn.

Cicada Stories

Bug-brandishing burglars reported

Cincinnati – Two men armed with a cicada apparently stole $25 from a restaurant's cash register after using the six-legged bug to scare away the cashier, police say. The two men, described as being in their 20s, walked into the Grand Slam Restaurant on Thursday brandishing a cicada which is big and ugly (according to some folks), but harmless. They thrust the bug at the cashier, Marquiss Kellogg, 22, who then fled from her post at the cash register, police said. Later, after Ms. Kellogg had recovered and returned to the register, she found that it was missing $25, police were told. Although the two men are suspected of the theft, no one actually saw the two take anything, police said. Certain FERM members are pretty sure that Marquiss actually took the money herself, because she "knew she could" to quote Bill Clinton.



Another cicada story

This was an excerpt of an email sent out to Section C members of the Entomology Society of America by section chairman, Bob Nowierski.

Dear Section C Members:

We finally have some actual meaning to the question "What's the latest buzz in Washington, DC"? --- We're up to our *!?@%! in periodical cicadas! A few days ago, one unfortunate lady in the DC Area wrecked her car and caused some flooding in a neighborhood when a cicada flew in through her car window, startled her, and caused her to run into a fire hydrant! I hope you all are having a wonderful and productive spring.

Thanks and Best Regards,
Bob Nowierski

Using bird pin-feathers for manipulating small arthropods

[Editor's note: this article appears in the latest issue of the British Arachnological Society newsletter (#99, page 1). I thought that it would be appropriate for FERM folks.]

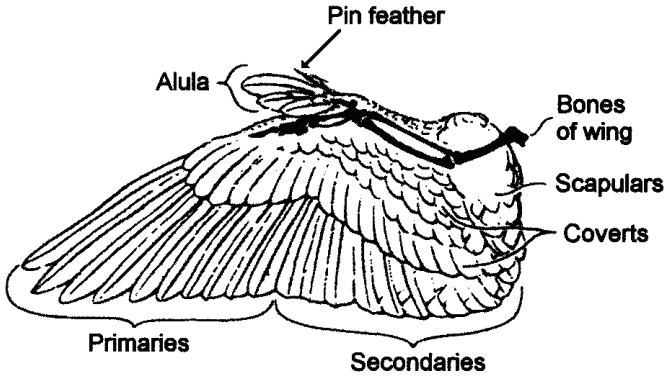


Figure 1. Bird wing showing alula and pin feather.

Figure 2. Examples of pin feathers. Scale bar=10 mm.

Handling Small Arachnids

By John H. Parker

This note is intended for those beginners who do not have much experience in handling small spiders (and other small arachnids). They can be examined when submerged in alcohol for their identification to species level, a process not usually well described in most of the collecting manuals. The use of fine forceps can be clumsy for adjustment to find trichobothria or to view a male palp in a suitable position.

I have always been grateful to the late Harry Britten who, sixty-five years ago, at Manchester University Museum, demonstrated his techniques for the mounting of tiny invertebrate specimens as micro-slide preparations. Britten was then working intensively on fleas, feather lice and minute dipterans. These tiny animals had to be spread out on a micro-slide in a symmetrical fashion after preparatory treatment with caustic soda, glacial acetic acid and alcohol, before using a cover slip to seal the mount. Metal setting needles were not suitable for use in such delicate work where specimens could easily be damaged.

Britten had a collection of what he called "pin feathers', each mounted in the end of a wood skewer. I found these to be excellent for the manipulation of tiny spiders submerged in spirit. He showed me where to find these tiny feathers on the wings of small game birds. Each wing has only one pin feather. The thumb joint of every bird's wing has three large flight feathers (alula), and one pin feather (Fig. 1) which is easy to see on a large bird such as a pigeon or goose, but not so easy to find on small wading birds such as plovers, woodcock and snipe, which provide the most suitable pin feathers for our purpose. They are also much in demand by anglers who use them when tying their own flies. I have found them to be invaluable for the adjustment of tiny spiders. The feathers are soft edged so that the specimens are not damaged and the points are firm. The are difficult to obtain, so make friends with game dealers, wardens of wildfowl trusts and museum curators. They are illustrated in Figure 2 from snipe, woodcock and graylag goose, the last included simply for shape.

[There are additional comments in the article but they no longer pertain to pin feathers in specific.]

Final Editor's note: Just so no one misconstrues the message, the information provided here applies to sources of dead birds. It would be unforgivably repulsive if anyone were to purposely destroy a bird just for its pin feathers. There are enough sources of dead birds out there where the harvesting of pinfeathers would not require the destruction of live creatures. If crows have pinfeathers, with the West Nile Virus going around, someone could open up a pinfeather business!!!!! (Or maybe not.)

East Coast Hymenopteran Tour

By Gene Drake

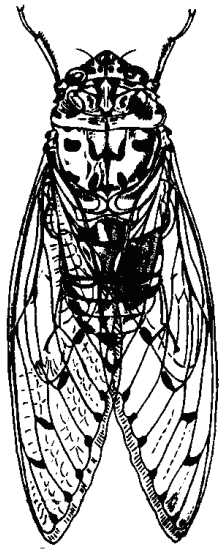
Rick Vetter's report in the last issue of the museum newsletter got into the gastronomic delights he finds while on the road looking for spiders. The followers of the hymenopteran avocation also can report on gastronomic centers. I will try to cover that issue as we work our way across the east coast into the mid-west.

On May 27 my wife and I landed at Baltimore/Washington air terminal and picked up a shuttle bus to Jury's on Wyoming Avenue near the Georgetown district of Washington DC. Carlene had a National Medical Library Association meeting at the Hilton across Connecticut Avenue. This is the place where John Hinkley took a crack at Ronald Reagan.

We were greeted with the loud buzz of millions of 17-year cicadas of Brood X emergence sequence. However, this year, in a rare act of mathematical coincidence, the 13-year cicadas and the 17-year cicadas got together for a common party. The local Washington newspaper blamed the entire episode on the 17-year cicada brood X crowd, while all other cicadas have escaped, free of blame. The University of Maryland and the University of Michigan have web pages dedicated to these insects and their monumental party. Shortly after daylight the cicada din starts and the critters finally begin to rest at sunset. The concert is unbelievable in city parks. "Typhoon," a Thai restaurant just off Connecticut Avenue two blocks below the Hilton, and a short walk from our hotel, is highly commendable. Zorba's on Connecticut Avenue offers good Greek food and is also good for a light quick meal.

The weekend was spent touristing and collecting hymenoptera in Rock Creek Park with yellow pan traps and a classic insect net, although activity was abbreviated by rain and a tornado. Monday it was into the Metro system and down to the Smithsonian to check some old dusty type specimens from Ashmead's 1893 tome on Proctotrypoidea. My visit was facilitated by a prior contact with Dr. David Smith and Terry Nhun. Four long days peering over *Lagynodes* (Megaspilidae) and *Cinetus* (Belytinae) type material kept us busy. During a side glance; I looked at Dr. H. Priesner's European *Anommatium* (Belytinae) from Germany and Austria and compared my California specimens; nice generic level match.

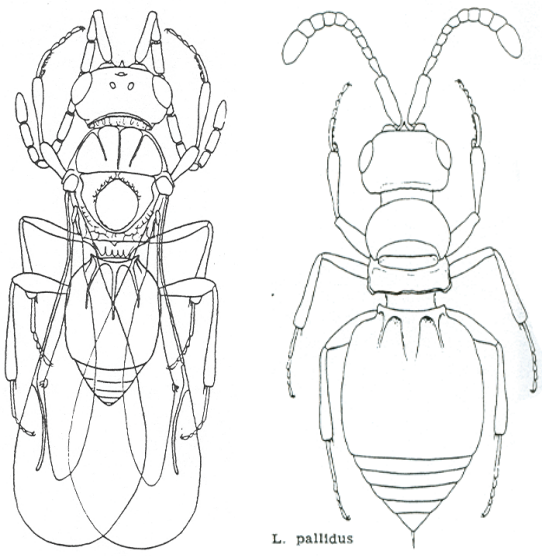
The genus *Anommatium* Forster has not been reported from North America. The females are a component of the leaf litter fauna in California. Yours truly has been feeding leaf litter spiders to Rick Vetter for some time and has also accumulated a small collection of female *Anommatium* in the process. The winged males are probably confused with the genus *Zygota* Forster and have never been described. Dr H. Priesner (prior owner of the *Anommatium* collection at the Smithsonian) made the proper association, but did not publish the facts before his death.



Thursday it was time to hit the road. We went to Gettysburg for a history lesson and stayed at the town of Thurmont, Maryland, just outside of Catoctin Mountain. Good diapriid wasp collecting can be had on the boundaries of the park. This is an classic uncut hardwood forest, and well worth saving. Evening thunderstorms blew out my yellow pan collecting. However, some productive sweep net work resulted in a fair collection of Belytinae and Diapriinae genera.

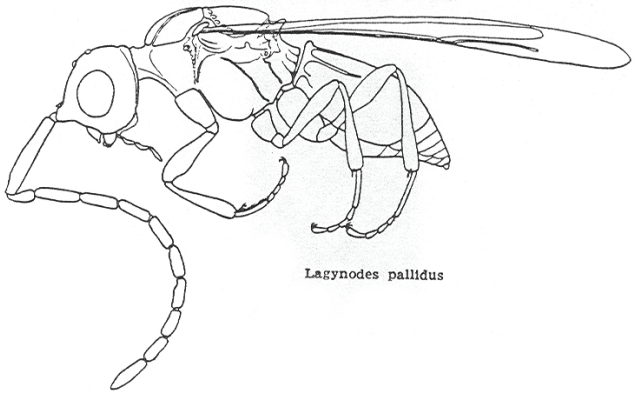
Then it was off to the town of Jeannette, Pennsylvania, and a collection site frequented by Ashmead in the 1890's. Going west at 70 mph on the Pennsylvania Turnpike with the auto tire noise and the air conditioner in the car running at mid-tilt we could still hear the cicadas. Then we suddenly became aware of the reduction in noise level. No more 17-year cicadas, magically, somewhere outside of Cumberland, Pennsylvania. Today, Jeannette is a small burg surrounded by the growing Pittsburgh and nothing remotely resembles the town of the 1890's. Some collecting turf was found along the river 15 miles south of town around Yukon. A short series of Belytinae went into alcohol for later review. My wife has friends in Pittsburgh, so we did a vegetarian type restaurant in old town Pittsburgh, on the point of land between the Allegheny and the Monongahela Rivers, a little off the main path for entomologists. The grub was quite good!

Monday, we were off again, headed toward the Finger Lakes of New York via Pennsylvania's rural roads through the Allegheny National Forest. Hours were spent swinging an insect net along remote creeks where, in these woods, turkeys, deer, and grouse abound. The Pennsylvania Fish Commission has purchased access points along rural streams for hymenopterists. It was wonderful. Somehow we wound up in Punxsutawney, Pennsylvania for lunch in a blazing thunderstorm. The Groundhog's Day Celebrity Groundhog, well known as "Punxsutawney Phil", was in his hole. He obviously had more gray matter between his ears than the author. There is no eatery of note in this town. Nothing, nada.



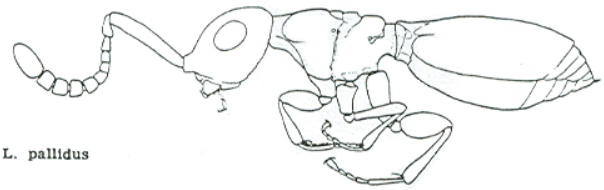
It was now time to drag out the map, a tour book, and a cell phone and look for lodging. The Gatehouse Motel in Corning, New York looked good and had a dry room after the LPGA had played through. The next evening I took the advice of the owner of the Gatehouse, and now agree that a visit to the Corning Museum of Glass is a must for anyone visiting this area. The original 200-inch mirror planned for the telescope on Palomar Mountain in San Diego County is in the Corning Museum; cracks, pits and all. Corning had never broken the mirror up for "cullet". The museum store had 2 wonderful jeweled scarab imitations, with a price tag of $250 each, constructed in glass by an Italian artist. I really like Dave, but $500 U.S. worth? Oh! Gee! I like you Dave! (Editor's note: but obviously not THAT much.) Spencer's Restaurant and Mercantile is where the locals in Corning eat. This eatery holds the Guinness Record for the longest pasta noodle! Their thing is pasta and pizza "New York" style. You will get rotund eating in this place.

Down the road again; and yes that was V/8 engines screaming! Watkins Glen is the place; and the sky is clear of rain clouds for the moment with shiny NASCAR rigs screaming around the track. One sweep collection then onward to the community of McLean, New York; another collection site frequented by Ashmead. And a river does run through McLean; additionally on Cemetery Road there was good marshy habitat along the river in which diapriid wasps could propagate. The obliging State of New York Fish and Game Commission even had a parking place for fishermen/hymenopterists. About one hour into the collecting process a cloudburst of tropical but not biblical proportions unloaded on the area. A review of the collection will tell the story as to whether topotypic material was collected.



Before leaving the area with my tail between my legs, we stopped at the Cornell University Ornithology Laboratory. This is the place to visit if you have any interest in birding. It is a wonderful 200-acre bird sanctuary with wetlands and research laboratory. Birding would have been good if only it had stopped raining. My Nikon 7X35 binocs were in the pack on my back. Birding trails are open to the public. In Ithaca, New York, the place to eat was the legendary vegetarian restaurant "Moosewood". What they do with spinach and feta and a few spices is unbelievable. Their cookbook is on the web through Amazon.

Off to Buffalo and the Falls and west into Ontario and on to Muskegon as fast as we can go. We are days behind schedule. So much for collecting bliss, a bottle of wine and Theeee!



We were in Muskegon for the wife's family reunion; and out the back door quietly, to collect diapriids in the muskeg along the Muskegon River. This is a real marsh; hemlock trees, maple trees, sphagnum, cat tails, "skeeters", snakes and all the trappings. The collecting was moderately good with *Cinetus* and several related Belytinae as well as a smattering of other "Proctotrupoid" genera. On each of 4 days, collecting started at about 10 AM when the dew lifted, and was rained out about 3 PM. On the 5th day it just rained and kept it up. During one night, 4 inches of rain was dumped in a single hour. The Muskegon River was in full flood stage. The collecting equipment was packed and shipped home via UPS to Riverside. Three weeks of blissful hymenoptera collecting ended in many thunderstorms and a tornado. Muskegon has no gastronomic center; vegetarian or otherwise for recommendation. Beef pot roast and bratwurst with sauerkraut appear to be the center line of the diet here.

On the 14th of June we landed at Ontario with a shuttle bus waiting for our tired bodies. Soon boxes of wasps and collecting gear started drifting into Riverside. It was all over.

PINE : PARTNERS IN NATURE EDUCATION

FERM members are entitled to 20% discounts* on the following UCR Extension field nature study courses:

Mountain Ecology and Survival
Thur. 5-9 pm, July 29/Fri., Sat. 8 am-5 pm, July 30, 31/Sun. 8 am-2 pm, Aug. 1. $285 (41N26)

Mammals of the Southern California Deserts
Fri. 5-8 pm, Sept. 24/Sat., Sun. 9 am-5 pm, Sept. 25, 26. $206 (42P21)

Birds of Anza-Borrego
Fri. 7-9 pm, Oct. 1/Sat. 7 am-5 pm, Oct. 2/Sun. 8 am-2pm, Oct. 3. $169 (42P25)

Introduction to Bird-Banding
Tue. 5:30-9:30 pm, Nov. 2/Sat., Sun. 6 am-3 pm, Nov.6, 7. $206 (42P25)

Also of interest:
Astronomy Sat. 5-10 pm, Aug. 7, 14. $69 (EDP 41p67)

For current listing of courses at any time, bookmark www.unex.ucr.edu/ns/fns1/classes in your web browser.
For further information, contact: Natural Sciences UCR Extension 909.787.5804 909.787.2456 (fax)
*some restrictions apply

ATTENTION!

For those FERM members who have been clamoring for a chance to get out into the field, your wait has ended! There is a wonderful opportunity (courtesy of UCR Entomology graduate and member of FERM, Dr. Michael Gates) for us to visit the Gray Ranch later this summer. The Gray Ranch is located in the extreme southwestern portion of New Mexico and encompasses a wide variety of habitats. If you are interested, keep the interval from August 19th to the 26th free. Contact Alexis Park (alexisp@citrus.ucr.edu), Ken Osborne (euproserpinus@msn.com), or the Entomology Museum (909-787-4315) if you want to go. If you are unable to stay for the entire trip but still wish to go for a portion of the time, please indicate the days you would be able to attend. Above all, please provide a reliable means of contacting you for further details. Thanks, and hope you can make it!