University of California, No. 7, Spring 2000

# Friends of the Entomology Research Museum

# Newsletter

Editor: Rick Vetter

## FERM Field Trip to China Lake

**JULY 14-16, 2000**

The trip will be organized and led by Gordon Pratt. We will be surveying for insects and other arthropods specifically around springs. Everyone will be required to collect insects since the objective of this study is to provide China Lake with a list of species found around springs. We may have to change it if we do not have enough 4-wheel vehicles to get into Haiwee, which requires 4-wheel drive.

On Friday night we will be running lights at Haiwee Springs and searching for nocturnal insects. The following morning we will be collecting diurnal insects at Haiwee Springs. In the afternoon we will leave Haiwee and travel to the springs around East Silver Peak. We will spend the afternoon and the morning of the next day collecting insects in this area. Early in the afternoon we will move on to Mountain Springs Canyon where we will be collecting until late in the evening. No one will be allowed to leave early, since escorting people off of the base wastes a few hours of valuable field time, so plan to spend the entire time collecting. Remember, this base is over 2 times the size of Rhode Island (!) and most of the areas are only accessible by dirt roads.

A mandatory meeting will be scheduled the week before to discuss the rules. This opportunity is available to only 12 people, so sign up quickly! Gordon will need your social security number before he can include you on the list. Contact Gordon at Euphilotes@aol.com or 909-788-9703. He may offer another trip to China Lake in August or September, so stay tuned!

SEE BACK PAGE FOR THURSDAY NIGHT FERM OUTING INFORMATION!!

*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 article in one of the following two methods:(1) an attachment via email to the editors (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. For further questions please contact FERM editor:*
*Rick Vetter (vetter@citrus.ucr.edu)*

## Rattlesnakes!

by Mike Cardwell

What's an article about reptiles doing in an entomological newsletter? With summer upon us, FERM members will be taking to the field, preoccupied with finding six and eight legged critters. However, spring is also the peak activity time for reptiles - including rattlesnakes. So here are a few tips on keeping your field trips safe.

First, to put the topic in perspective, understand that insects, predominantly Hymenoptera, kill more people annually in the U.S. than all other venomous fauna combined. The mechanism at work here is a severe allergic reaction called anaphylaxis. Although outside the scope of this article, it's wise to learn to recognize the early signs of anaphylaxis and what to do about it, since, unlike rattlesnake bites, anaphylaxis can be quickly lethal.

All of California's dangerous native snakes are rattlesnakes with six species occurring here; one or more can be found throughout the state. From an envenomation point of view, it's of little value to distinguish one species from another - with the possible exception of the Mojave rattlesnake. It is important, though, to be able to distinguish rattlesnakes from the many harmless species.

Do rattlesnakes have elliptical pupils and triangular heads? Sure. But so do some harmless snakes. To identify rattlesnakes, look for the rattle. Every rattlesnake has one. Juveniles, which are born alive in the fall, have a single hard button, about the size of a pencil eraser, at the tail tip. It makes no noise but easily identifies the little snakes as dangerous. Older rattlers routinely loose segments to breakage. The rattle grows from the base and the distal parts become dry and brittle - just like your fingernails. However, regardless of breakage, the proximal segment contains living tissue and is never lost. No rattlesnake has a gracefully tapered and pointed tail like harmless species.

Avoid bites by avoiding two activities: don't put unprotected hands and feet in places you can't see and leave

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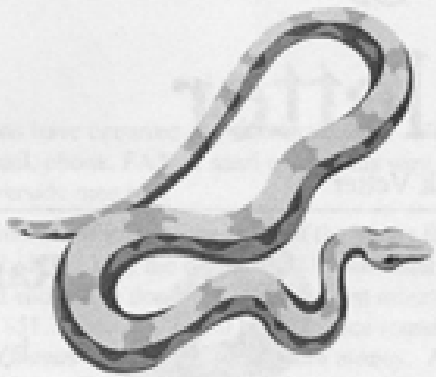
rattlesnakes alone when you find them. This includes using a flashlight or sturdy boots when walking around in the dark. When turning stones and boards, lift the edge that's away from you, keeping the object you're turning between you and whatever's under it. Don't wrap your fingers too far over the edge, either. However, the majority of venomous snakebites occur when people foolishly bother the snakes after they've discovered them. Clearly, just leaving the animals alone would prevent such accidents.



If someone is unfortunate enough to be bitten, don't panic. Look for the rattle; if the snake has a tapered pointed tail with no rattle, it's not a dangerous species. (This rule is useless in many other states, including Arizona, that harbor venomous snakes besides rattlesnakes!) If a rattle is present, head for medical help without delay. If you're way out in the boondocks and have radio or telephone communication, it's worth asking for a helicopter evacuation.

Rattlesnake bites rarely develop serious symptoms quickly, in fact, half or more inject so little venom that the injury is not serious. You have no way of knowing that, however, and must assume the worst. While well under 1% of venomous snakebite victims die in the United States, a serious rattlesnake bite can cause terrible soft tissue damage around the bite site. The only effective way to arrest this necrotic process is use of snakebite antivenin - a procedure done only in hospitals; hence, the importance of rapid transportation to medical care.

Your best snakebite kit is your car key. There's little you can do in the field to mitigate a serious snakebite. If possible, keep the bitten appendage immobilized at or below heart level and minimize exertion. Do not cut open the fang punctures, use a tourniquet or electric shock, apply ice, or immerse the bite in ice water. To date, use of suction devices like The Extractor™ is not proven to be of value, regardless of claims on the package.

When you get to the hospital, understand that many ER docs are not well informed regarding snakebite treatment. They usually have not been trained to treat them and they have probably never seen one before. The good news is that most are quick to seek telephone consultation from an expert. Nonetheless, be alert for those that think they know what they're doing but don't. A few hints: surgical procedures (like fasciotomy) are seldom indicated, even when dramatic swelling occurs. If significant pain, swelling, and/or bruising develops quickly, aggressive antivenom therapy is usually indicated. Antivenin should be withheld, however, in most cases not presenting significant signs and symptoms. (The antivenin itself can cause life-threatening anaphylaxis and should not be administered unnecessarily.)

The most common exception to the antivenin rule involves bites by the Mojave rattlesnake. Serious envenomations by Mojave rattlers in California often produce little or no local effects, sometimes causing even knowledgeable physicians to underestimate the seriousness of a bite. These snakes are capable of producing life-threatening central nervous system deficits hours later, involving respiratory paralysis, often with rapid onset. If a Mojave rattlesnake is suspected, most snakebite experts will admit the patient and frequently administer antivenin regardless of early signs and symptoms.

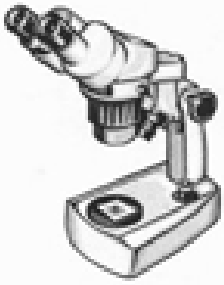
In California, Mojave rattlesnakes are found only in the deserts of San Bernardino, Los Angeles, and Kern Counties, although there are probable accounts of this species in the edge of Riverside County within Joshua Tree National Park. Specific identification information can be found in a 1999 paper I co-authored with Dr. Sean Bush entitled "Mojave rattlesnake (*Crotalus scutulatus scutulatus*) identification" (*Wilderness and Environmental Medicine*. 10(1):6-9).

Should you find yourself in an emergency room with reason to question the snakebite expertise of the attending physician, insist that telephone consultation with a true expert be sought; poison control centers can facilitate this. In California, Dr. Bush at Loma Linda University Medical Center and Dr. Bob Norris at Stanford University Medical Center are trusted envenomation experts.

O.K., this is getting a bit long, but what about Gila monsters, you ask. Well, they do occur in California's extreme eastern desert, mostly in San Bernardino County. In spite of their undeserved reputation, Gila monsters do not produce serious long term medical consequences in humans. The bites are extremely painful, however, and the lizards are usually difficult to dislodge. Gila monster bites invariably happen when people carelessly handle these big secretive lizards.

So there you have it. Don't let fear of venomous snakes distract you on your next field trip. A little care and common sense goes a long way toward minimizing the hazard posed by these fascinating animals.

# NEWS FROM THE MUSEUM



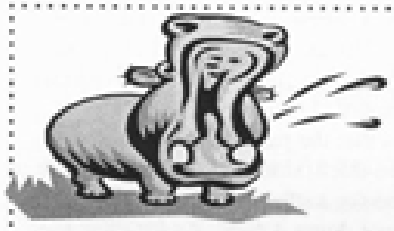
**by Serguei Triapitsyn & Doug Yanega**

The Entomology Research Museum has been a busy place in 2000. Since January 1st and May 1st, 44 individual visitors or groups have registered in our guest book.

Two graduate students have been assigned by the Department for the spring quarter to work in the museum. Liangwei Wang is mounting backlog dry material and assisting with labeling and databasing. We are proud to announce that the museum's specimen-level database, designed by Doug Yanega, now has records for over 15,000 specimens, including substantial recent donations by Greg Ballmer and Mike Gates. Miriam Cooperband is continuing the re-curation of the Lauren D. Anderson Immature Insect Collection, work that was started by others in October 1999. During the first stage of the project, the alcohol in all of the several thousand vials was checked, and estimates of ideal vial size (to maximize space efficiency) were produced. In the second stage, underway now, insect larvae and accompanying labels are being transferred into smaller vials with leak-proof caps, thus allowing us to both save valuable space and at the same time simplifying curation of this collection by eliminating the constant need for adding alcohol, a task for which Hank Nakakihara has been graciously donating his time for many years now. We estimate that this re-curation may be completed in two years at the earliest. The teaching collection of immature insect stages (Dr. John Pinto's resource) has already been fully curated in a similar way, into screw-cap vials with cap liners.

Doug Yanega recently sorted the museum's holdings of miscellaneous Heteroptera to family level, and Serguei Triapitsyn did the same for 30 drawers full of pinned and pointed parasitic Hymenoptera, in addition to almost 1000 slide-mounted specimens. Many of those slides were made in the 1910's-1920's and are in fact vouchers from many of the earliest biological control projects in California.

Recent ERM acquisitions include the book by C. D. Michener entitled "Bees of the World" that has just come into print, and FERM donations are being used to purchase a heat-sealing device (for shipping of alcohol vials in individual sealed plastic bags to prevent leakage), and a set of CD-ROMs containing various volumes (including the life-size color plates) of Seitz' classic work, "Macrolepidoptera of the World", now out-of-print for almost 80 years. Museum personnel's outreach activities included participation in two insect fairs at Arcadia Arboretum and Los Angeles Co. Natural History Museum, and also several small tours of the museum, including a visit by several UC Regents.



## Wasp or Hippopotamus?

by Rick Vetter

Many immunology articles reference an oft-repeated story that the first historical recording of an anaphylactic death was that of Egyptian Pharoah Menes in 2641 B.C. to a wasp sting. However grand and glorious this tale is, there is a lesser known contradictory story that the death of Pharaoh Menes may have actually been caused by a hippopotamus. This discrepancy has to do with confusion over hieroglyphics and interpretation of various Egyptian stories. Cohen (1989) points out an earlier reference in Chafee (1969) where "the Egyptian word for hippo was the same value as a word for wasp", that one Egyptologist "did not distinguish between the word for hippo and the name of an Egyptian town with a similar sound which had as a determinative sign a wasp or bee", a separate historical reference implicates the vertebrate assassin and there is conjecture that "Menes" may have referred to more than one king which further muddles interpretation. And, of course, hippopotamus-induced death is more likely through gross, bodily trauma than anaphylaxis.

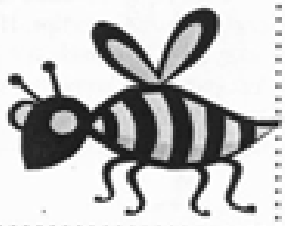
The impetus for this article was that serendiptiously my eye was caught in the UCR Science library by the Journal of Allergy and Clinical Immunology (JACI) (right next to the Journal of Apicultural Research). It's cover design incorporated hieroglyphics overprinted with a wasp. Knowing about the contradictory hippo story, I wrote a letter to the editor of JACI and it was published. The best thing out of this situation is that I will be able to proudly list this title on my resume (the title being the same as above) never guessing that in a bazillion years that the word "hippopotamus" would ever appear on my CV.

**References**


Chafee FH. 1969. Letter to the editor. J. Allergy 43:309-310.

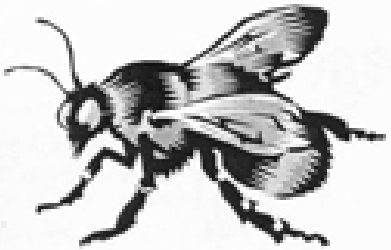
Cohen SG. 1989. The pharaoh and the wasp. Allergy Proc. 10:149-151 [includes a copy of Chafee's letter].

Vetter, RS. 2000. Wasp or hippopotamus? J. Allergy Clin Immunol 105

# INSECT PREPARATION TIPS: PART II, PINNING

by Doug Yanega (Senior Museum Scientist)



*This is the second in a short series of articles to help those FERM members who like to collect and prepare their own insects. Pinning is something covered in some detail in virtually every field guide around, and I presume that most of us have at least one such guide to refer to, so the basics of pinning are something I expect readers to be familiar with (e.g., how to point-mount insects), and won't re-hash the fundamentals here. What I'd like to do, then, is mention some of the details that are not generally appreciated.*

***When to pin, when NOT to pin.*** This is very important, and has a dual meaning: (1) There are certain types of insects which shrivel and/or discolor badly when pinned, and should therefore either be preserved in 80% ethanol indefinitely, properly dehydrated for mounting (either critical point drying or HMDS bath), or placed on microscope slides. (2) some insects are too small or too slender to be pinned, and should be point-mounted instead. These are both significant steps in improving the quality of one's collection, and I'd go so far as to say the boundary between a casual and a serious general collector is crossed when you start storing specimens in alcohol and using points. Microscope slides are generally only used by specialists. Becoming acquainted, by experience, with how each type of insect preserves, will probably ultimately be necessary for most folks, but learning some rules of thumb early on will help minimize the number of disastrous pinning jobs.

In the first case, which insects must go into alcohol breaks down fairly cleanly along certain lines: **adults** of almost any macroscopic Odonata, Hemiptera, Homoptera, Mecoptera, Hymenoptera, Diptera, Lepidoptera, and Coleoptera are perfectly suitable for pinning, with few exceptions. When you get into the microscopic types (under 2 mm), or immature stages, then the odds that alcohol storage will be better increase dramatically. Members of the Orthopteroid orders (including roaches, mantids, and walking sticks) lie on both sides of the fence, as do Neuroptera; many of them can be pinned, but generally speaking most of them preserve better in alcohol. If you've ever seen a camel cricket or Jerusalem cricket that's been pinned, you've seen how badly they can shrivel, even though an ordinary cricket or grasshopper might look just fine treated the same way. Likewise, a lacewing, ant lion, or dobsonfly on a pin might not look that bad at first glance, but those shriveled abdomens aren't necessary or desirable. Members of any group I did not list above (Ephemeroptera, Plecoptera, Isoptera, Psocoptera, Trichoptera, etc.) and any immature stages should generally be preserved in alcohol. The bottom line is probably this: (1) anything whose body is somewhat membranous and soft is better off in alcohol (2) aside from butterflies and moths, and certain types of brightly-colored beetles (e.g., *Plusiotis*), almost nothing can be hurt by storing it in alcohol, if only temporarily. In other words, when in doubt, go with alcohol, and if it turns out to not be necessary, then you can simply remove it and pin it normally.

In the second case, judging when something needs to be pointed versus pinned is pretty straightforward, though most folks left to their own devices tend to try to pin things that are really too small. You should, realistically, never need to use any pin below size 1, and anything smaller than a size 0 pin literally should never be used (they are too fragile). The rule of thumb is that anything from about the size of an average ladybug (6-7 mm) on down should be point-mounted, and anything that is skinnier than 3 mm, as well, no matter how long it is. Another trick to good point-mounting is that the paper should ideally be acid-free, and of about the thickness of an index card or slightly thicker. The paper can't be too thick, since you want to be able to bend the tip so it fits the contour of the body of the insect as precisely as possible, to maximize the surface contact of glue to body. If you don't custom-shape the end of each point to the body of each insect, then you're not doing it right. As for glue, there are pros and cons to the various types, but for long-term museum-quality preservation, it appears that a good shellac gel is best, followed perhaps by hide glue (commercial hide glue may need to be diluted slightly). White glue is apparently less than ideal, though it is the easiest to obtain and use, and clear nail polish also apparently has similar drawbacks (the chemicals in both reportedly can cause some damage to the specimen over a long period of time, this becoming more of a problem as the insect involved becomes smaller, meaning a greater proportion of the body comes in contact with the glue). In essence, if you're pointing ladybugs and other relatively big and sturdy insects, use whatever you like, but if you're pointing Mymarid wasps or such, then you might want to consider going for the shellac gel.

***Proper use of a pinning block, posing, etc.*** I consider it unfortunate that pinning blocks aren't designed so the pin is inverted when adjusting the height of the insect: in essence, what really matters is where the TOP of the insect's body is, not the bottom, so simply pushing a pin into a pinning block can often cause problems if the insect's body is very thick. If you don't have at least 8 mm of space between the head of the pin and the top of the insect, then you have the body mounted too high, and you run the very real risk of damage to the specimen from contact with fingertips. If you have more than 11 or 12 mm of clearance, then the body is too low, and you're obviously not leaving enough space for labels. Putting aside the matter of spreading lepidopterans, some folks like to pin their insects into styrofoam blocks, but very often the foam is too thin and the bodies are mounted too low, accordingly - pinning this way helps get the legs and other appendages nicely arranged in one plane, and prevents the abdomen drooping, but that

*(Continued on page 6)*

# PINE : PARTNERS IN NATURE EDUCATION

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

- Field Study of Birds: Southeast Arizona $295 (01P23) [Thur. 7:00-9:00 pm, June 29 and July (Riverside)/ Various times, Sun.-Sat. July 9-15 (Arizona)/Thur. 7:00-9:00 pm, July 20 (Riverside)]
- Plant Life of the San Bernardino Mountains $145 (01P20) [Fri. 6:00-8:00 pm, July 7 (Riverside)/Sat. 8:00 am-4:00 pm, July 8/Sun.8:00 am-4:00 pm, July 9]
- Natural History of the Bristlecone Pine $165 (01N60) [Mon. 7:00-9:00 pm, July 17/Tue.-Wed. 8:00 am-5:00 pm, July 18-19]
- The Natural Gourmet: Summertime in the Mountains $60 (01P07) [Sun. 8:00 am-5:00 pm, Aug. 6]
- Natural History and Ecology of the Grand Teton National Park $295 (01P06) [Mon. 9:30 am-5:00 pm and 7:30-9:00 pm, Aug. 7/Tue.-Wed. 8:00 am-6:00 pm, Aug. 8-9/Thur. 9:00 am-4:00 pm, Aug. 10]
- Geology and Volcanic Hazards of Mammoth Mountains $155 (01N32) [Sat. 9:00 am-5:00 pm, Aug. 26/Sun. 7:00 am-3:00 pm, Aug. 27]
- **Spiders and Other Arachnids** $90 (02P04) [Sat. 9:00 am-3:00 pm, Sept. 16 and Sept. 23]
- Geology and Natural History of Yosemite National Park: A Weekend of Discovery $125 (01N21) [Sat. 9:00 am-6:00 pm, Sept. 16/Sun. 8:00 am-3:00 pm, Sept. 17]
- A Field Study of Birds: Fall $185 (02P23) [Tue. 7:30-9:30 pm, Sept. 19; Field trips all day Sat. Sept. 23, Oct. 7, 21, Nov. 4, 18]
- Introduction to Bird Banding $325 (02N40) [Wed. 6-9 pm, Sept. 20, 27; Sat., Sun. 6:30 am-4 pm, Sept. 30 - Oct. 8]
- Ecology of the Palm Oasis $130 (02P67) [Fri. 5-8 pm, Sept. 29/Sat. 9 am-5 pm, Sept. 30/Sun. 9 am-4 pm, Oct. 1]
- **Field Entomology** $295 (02P20) [Thur. 6:00-9:00 pm, Oct. 5 - Nov. 9 plus two Saturday field trips]
- Natural History of the Mojave National Preserve $250 (02N30) [Fri. 8-10 pm, Oct. 13/ Sat. 7:30 am-5:30 pm and 7-8 pm, Oct. 14/Sun. 7 am-3 pm, Oct. 15]
- Field Study of the San Andreas Fault: San Bernardino to Palmdale $90 (02N31) [Sat. 8 am-5 pm, Oct. 21]
- Natural History of the Santa Rosa Plateau $105 (02N13) [Wed. 6:00-8:00 pm, Nov. 1/Sun. 8:00 am-4:00 pm, Nov. 5]
- Geology and Natural History of Death Valley $140 (02N25) [Sat. 9 am-6 pm, Nov. 4/ Sun. 8 am-3 pm, Nov. 5]
- A Field Study of Birds: Winter $185 (02P23) [Tue. 7:30-9:30 pm, Jan. 9, 2001/ Field trips all day Sat. Jan. 13, 20, Feb. 3, 17, 24]
- Field Study of the San Andreas Fault: San Bernardino to Mecca Hills $90(03N24) Sat. 8 am-5 pm, Feb. 3, 2001]
- Winter Ecology in Yellowstone $345 (03P01) [Mon. 5-8 pm, Feb. 5, 2001/ Tue.-Thur. 8 am-4 pm, Feb. 6-8]
- Geology and Natural History of Death Valley $140 (03N25) [Sat. 9 am-6 pm, Mar. 10, 2001/ Sun. 8 am-3 pm, Mar. 11]

**ALSO OF INTEREST:**

- Basic Canoeing: Lake Tahoe and Truckee River $180 (01N24) [Thur.-Fri. 8 am-5 pm, Aug. 10-11/Sat. 8 am-noon, Aug. 12]
- A Hiking Adventure to the Canyon Country of Zion National Park $125 (02P14) [Sat. 5:30-7:30 pm, Sept. 23 (Riverside)/ Hiking trips all day Sun.-Tue. Sept. 24-26 (times vary)]
- Hiking in and Near the Coachella Valley $68 (02P01) [Sat. 8:30 am-12:00 pm, Oct. 21 (Riverside)/Hiking trips all day Sat Oct. 28-Nov. 11]
- Nature Writing: A Hands-On Workshop $215 (02N21) [Fri. 8:00 am-9:00 pm, Dec. 1/ Sat. 8:00 am-5:00 pm, Dec. 2/Sun. 8:00am-2:00 pm, Dec. 3]

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

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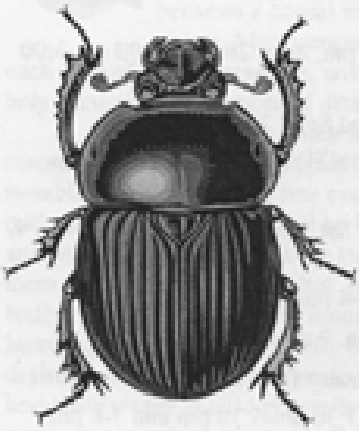
shouldn't be at the expense of having the body at the proper height. Either use thicker foam, or use small cards (e.g. 15 x 20 mm or slightly larger) under the bodies until they're dry, in order to help get good poses without having the body at the wrong height. An advantage of pinning into thick foam instead of using cards is that one can then use brace pins to hold the appendages in place while they dry (the end results can be extraordinary, as anyone who's seen Dave Hawks' specimens can attest). Along these lines, while having the appendages spread away from the body can improve visibility of certain structures, and make for cosmetically appealing mounts, this has to be balanced against the greatly increased risk of having appendages broken off if they're sticking out too far. A possible rule of thumb is that the tarsi and antennal tips should end up no more than 1/3 of the body width away from the body.

As for wing-spreading with insects other than leps, it can sometimes be useful, but it should again be weighed against the increased risk, and the increase in storage space it might require. Ask yourself the following questions: (1) "Is there some potentially important structure or feature of the abdomen that I can't see if I don't spread at least one pair of wings?" (2) "Are there important features of the wings themselves that I can't see unless at least one pair is spread?". If the answer to either question is "Yes", then you should probably spread one pair of wings, generally on the left side of the body (since the pin is placed through the right side). As with leps, the back margin of the forewing should be at a right angle to the long axis of the body. Another thing to consider is that if you have multiple specimens of the same insect collected together, you can spread the wings on one, and leave the other specimens unspread; I've seen this sort of thing many times with people who collect grasshoppers, for example. Liberal use of this particular rule can lead to some interesting discoveries, too, because the abdomens of certain types of beetles and hemipterans (e.g., Buprestidae and Coreidae, respectively), sometimes have distinctive colors and markings that are worth exposing to view, in at least one specimen of a collected series. It may not be traditional for these insect groups, but sometimes new and useful taxonomic characters can be found this way, so it's worth considering.



Finally, I should mention that FERM members who come by on Museum Nights (virtually every Thursday evening) are welcome to use the point punch and pinning blocks in the Museum to make points for their own use. The Museum also has found a pin supplier in the Czech Republic whose prices are less than half what BioQuip charges, and we may be able to help members obtain these pins. We also have a large supply of pins that are suitable for use as brace pins only, and members are welcome to use them.

## RECENT PUBLICATIONS BY FERM MEMBERS:

*(Please submit titles of your recently published taxonomy and natural history articles to FERM editor!!)*

**Heraty, J. M.** 2000. Phylogenetic relationships of Oraseminae (Hymenoptera: Eucharitidae). Annals of the Entomological Society of America. 93:374-390.

**Vetter, R. S.** 2000. Brown recluse and other recluse spiders: Integrated pest management in and around the home. Univ. Calif. Pest Notes #7468, 4pp. **http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7468.html** (article has distribution maps)

**Vetter, R. S.** 2000. A South American spider, *Metaltella simoni* Keyserling (Araneae: Amphinectidae) in southern California.Pan-Pac. Entomol. 76:134-135.

# FERM COMPETITIVE RESEARCH GRANTS

## FERM Collecting Grants

Funds will be made available on a competitive basis for collecting trips or travel that will ultimately benefit the Entomology Research Museum (ERM). The primary benefit being a substantial donation of representative material from western North America, or globally in groups of research strength in the collection. Up to $750 annually is available for local or foreign travel by FERM members. A one or two page outline of the planned trip, participating personnel, purpose, budget, and expected benefit to ERM can be submitted at any time, but proposals will be reviewed and awarded every three months, beginning July 15, until funds are expended. Only one proposal may be submitted per expedition. Please submit requests to Doug Yanega, Entomology Research Museum, University of California, Riverside, CA, 92521.

## FERM Curation Grants

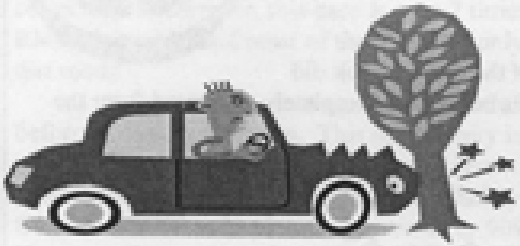
Awards are available to qualified specialists wishing to visit and curate the ERM collection. Up to $750 annually is available for travel and per diem. Requests for funds should include an outline of the project, an abbreviated CV, and budget, and be submitted by July 15 to Doug Yanega (address above).

## Got an idea for a FERM article???

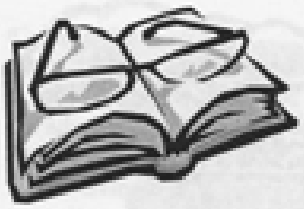
Do you have anything buggy-related that might be of interest to for the FERM newsletter? We really would be tickled pinkish if you would send "stuff" in. Remember, this newsletter won't get published unless we have material submitted from you folks. Feel free to send in photos, articles, recent publications related to insect taxonomy or natural history and even stories about how the Entomology Reasearch 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 on the front page of this newsletter.

# Car Insurance Discount for Bug Chasers

by Rick Vetter



What? Do you mean your entomology affiliation may actually get you something for cheap in this world just because you are an entomologist? You betchum!!! If you are a member of AAA (i.e., the Automobile Association of Southern California or whatever it calls itself), this year, they have instituted a new discount for Professionals. That may be you!!! They are giving a discount to scientists, engineers, doctors and educators. As far as the scientists are concerned, if you have a Bachelor's degree or higher in many of the life sciences (Biology, Zoology, Botany, Entomology, Plusiotisology, etc.) you qualify for possibly a 15% discount on your automobile insurance. So if your insurance is 1000 kronkites, then you get 150 back. That's a big yowza in my corner. However, you can also get this discount if you are a member of the Entomological Society of America. It is obvious that some bean counters out there have demographically determined that entomologists are boring, cautious drivers (except for some of you yahoos running the mountain roads on collecting trips) or that we spend our time in the museum or at home jabbing insects with pins instead of looking for trouble and that we drive beat-up old pickup trucks that aren't worth the deductible if we total them instead of driving shiny black muscle cars for picking up babes or dudes and like, ya know, totally hanging out, experiencing maximum hormone rocket thrust. Dude!!! But to get the discount, you have to be able to prove it. When I attempted to get my discount they rebuffed it the first time because neither of my degrees listed THE SUBJECT IN WHICH I earned my degree. Sooooo, I wrote to the ESA asking for a letter stating that I am a member in good standing. So check it out. You may be eligible for an enough of a discount to actually justify being a member of ESA. You can either mail it in or go down to AAA with degrees in hand. But don't go down there with the most recent copy of the Annals and try to get a discount. Lots of money is involved so they are making sure you ain't a-lyin' to them.



# Book and Reprint Recycling Committee

## Book Auction

Most prior book auctions have occurred at FERM meetings. We would like to try a new concept here by offering books which can be bid upon via email, phone, FAX or snail mail. This way we are able to offer books to FERM members who may not be able to make it to a Riverside meeting.

**Rules:** You get to make one bid on any or all of the books listed below. The highest bid will take the book; there will be no additional competitive bidding after the deadline. All bids must be in by August 31st at some arbitrary hour of the day that I decide when I have had enough so don't wait until the last minute or else it may be past the last minute. It might be very wise to bid odd values such as $51.73 instead of $50 because nice round numbers may end up with a tie and then there will be a tiebreaker round which means you'll have to bid more money. All books are in excellent condition unless otherwise noted. Bids are made to Rick Vetter, Entomology, UC Riverside, Riverside CA 92521, phone 909-787-3550, fax 909-787-3086, vetter@citrus.ucr.edu.

Borror, Delong & Triplehorn. 1981. An Introduction to the Study of Insects. 5th edition. Saunders College Pub. 827pp.

Brues, Melander & Carpenter. 1954. Classification of Insects. Bull. Mus. Comp. Zool. 917pp. (a 1954 update of the 1932 original)

Snodgrass. 1935. Principles of Insect Morphology. McGraw-Hill. 667pp.

Michener & Michener. 1951. American Social Insects. Van Nostrand 267pp.

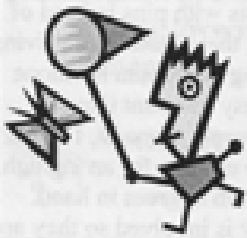
Steinhaus. 1946. Insect Microbiology. Comstock Publ. Co. 763pp. (signed by the author with a note to Ted Fisher "Best Wishes Ted" and the author's signature)

Allwright. (1945) The Controlled Marketing of Citrus Fruit in South Africa. Pub. Univ Pretoria. 224pp.

Ebeling. 1959. Subtropical Fruit Pests. UC Div. Agric. Pub. 436pp.

Quayle, (our own H.J.!!) 1941. Insects of Citrus and other Subtropical Fruits. Comstock Publ. Co 583pp.

Wheeler. 1910. Ants. Columbia Univ. Press. 663pp. (this original publication of the classic book did service at Warner Intermediate School (GASP!!!) and was discarded (GASP!!!). Its binding is completely separated from the text but should readily be repairable.)



## Museum Nights!!

Come to Museum Nights (Thursdays) if you'd like to collect local nocturnal insects around the mercury vapor lamps on campus. Also, we're planning to take MV lights to nearby localities on occasional Thursdays this summer, so show up at the Museum by 7:00 pm or call Doug (909-787-4315) to see if anything has been planned. Stay tuned for other possible field trip opportunities this summer, including a potential second annual **"COLLECTATHON".**