

SCARABS

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Occasional Issue Number 3

August, 1991

Art Evans Dept.

Hot on the heels of the release of the second issue of *Scarabs*, as well as the Insect Fair, was the Second Ever Occasional Doctor Art Evans Ph.D. Memorial Scarab Collectors Get Together. Most everyone was there, either in person, or by telephone.

Oddly enough, the center of conversation was not scarabs, nor even the Doctor himself, yet an obscure passage in that second *Scarabs* issue. It seems there is such a thing as "cunninghaming." The trouble is, nobody could agree just what it is.

We already know Dave Russell takes "cunninghaming" to mean "driving hundreds of miles for a bug, especially *Phobetus panamintensis*, and getting none. Further, you repeat this phenomenon year after year, with the same result."

Big Bill Warner gave Dave a stiff arm to the sternum, spilling the semi-pro basketballer slam dunk champion's Coke. "Everyone knows cunninghaming means to squirt poop from a cake decorating bag onto your own pant leg."

"Yeah? What makes you so sure?" retorted the increasingly bellicose Dave.

"Because I wrote the feature article, that's why!" taunted the Macho Sacred Exalted Grand Left Paramere de los Hermanos de Caca y Presidente de SOLA.

Bad Bob Duff stepped between them, clutching each guy's throat. "You're both wrong. Cunninghaming is arriving in Arizona, setting up your mercury vapor light, then waiting until dusk to find out you don't have any gas, all the gas stations are closed and

there is no siphon hose to fill your generator. You then tear through all your stuff, looking for it with the fervor of a banana-brained madman. Finally, you drive all the way into town to buy one. You show up with an expensive garden hose, which you hack to pieces. You then have your hose. You start your generator at 10:30 PM, after most of the good bugs have gone to bed. *That*, my friends, is cunninghaming."

"Why should we believe you?" Bill and Dave cried.

"Because I am the editor of *Southwest Clodhopperist*," proffered Bob.

"So who cares about Orthoptera?" they cried again.

Bill and Dave stood silent, lump-throated. The phone rang. It was Pleocomaniac Delbert LaRue. When asked to settle the squabble, Delbert only made matters worse: "Cunninghaming is going after *Pleocoma octopagina*, which normally flies from late November through February, in September."

Alex Reifschneider grabbed the phone. "You dingbat. Cunninghaming is trading a nice series of *Megasoma thersites* for a couple of junk *Phyllophaga* from back east."

Doctor Evans, Ph.D., stepped into the fray. "I got into one of my mad tizzies once when Rich was digging up *Polyphylla erratica* faster than I could photograph them. Now *that* is cunninghaming."

Delbert then recanted. "No, cunninghaming is going for *octopagina* two full months *after* their last flight."

Co-editor Barney grabbed the phone and smash-hung-up. "I know the

answer. It means hearing there are scarabs out on Catalina Island, then going the very next weekend, despite the presence of a big storm. You get there. It is cold and windy, so you find maybe one dead specimen of each of the beetles there. You then get really seasick on the way home. You are sick for three days, one for each specimen."

Rich overheard this last remark. Recanting in his mind the bleakly vivid events of the stormy Catalina ride which took place mostly hanging over the sides and back of the boat, he simply snapped. He lunged at Barney and yelled "Greco-Roman?" He pinned poor Barney in 1.9 seconds.

"Tell them what happened in September, 1961. The East Verde River near Payson."

"No way!" squealed the pretzeled Barney. Rich tightened his grip. "Iiiiiiiiiiiiiiih!" screamed old Barn.

"Come on. With Terry Taylor. Tell them what happened."

"O.K. O.K. He told me I had a pretty wrist watch. He wanted to see it. So I took it off and gave it to him to examine. He looked at it, then offered to trade his *Xyloryctes jamacaicensis* for my *Dynastes granti*, which I had just caught the night before, one for one. He told me it was a good trade, so I took it."

"Then what?" gruffed the former NCAA wrestling finalist.

"He threw me in the river," replied the embarrassed and defeated Barney.

Rich was relentless in his wrestling hold. "So I'm not the only poor decision maker here, am I?"

"No," whimpered Barney, fading fast. "But Rich, I was in the seventh grade. You are doing stuff like that in your

thirties. Besides, compared to Terry Taylor, I guess we're all naive beginners. Even his daughter out-collected me one night on Mount Wilson."

Former power lifter Alex intervened. "Hey Rich, that's his left arm, and since he is left-handed, and he is your dentist, you better let him go and apologize. Come to think of it, he's done work on me."

"Me too," said Dr. Art, Ph.D. "I love hearing all those old rain beetle stories about Frank while he works on me. It makes the time go by fast. Let him up and apologize, or you will regret it at your next appointment."

Rich did so and everyone went home friends. As Barney left, he was heard to mutter something about never getting his watch back, either. Sadly, the issue of "cunninghaming" never was resolved. Another typical Doctor Art Evans Ph.D. Get Together goes down in history.

AC Lights

The 12 volt car battery, DC to AC converter and AC strip with blacklight were once common. The components were readily available and there were few alternatives. The batteries were heavy, however, and the converters often blew their power transistors. Moreover, the converter was often a thirsty power drain.

With the advent of DC lights, things got more efficient, transportable, and affordable. But wait, the AC is making a comeback! It seems that collectors are flying to the tropics with a mercury vapor lamp and portable generator. Hooked to this are several AC blacklights, strung together with light-weight lamp (zip) cord.

This cord can be purchased in 250 foot reels for about \$23 or so at Home Depot. Two reels and you can put

lights far enough away to draw different bugs: up a path, around a corner, perhaps even in a different life zone. Voltage drop is not a problem, even with extension cords totaling 500 feet in length, because these lights draw so little current. Inexpensive, lightweight plastic reels are available which hold 500 feet of cord very nicely, making set-up and break-down very easy.

The old style AC strip lights are simply too heavy to pack for an airline flight. What is needed is a cheap, light-weight AC light. Those of you considering making both AC and DC lights will want to modify the DC light instructions given in the premier issue. Instead of connecting the four-wire cord that goes to the lamp into the DC box directly, use a connector (see below) to make it detachable. That way, you can use the same blacklight tubes on your AC boxes as well.

The reason we need the tubes detachable from the box are three: to use tubes on both DC and AC boxes, to help eliminate those terrible wire tangles when boxes and tubes are heaped together, and to allow easy shipping of the tubes separately in a smashproof container.

The guts for this light come from the commonly available "18 Inch Under Cabinet Light Fixture," made by Lights of America. It is a real cheapie, but we are going to throw most of it away. It is available in numbers, hanging on the shelves (sometimes in mated pairs) at Home Depot for \$4.96. Take the light apart and save the coil, power cord, and starter device, which consists of a small neon tube and coil. The assembly should look as diagramed in Figure 1.

Special Note To Bill Warner:

We realize that this wiring stuff may be confusing. If you have any questions, call Barney at home (714) 593-5455. He will give you a special, more in-depth presentation.

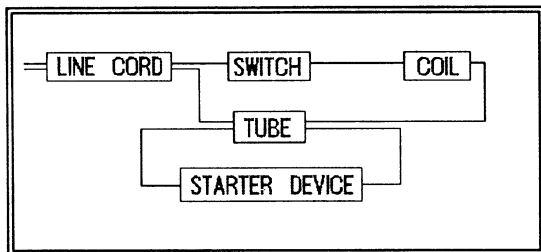


Figure 1.

These will be mounted in a Radio Shack "Metal P-Box" Cat. No. 270-239, selling for \$1.99. The coil has no means to mount it, but it fits exactly into this particular box, so no mounting hardware is needed. The special connectors mentioned above are the Radio Shack "4-Pin Mic Plug" Cat. No. 274-001, for \$1.69, and the "4-Pin Mic Jack" Cat. No. 274-002, for \$1.29.

Cut two holes in the box, slide the power cord through a grommeted hole then tie it in a knot on the inside of the box. Mount the jack in the other hole. Follow this wiring procedure exactly so you do not goof up: mount the starter device across lugs # 2 and 4, and connect the line and coil to lugs # 1 and 3 on the jack. Because it is difficult to solder stranded zip cord wire to the lug, solder a small piece of solid wire onto lug # 1 and solder this to the stranded wire. The other stranded zip cord wire goes to the coil. The other wire from the coil goes to lug # 3. Follow the wiring diagram in Figure 2 if you get confused.

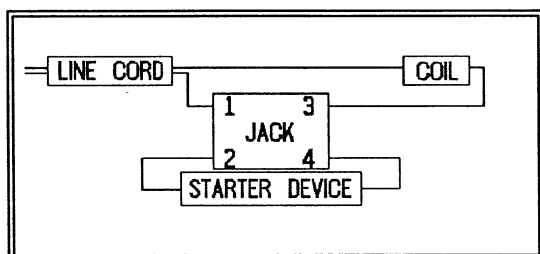


Figure 2.

The lamp can be connected to a four-wire cord. Remember to buy stranded

*In Defense of Floridian
Scarabaeologists' Aromatic
Honor*

Dung: Human vs. Swine

Which is Best?

by Paul Skelley

wire for durability, as described in the first issue. The tough connection to make is the other end of this wire to the 4-pin plug. This is a tight space, so make sure the insulation is right up to the lug before you solder. This is important: the wires coming from one end of the tube connect to lugs # 1 and 2, the wires from the other end go to lugs # 3 and 4. Examine your work carefully. While not all of you possess the extraordinary hand-eye coordination of, say, a dentist or biology teacher, you should be able to do it. If in doubt, wrap small pieces of electrical tape around the lugs to prevent short circuits, or cover with shrink tubing.

Six tubes can be wrapped in foam padding and packed inside a four inch diameter sewer and drain pipe. Place caps on either end for added strength and protection. We suggest gluing one cap permanently with PVC cement. Spare mercury vapor lamps can also be packed for airline flight in this fashion. Wrap your sheets around these tubes and place them in the center of your suitcase or duffel bag.

This system has already made one trip each to Panama and Chiapas with no problems. Those of you considering bringing AC lights aboard an airline flight will have to make a value judgment about their added weight and whether the extra scarabs they bring in is worth the trouble. The boxes themselves are little: six can easily fit into a lunch bag. The tubes and cord add more weight, though. Cotton groundsheets will prove somewhat heavy, so perhaps white plastic sheets would prove the best, lightest groundsheet to place the light over.

It is sincerely hoped that these AC (and DC) lights will prove inexpensive, durable, lightweight, and invaluable to maximize your catch. Let us know of any improvements or refinements you come up with.

My experience collecting with dung throughout the U.S., though not as extensive as Bill Warner's, (see *Scarabs*, issue 2), have led me to some observations on why we Floridian scarabaeologists prefer swine feces. Here in Florida, especially in Gainesville, we have access to high-tech swine farms that use high-quality feeds which produce high-quality dung. This potent material is available in large quantities at a moment's notice. There are many stories of the poor scarab collector on a long trip, who is unable to produce the needed material until the last day when Montezuma attacks. Alas, too little, too late. I have found that need and availability usually determine which "flavor" is used.

It is understood that many other factors could determine the effectiveness of said traps, such as what food produced the dung, the time of year, the time of day or night, weather, locality, species of beetles sought, size or amount of bait, etc. Therefore, before statements can be made as to whether human dung or pig dung is actually the best bait, a "proper" experiment should be conducted comparing the effectiveness of these excrements. So Bill, you will be receiving an immense package in the mail shortly which should be opened **VERY CAREFULLY**. Please use the enclosed material simultaneously with your homemade brew as you travel the country to trap dung beetles, or "lower" scarabs, as Dr. Art Evans calls them. You can then compare the catches. This should clear up some questions about the best bait!

Editors' Note

We want to thank Paul Skelley, Florida State Collection of Arthropods, for this contribution. We wonder if Paul knows who the "mystery collector" is, who carries swine dung in a glass container in his hot car, mentioned in *Scarabs Occasional Issue #2*. It should be noted that neither the editors nor Bill Warner especially, have had any trouble delivering high-quality bait of both kinds, no less, on demand. There are some who have hinted that there is a strong correlation to what we may be full of!

We also ask whether any readers have tested the perching behavior theory of dung beetles by placing traps at varying levels off the ground. You may recall that Dr. Howden postulated that large dung beetles perch higher off the ground so that they can better detect dung deposits large enough to support their needs. This way, they do not waste valuable energy flying to a feces too small to support their grubs. Therefore, if traps containing small dung samples of the same size were placed at varying levels off the ground, the higher traps would produce a higher percentage of larger dung beetles, also known as "Ryanidae." We thought that John Ryan might do this experiment, but he would probably put all the traps high in the canopy, trying to discover some 20 pound bowling ball-sized bejeweled *Phanaeus* major male only, of course.

We might add that if you are going to trap an area for a few hours, and not return, you may want to use Bill Warner Dung Holding Method #1, which is gauze. The dung will have greater surface area exposed for enhanced attractiveness.

If you are planning on returning to a site a day or so later, Bill Warner Dung Holding Method #2, the souffle cup, may be superior. It exposes less dung to the air, but this should prevent

desiccation over time and also protect the dung better from washing away during a rain.

Dr. Don Thomas Leaving Chiapas!

Don Thomas and Chiapas. These two names seem synonymous to the many intrepid entomologists, both professional and amateur alike, who have ventured to collect in the Mexican state of Chiapas. For years, Don and his wonderful family have welcomed collectors and researchers from many countries to use their home as a "base of operations" to work from. Speaking from experience, Don's home was most welcome on those days and nights that it rained buckets without stopping. Don's knowledge of the state, special collecting areas, expertise in the field, and all of his help in general have been invaluable to all who have stayed with him.

Collecting and spending much of his "spare" time in the field, Don has contributed significantly to the entomofaunal knowledge of Chiapas. Sending material to specialists has proven scientifically worthwhile, as previously undescribed species have been worked-up, as well as ranges and questions relating to described species clarified. There is even a Trichiine, *Trigonopeltastes thomasi* Howden, named in his honor. While in Chiapas, Don has been working on a project, "Scarabaeidae of Mexico: Chiapas - A Faunistic Analysis," which will provide a very useful annotated checklist of the scarabs in Chiapas. He will give a presentation on this project at the ESA meetings in Reno, Nevada this December.

Don has been in Chiapas working for the USDA on the screwworm project, although his expertise is in Pentatomidae, aka "stinkbugs." In two months, Don and his family will be back in Texas, as his five year stint in Chiapas is almost at an end.

We would like to take this opportunity to thank Don for all of his kindness, help, and effort. It is certain that future researchers and collectors in Chiapas will miss Don.

THANKS DON....FROM ALL OF US

Entomological Society Of America Meetings

This year's ESA meetings will be held in Reno, Nevada, December 8-12, 1991. This year's meetings will hold a good deal of interest in store for scarab workers, as there will be approximately ten presentations dealing with Scarabaeidae. The following is a tentative list of presenters for the symposium "Current Concepts in the Systematics, Biology and Ethnoentomology of the Scarabaeidae."

Introduction. B. C. Ratcliffe.

Serica since Dawson (Scarabaeidae: Melolonthidae). P. Lago.

Subgeneric Phylogeny and Mating Behavior of *Cremastocheilus* Knoch (Scarabaeidae: Cetoniinae). W. Warner.

Passalidae: Biodiversity and Biogeography of Big Beetles. J. Schuster.

Wet and Wild: Life History and Behavior in *Pleocoma* (Scarabaeidae: Pleocominae). F. Hovore.

Generic Relationships in the Rhyparina and the Problem of Convergent Characters (Scarabaeidae: Aphodiinae). H. Howden.

Recess.

Reflections on the Biogeography of the Rutelina (Scarabaeidae: Rutelinae). M. L. Jameson.

The *Phyllophaga* of Louisiana: Species Groups and Distribution Patterns (Scarabaeidae: Melolonthinae). E. Riley.

Synapomorphies or Aposomatomorphies: Mimicry, Chemical Ecology, and Behavior Among the Scarabaeinae A Century After Bates. (Scarabaeidae: Scarabaeinae). B. Gill.

The Significance of Scarab Beetles in the Ethnoentomology of Non-Industrial, Indigenous Peoples (Scarabaeidae). B. C. Ratcliffe.

Scarabaeidae of Chiapas, Mexico: A Faunistic Analysis. D. Thomas.

Discussion.

Thanks to Dr. Brett Ratcliffe for sending us the tentative list of presenters. However, he inadvertently left out the two feature presentations everyone has been looking forward to and talking about for months. After the short discussion, there will be two standing-room-only lectures:

Hi-Tech Techniques: The Laser Trap in Quest of the Long-Thought Extinct *Aphodius lividus* Oliver (Scarabaeidae: Aphodiinae). B. Streit.

The Neverending Story, Or, How To Bag *Phobetus panamintensis* Hardy In Awesome Numbers: A Goof-Proof Approach (Scarabaeidae: Melolonthinae). R. Cunningham.

Autograph signing (\$10 fee).

Harmonic Convergence

Here is a letter from Bill Warner regarding the ESA or pre-ESA meeting:

Dear Fellow Scarab Worker:

You are cordially invited to attend the third occasional meeting of SOLA, (Sacred Order Of The Lamellate Antennae), an informal Scarabaeidophilous aggregation, on Saturday, December 7, 1991, at 5:00 p.m. (the day before the Reno ESA meetings) for a night of SCARAB BS with friends and colleagues. A VCR

and slide projector will be available for anyone who wishes to bring scarab-related videos or "Blackmail Slides" of fellow scarab workers on collecting trips. At least two microscopes will be set up, so bring your scarab "WhatsIts" and other interesting specimens. Specialists who are willing to do some quickie determinations might want to bring some critical literature with them.

The meeting will take place at my parents' (to use Brett Ratcliffe's words) "palatial vacation retreat" on the north shore of Lake Tahoe, a 1.5 to 2 hour drive from Reno, unless it is snowing. If there is sufficient interest, a van pool can be arranged, leaving from Reno about 2:00 p.m. Saturday. For those who would like to spend the night, the site boasts five bedrooms, one of which contains four bunk beds and a hide-a-bed, as well as four bathrooms. There is plenty of couch and floor space for the sleeping bag crowd, should all of the bed space be filled. Private rooms will be reserved for couples on a first come, first serve basis so please "RSVP ASAP." The site is minutes from several ski areas for those who want to spend Sunday on the snow.

If you are interested in being part of what will hopefully become the first "Scarabaeologist's Harmonic Convergence," write or give me a call soon at (602) 821-1258 (home) or (602) 285-1660 (work) for more information. I will look forward to seeing you in Tahoe!!

Sincerely,

Bill Warner
2338 W. Rockwell Court
Chandler, AZ 85224 USA

More Maps

Delbert LaRue has informed us of two additional sources of maps. The state of Nevada sells nice quadrangle maps of the state. You can order their catalog, but we will save you the

trouble. Order the *Nevada Map Atlas* for \$12.00 and the *Geographic Names Directory* for \$10.00, postpaid. The *Atlas* contains reduced scale versions of all their maps, while the *Directory* serves as an index. Which each order you receive a nice state map. Make checks payable to "Nevada Department of Transportation," Map Section, Room 206, 1263 South Stewart Street, Carson City, Nevada 89712.

Mexican topographic maps can be ordered from Map Centre, Inc., 2611 University Avenue, San Diego, California 92104-2894. Their phone number is (619) 291-3830.

"Scarabs" Invades Pan-Pac

At a recent meeting of the Pacific Coast Entomological Society in San Francisco, Secretary Larry Bezark appropriately introduced *Scarabs* to the members. We had a spy there.

He announced that "During the course of the last several years, there has been a real proliferation of newsletters dealing with insect groups. It seems, in fact, that every time someone breaks wind, another newsletter surfaces. On that note, I'd like to announce the availability of *Scarabs*, an occasional newsletter about, surprisingly, scarabs." Everyone seemed to get a big kick out of the announcement.

Thanks for the plug, Bez! Looking back at the content of our first two issues, your words were quite appropriate, although us "scarab guys" know it takes *a lot more* than merely breaking wind to bring in those ("sorry" to Dave Edmonds and Bruce Gill) "lower" scarabs.

It sounds like Larry has been hanging around "those scarab guys" again. Larry is a Senior Research Entomologist working for the state of California. He collects all groups, but his main expertise is Asilidae. Robber flies sometimes end up in our nets and

jars; now we can do something with them. Larry would enjoy seeing them unless you already have a place for them. He may even be able to magically turn them into a scarab or two for you.

Collecting Reports Chiapas, Mexico

RA Cunningham, J. Beierl and E. Beierl, collectors. Hwy 199, 14 km S. Palenque, along Road to San Manuel, 600m, 16-VI-1991, lowland rain forest, MV and BL. A few of the highlights were: *Pelidnota velutipes*, *P. notata*, *P. punctulata*, *P. centroamericana*, *Plusiotis diversa*, *Spodistes mniszehi*, *Macropoides crassipes*, *Cyclocephala maffafa*, *C. pubescens*, *Aspidolea fulginea*, *A. singularis*, *Ceraspis mexicanis*, *Ceraspis* sp., *Stenocrates* sp.

Hwy 190, 6km SE La Trinitaria, 1500m, 18-VI-1991, tropical deciduous forest, day collecting: *Euphoria leseuri*, *Phanaeus wagneri wagneri*, *P. endymion*, *Trigonopeltastes* spp., *Pelidnota aurescens*.

Hwy 186, East of San Cristobal de Las Casas, 6km SW Chilil, 2350m, 19-VI-1991, MV and BL, pine-oak forest: *Plusiotis pehlkei*, *P. quetzalcoautli*, *Viridimicus aurescens*, *Geotrupes guatemalensis unidentatus*, *Aphodius* sp. in large series.

20 km N. Ocozocuatla, entrance to Parque Laguna Belgica, 1100m, 20-VI-1991, montane rain forest: *Cnemida aterrma*, *Chlorota limbaticollis*, *Chasmodia viticollis*, *Spodistes mniszehi*, *Macropoides crassipes*, *Xyloryctes lobicollis*, *Golofa tersander*, *Coelosis biloba*, *Heterogomphus florhi*, *Amithao cavifrons*, *Pelidnota notata*, *P. punctulatus*, *Macroductylus dimidiatus*, *Hoplia* spp., *Stenocrates* sp. and *Macroductylus* spp. in large series.

Parque Nacional El Sumidero, vicinity of Mirador El Coyota, 21/22-VI-1991, tropical deciduous forest, day:

Apeltastes elongata, *Trigonopeltastes archimedes*, *T. sallei*, *T. glabella* (black form?), *T.* sp., *Balsameda pulverulenta*, *Cotinis pauperula*, *Guatemalica marginicollis*, *Euphoria irridescens*, *Phanaeus w. wagneri*, *P. endymion*, *Canthon femoralis*.

Hwy 190, 7km E. Rizo de Oro, Hotel Paty, rained out: *Heterogomphus pehlkei*, *Anomala subaenea*, *Phalangogonia obesa*, *Cyclocephala testacea*, *Pelidnota aurescens*, *P. strigosa*, *P. punctulatus*, *Phanaeus tridens pseudofurcosus*.

We had about three nights that were a total loss due to the rain, but we still had a blast. We did manage to come up with 55-60 scarab genera for the week. Brett Ratcliffe bested our efforts as he pulled out 61-63 scarab genera about a week and a half before us, while visiting Don in Chiapas. For those interested in Cerambycidae (ugly!), Josef reports that we did quite well in that department also: 400+ specimens of 160+ species, some undescribed.

Closer To Home

Mescalero Sand Dune trip, RA Cunningham and Alex Reifschneider, collectors: USA: New Mexico, Chaves Co., 9.5 mi. W. Caprock, 1.7 mi. SE Hwy 380, 29-VII-1991, 1400m: *Polyphylla mescalensis* (100+), *Polyphylla* sp. near *pottorum* (100+), *Omorgus nodosus*, *Bradyscinetulus fossatus*, *Eucanthus* spp. Also from the above area on 26-V-1991, RA Cunningham, J. Beierl and E. Beierl collectors: a mating flight of *Cremastocheilus nitens*, 26 collected.

Dave Russell's and Larry Bezark's "gold mine," the weekend of June 15, 1991: California, Mt. Hermon, *Polyphylla barbata*. CA., San Luis Obispo Co., Oso Flaco Lake Dunes: *Hoplia* n.sp., *Lichnanthe albipilosa*. CA., San Luis Obispo Co., Atascadero. 70(!) *Polyphylla nubila* including one female! Nice job Dave!!!