

SCARABS



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An Inexpensive Yet Effective Setup for Beetle Photography

by Paul O. Kaufman

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Two finished images using this setup showing dorsal and ventral views of *Paracotalpa granicollis* Haldeman.

Editor Barney elaborated on a very nice lighting tent in *Scarabs* 28: 5-7 for photographing shiny pinned specimens. I needed photos for a journal article and wanted very much to set up something similar. Not being an endodontist nor having the unlimited funds available to one,

I needed to find a way to make something from available materials.

Fortunately I have a good macro lens (only a 100 mm - so Barney's 200 mm is twice as good, right?) and several speedlites, so I was sure I could figure something out.



Photo of clipboards and clamps as a framework.

I started with two office clipboards held vertically on their long sides with wood clamps. Over these I hung pieces of aluminum foil to form the rear reflectors. Lacking sheets of translucent plastic, I taped a piece of tracing paper across the front. A piece of small scrap wood was placed across the two clipboards and another sheet of tracing paper laid on top of it.

You can use a light (white paper) or dark (black velvet) or even neutral (something gray...) background for your specimen - try several and see



Photo of foil and front tracing paper in place.

what you like best. My specimen was clothed with long white hairs, so the black background looked best. By the way, dust specks can be easily removed in Photoshop*!

Small pieces of aluminum foil can be dropped in as reflectors
- I used one on the camera end and one along the bottom of the tracing paper to block the direct light from the flash. You can use masking tape to hold these in place if necessary. Between sessions, I leave the aluminum strip attached on the tracing paper end.

This whole setup can be put together on top of a piece of Styrofoam to provide a pinning surface, or you can use a small piece of modeling clay or stickytack to hold the pin. The clay or sticky-tack works better to hold the head of a pin, so I usually don't bother with the Styrofoam. None of this is critical.

Place your flash or flashes on the end of the triangle with the tracing paper and point them in the general direction of the specimen, or toward the "roof." You can experiment with the number and direction of the flashes. I got best results with my three remote flashes pointed up at about a 45-degree angle. You will need a way to trigger the off-camera flash(es) and there are a multitude of ways to accomplish this depending on your equipment. Cords and a manual flash will be cheapest but require more experimentation.

Flashes made by your camera manufacturer, designed to work with your camera will be easiest and you can set them up as "master" and "slaves" but they will be more expensive. There are also a number of flash triggers available - talk to a camera store if you want to go this route.

I set my camera in manual mode with the exposure set at 1/200 of a second and f/16. Some people feel that the middle range of f/-stops are actually sharper than using the lens closed all the way down, although the depth of field is less. I have found that f/16 works very nicely! By shooting at 1/200 there is no need of a tripod, which can be clumsy to set up. You will need to set your focal distance and then move in and out to bring the image to sharpness. At f/16 and smaller (larger f/ number), there is enough depth of field that you can be a little off and still get a sharp image. That being said, the photos you produce with this setup will not be equal to an automontage image!

Take several pictures and then bring them into the computer to evaluate them. The screen on the back of the camera is not high enough resolution to really tell if you got the shot. You can set this tent up in a few minutes and put it away (flat) just about as fast but it is easier to shoot more pictures right away if you need to.

Post-processing work in Photoshop® includes removing dust and carefully either dodging

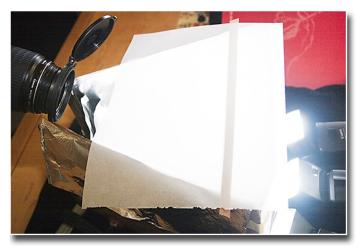


Photo of roof and flashes in place. Macro lens pointing in hole. How did Barney get a picture of his camera??? Mirrors???

(white) or burning (black) the background to clean it up. Apply curves and sharpening and you should be ready to publish!

Binder clips and translucent sheets of plastic would be really nice but I'll probably save the money and stick with this - the results are very nice! Editors' Note: Paul used this setup for the article "Biological Observations and a New State Record of Paracotalpa granicollis Haldeman (Coleoptera: Scarabaeidae: Rutelinae) in New Mexico" by P. Kaufman and M.L. Jameson. Coleopterists Bulletin, Volume 63, No. 4, December, 2009, pages 513-515.



Megasoma elephas model (a Christmas present created by my children...) taken in the light tent. I should have built a bigger one for this guy!

An Entomological Trip to Argentina Part II

by Olivier Boilly

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Photo 1: Argentinean two-story bus.



Photo 2: Iguazu falls.

IV) Misiones - Iguazu falls

We took a bus to go to Puerto Iguazu. After more than 20 hours in a big bus (Photo 1), we arrived in Misiones Province. We rented a car and put eight dung traps just 20 km beyond Wanda.

This forest is very moist and it is difficult to walk because there are many plants everywhere.

We arrived at Iguazu Falls (Photo 2). The place is fantastic but there are a lot of tourists.

We slept near Wanda (Photo 3) and searched for insects at the street lights but found only an Oryctini. The day after, we picked up the traps and we caught Canthon ornatus Redtenbacher, 1867, Canthon quinquemaculatus Castelnau, 1840, Coprophanaeus cyanescens Olsoufirff, 1924, Coprophaneus saphirinus (Sturm, 1826) and a few *Eurysternus* sp. During the day, we caught some beetles and females of Pelidnota sordida (Germar, 1824) (Photo 4) and Macraspis morio Burmeister, 1844.

We left this place in a bus to go to Corrientes Province.

V) Corrientes

We rented a car at the Corrientes bus station and we went straight away to the National park of Mburucuya. The biotopes (Photos 5 and 6) are really different compared to Misiones. It is wet grassland with a few palm trees. We saw some ponds. I found one *Canthon heyrovskyi* Balthasar, 1939 on fox dung, my first time catching this species in Argentina.

We went to this place to catch the red form of *Sulcophanaeus imperator* (Chevrolat, 1844) near Mercedes, but in all the dung I searched, I found nothing. Perhaps it was not the right season.

I put some dung traps near Saladas, and caught a small species of *Eurysternus*, *Canthon lituratus* (Germar, 1813), *Deltochilum irroratum* Castelnau, 1840, *Onthophagus bucculus* Mannerheim, 1829, *Polynoncus bifurcatus* (Vaurie, 1962) and a lot of *Dichotomius* sp.

During the night, we caught some *Navosoma luctuosum* (Schoenherr, 1817) (Cerambycidae) and a lot of *Dyscinetus* sp. and a *Geniates* sp. under the streetlights of the city of Saladas.

We left by plane for the Valdes Peninsula.

VI) Valdes Peninsula

This place is unique: it is sandy everywhere (Photo 7). Roads are made with small stones. We

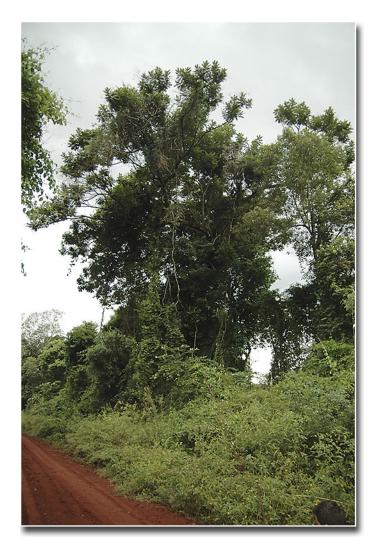


Photo 3: Forest near Wanda.



Photo 4: Male Pelidnota sordida (Germar) in the wild.



Photo 5: Parque Nacional Mburucuya.



Photo 6: Parque Nacional Mburucuya.



Photo 7: The Valdes Peninsula.

sometimes stopped to catch insects on dead guanacos. Unfortunately, we found no Trogidae, only a few Canthonini and Histeridae. Along the ocean, I found two Canthonini of a very strange species.

We next took a bus to the city of Mendoza.

VII) Mendoza - San Luis - San Juan

We rented a car and we took the road to Uspallata (Photo 8) to see the famous high mountain of America, the Cerro Acancagua (6,962 meters!).

During the night in Uspallata, I caught a few Orphnidae and nothing more. The nights are very cold at this height (2,040 meters). We went to this place only to see the landscapes and mountains; I found only a few insects.

We took the road to San Juan and Matagusanos to catch the green form of *Sulcophanaeus imperator* and in a sandy place, we caught only one female (which was not green!) on a dead cow and we were attacked by a lot of mosquitos!

After, we went to Caucete and we caught some beetles at the exit of the city: There was a new Eucranini for me: *Anomiopsoides cavifrons* (Burmeister, 1871), smaller than *Anomiopsoides heteroclyta* (Blanchard, 1845) (Photo 9) which has a hole between the clypeal outgrowths.

In Chepes, we tried to find some other Eucranini. I caught only one female *Ennearabdus lobocephalus* Harold, 1868 (a very rare species) in fresh dung and a lot of *Anomiopsoides heteroclyta* and *Bolbites onitoides* Harold, 1868.

During the night in Chepes, we found a lot of *Heterogomphus* gracilicornis Prell, 1912 and *Calosoma argentiniensis* Csiki, 1927, very common species at this time.

The next day, we took the road to San Luis and we stopped in Lujan. In these places, our dung traps attracted a lot of species: Canthon curvodilatatus Schmidt, 1920, Deltochilum gibbosum (Fabricius, 1775) and Sulcophanaeus imperator. During the night, I was looking for insects under the street lights, and it was incredible, something I have never seen before: hundreds of Calosoma argentiniensis, some Malagionella argentina argentina Gillet, 1911, Omorgus suberosus (Fabricius, 1775), Coptopteryx sp. (mantid), and two Zefevazia quinquedentata (Felsche, 1909)! An unforgettable night!

We took the road to the National Park Sierra de las Quijadas and on the road, we saw some very fast beetles running on the road, looking like *Anomiopsoides* sp. but more convex. It was *Glyphoderus sterquilinus* Westwood, 1837 (Photo 10), a very interesting species of Eucranini.



Photo 8: Landscape in Uspallata.



Photo 9: Anomiopsoides heteroclyta (Blanchard) male.



Photo 10: Glyphoderus sterquilinus Westwood.



Photo 11: The landscape near Rio Gallegos.



Photo 12: The male *Taurocerastes patagonicus* Philippi out of his burrow.



Photo 13: The burrow of the male *Taurocerastes* patagonicus Philippi seen above.

We came back to Mendoza and we took a bus in Rio Gallegos to go to Patagonia.

VIII) Patagonia

In Rio Gallegos, after 18 hours in a bus, we rented a car and we wanted to catch the terrible *Taurocerastes* patagonicus Philippi, 1866, but a friend from Patagonia told me that this species is active in December-January. So I was not sure I would find it. We were detoured on Ruta 3 leaving Rio Gallegos. We followed the Ruta 3 for 15 km. I took the left road, a very bad one. I saw some herds of sheep (Photo 11). We stopped on the road and suddenly I saw something. I opened the door and caught a beetle on the road, it was a giant male of Taurocerastes patagonicus (Photo 12), so they were active! The wind was very strong at this place. The landscape is flat and it is almost possible to see the ocean. We stopped at this place and we searched for this species, but after one hour, we had found only a dead one in a spiderweb. But as we had seen some burrows (Photo 13), I tried to see inside. The burrow was very deep and irregular. I felt with my fingers something smooth and hard: it was a female Taurocerastes patagonicus! So I tried to catch them in burrows. But a policeman stopped us and told it was forbidden to walk on this area because of the presence of natural gas and petrol. So we went back with only a few beetles.

The days later, we went to El Calafate (Photo 14) to see the famous Perito Moreno glacier.



Photo 14: Landscapes near El Calafate.

There were no scarabs at this place, which was very cold and dry.

After two days we came back to another *Taurocerastes patagonicus* place and we caught more pairs with very big specimens. Then, we went to Buenos Aires.

IX) Buenos Aires

In Buenos Aires, we walked in the city parks (Photo 15) in the twilight because it is possible to catch *Diloboderus abderus* (Sturm, 1826) (Photo 16), a very common species there. They make burrows and leave them in the twilight under the streetlights. Females are less common than males. During the day, you can see a lot of dead beetles in the city parks.

The End.



Photo 15: A city park in Buenos Aires.



Photo 16: Diloboderus abderus (Sturm) in the wild.

My 2009 Quest for Rare Aphodius in the South of France

by Olivier Décobert

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One once used the genus *Aphodius* for a majority of small scarabs belonging to the subfamily Aphodiinae. Presently, there are many subgenera which describe these groups of scarabs, linked by their phylogenic affinities.

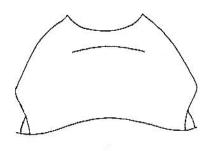
Like many other entomologists, I began my field research (more than 35 years ago...) with a preference for the largest (more than 1 cm) species. When I found a very tiny one, I collected it but didn't specifically search for tiny specimens.

Later, I began to realize that a lot of beetles are small, and having now collected the majority of the species measuring more than 1 cm, I became more and more interested by the less showy species. I am presently trying to find new Aphodiinae, and, as I live in the North of France, I quickly found (2007-2009) nearly all the *Aphodius* species of my region (see *Scarabs* 49 for some of them).

I knew that rare and unique *Aphodius* only exist in the South of my country so it was a challenge to search for them. 2009 was a good year for this quest. In February, I found *Aphodius* (*Ammoecius*) *elevatus* (Olivier) in cow dung near Sorède, on the edge of the "Albères" mountains (Oriental Pyrenees, see *Scarabs* 51), at a low altitude. This scarab is typically a Spanish species, but it exists in a few localities in the South of France, where it is rare. The subgenus *Ammoecius* is easy to recognize because of the special hollow shape of the clypeus.



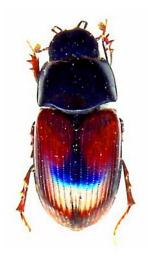




Clypeus of Ammoecius.

Ammoecius elevatus is between 6 and 8 mm. The other French species is *A. brevis* (Erichson), which is closely related to *A. elevatus* but smaller (4-5 mm).

In April, I was on a holiday vacation on the southern coast of France in the region of Béziers and was lucky enough to find *Aphodius* (*Biralus*) *satellitius* (Herbst). It was in only one place, in a meadow with horses (and their dung...), not far from the sea. I found a lot of these scarabs here, whose size is from 6 to 8 mm. The unique aspect of the elytra (red with black in the center) makes this species easy to identify.







A. (Biralus) satellitius (Herbst).

A. (Coprimorphus) scrutator (Herbst).

Aphodius conjugatus Panzer.

In August, I was again in the "Albères" mountains where I found *Aphodius* (*Coprimorphus*) *scrutator* (Herbst). This time, it was at a high altitude (about 1,200 meters, on the "Pic Neulos") in cow dung. It is the biggest Aphodiinae in France (up to 15 mm).

I was already happy with all these discoveries, which added many smaller, less spectacular *Aphodius* to my collection. But I now wanted to find one last species, *Aphodius conjugatus* Panzer. It is an *Aphodius sensu stricto*, belonging to the same subgenus as the very common *Aphodius fimetarius* Linnaeus (see *Scarabs* 49).

I knew that it was an autumn and winter species, localized in the South of France, and I first searched for it at the end of October in the "Albères" mountains. It was a failure, even with some clues given by other entomologists. I came back at the end of December, first searching in the area of Sorède (low altitude, about 200 meters), where I again found not only *Ammoecius elevatus* (Olivier), but also many other dung-feeders like *Typhoeus* and *Geotrupes*, etc...

But I didn't see *Aphodius conjugatus* in this place...

On the last day of my vacation, I tried to go higher, at an altitude of 600 meters, where there were cows everywhere, even on the road. It was really wonderful when I found my first *Aphodius conjugatus*! It was one of these great moments that every entomologist knows! It was not easy to find this beautiful scarab (8 to 11 mm), nonetheless, I found 18 specimens in this area. A good ending for the year 2009, and I am hoping that 2010 will give me more good surprises!



Aphodius conjugatus (profile) – One can see a yellow spot on the edge of the pronotum, a pecularity shared with the common *Aphodius fimetarius*, belonging to the same subgenus.



Aphodius larva (species unknown), found in dry cow dung in Sorède, December 2009.

Bug People X

In The Wilds of Backyard Ottawa from the Secret Files of Henry Howden

Do you know who these coleopterists are? The answers are at the bottom of this page.



The person on the left works mainly on New World dynastids, but could have done well in advertising.

The person on the right works primarily on broad-nosed weevils, mainly *Pandeleteius*, and has to put up with a different scarab worker!

Answers: Brett Ratcliffe and Anne Howden.

In Past Years - XXXV - 1991

by Henry F. Howden

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Photo 1: San José, Costa Rica, from a distance. Photograph taken from the shoulder of Pico Blanco.



Photo 2: Wooded hillside, part of Monty Wood's land near Monteverde.

The usual "Let's escape the Canadian winter" was slightly different in late February of 1991. Monty Wood had organized a group of students to visit Costa Rica during "Study Week" (February 22 to March 8) and invited Anne and me to tag along. Having no particular love for snow and ice, we gladly accepted. We overnighted at Mirabel Airport (no longer in use), and were up at 3:30 AM to catch our charter flight to Costa Rica. At check-in we were told that our six-volt headlight batteries had to be put in our carry-ons. At another airport we had been told that they had to be in our checked luggage. This resulted in repacking our luggage and considerable grumbling on my part. We finally left and in slightly more than five hours, landed in Costa Rica at the San José airport. Monty had arranged for a rented bus for the transport of his group, while Anne and I rented a car.

The real reason for the trip was that Monty had acquired a large tract of land abutting the Monte Verde Reserve and had a newly constructed field station that needed his attention. We drove for an hour, and then stopped for lunch and a distant picture of San Jose (Photo 1). The next stop was in the small town of Santa Elena near Monty's tract of land (Photo 2). Then on to the large, two story building (Photo 3) that had a series

of rooms, each with a bathroom, on the ground floor, as well as a dining room. On the second floor there was a large open lab and class room (Photo 4). The group arrived in the late afternoon, unloaded (Photo 5), and then was fed a great meal which was appreciated by the swarm of students and the rest of us. In the early evening black lights were set out. The results were not unexpected: three species of common scarabs and two species of cerambycids. The weather was cool and windy during our stay, often with mist or rain showers: typical for that time of year.

Daytime collecting was mostly on Monty's extensive tract of land. The main trail up the forested hill behind the lab rapidly became the equivalent of a very muddy, slippery otter slide. I learned how slippery it was the first morning, and never carried my camera up the hill for fear of damaging it, hence the lack of photographs. Frequently we used the car to get supplies from nearby Santa Elena (Photo 6). Anne and I also used the car to visit the area just outside of the park (Photo 7) including the Pensión where we had stayed on our first trip to the area. We started toward the Pensión and were met by the owner who told us that he was no longer open and that we were not welcome on his land. We then took several nearby trails frequently used by other visitors, most of whom seemed to be ecoenthusiasts that lectured us on the evils of killing insects. We tried to explain that most specimens were for scientific study, which seemed to make no difference, I then asked



Photo 3: The research station built by the Woods, a very functional facility.



Photo 4: Part of the lab on the second floor of the research building; even it was invaded by some ecotourists!



Photo 5: Rented bus being unloaded at the research station.

did they kill mosquitoes, etc., which merely made some angry at me for asking foolish questions. After a day or so of this, we stayed on Monty's land, which, despite being posted as private land, was invaded by the occasional unwanted visitor! In general, collecting was slow. I took nothing new to me, but the following genera were collected in dung traps: Onthophagus, Canthidium, Ontherus, Uroxys, Phanaeus, Copris, aphodiines and a number of other beetle families.

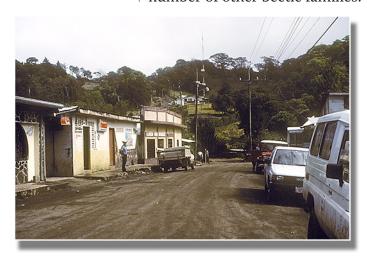


Photo 6: The booming metropolis of Santa Elena where we obtained our supplies during our stay at Monteverde.



Photo 7: Monteverde area just outside of the Park; now overrun with eco-tourists.

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After five days, Monty moved us to a warmer location, Puerto Viejo on the northern side of the central mountain range in the tropical lowland. It was quite a change. It was hot and our lodging was of the no star variety. Anne and I had a ground-level room with one window just above a pile of garbage and without a screen. There was no circulation of the air as the small fan was broken, so the only sound was derived from the many mosquitoes and people on the floor above us. We learned the next morning that the evening meal was at 7 PM, not the best for night collecting. It was OK for Monty's flies (Diptera), butterflies, etc., but not for us. So, since we were independent and had a car, we moved a short distance (10 km.) to a place call "La Selva Verde" with a large forest tract (Photo 8) and a small river. The area was mainly for tourists, but they had no objection to our collecting insects. The nearby forest, the night collecting and a large ceiling fan made the rather costly price seem reasonable for a few nights, particularly as all meals were included. Our lodging (Photo 9) consisted of a large thatched cabin set on poles, with at least a six-foot space between the floor and the ground below. It was an optimal space to run our lights, as it rained frequently during the day, and after 10 PM it poured. That night at least seven genera of scarabs came to the lights, including one Neoathyreus that came to a small light outside our room, about 10 feet above ground level! Collecting during the day turned up nothing special

except for one small Canthon in a dung trap. Our lights under the building continued to be productive; the most interesting beetle to come in was a large female Megasoma that hovered near the light until I knocked it down with my hat. The ability to hover without much noise surprised me, considering the size of the beetle. The day before the group was to return to San José, Anne and I went back to visit Mary Jane and Bill Eberhard who had a house near the city. On the way we took a few pictures of near by mountains (Photo 10), but did not try to collect. When we visited the Eberhards, we found that their house was in an agricultural area with patches of forest nearby. In the afternoon just before we left, we took the narrow dirt road up the hill to a wooded area. As we entered a wooded edge to the path we were on, we noted a large oak tree with some bees flying in and out of a hole near its base. Anne crossed a fence into the adjacent, open field to give the bees a wide berth. A minute later she looked down at the fanny pack she was wearing and saw it covered with bees, at almost the same time more were in her hair at the edge of her hat. She started to brush them out when they started to sting her. She departed the field hurriedly, dropping her beating sheet and hat in her haste. Back on the path, I brushed off the few remaining bees and we retreated down hill. Amazingly Anne had only two stings, although there were a number of stingers left in



Photo 8: Forest at La Selva Verde; it was hot and wet in early March.



Photo 9: Our lodging at La Selva Verde; great for running a light under the building and keeping dry!



Photo 10: Volcán Barva in the distance, part of the mountain chain running the length of Costa Rica.



Photo 11: Ottawa in early March,1991; our back yard with a foot or more of snow on the level. It is nice to look at and no pesky insects, so why go to the hot, humid tropics?

the fanny-pack. An hour later I tried to sneak back to retrieve the abandoned articles. Before I was close to the dropped items, I started to be stung, so abandoned the idea of rescuing the hat and beating sheet. Some Costa Rican probably is still wondering the original use for the odd sheet of cloth, but undoubtedly has found some use for it.

When we returned to the Eberhard house and told Mary Jane of our encounter, she said they were the African hybrids that were extremely aggressive. If my memory is correct, she mentioned that bee keepers sometimes hung a ball of black wool in front of a hive to test the aggressiveness of the colony. A joke concerning this is that a beekeeper tried to hang some black wool in front of an Africanized bee colony, was swarmed and is still running from them. By now he must have set some records.

Time ran out on our visit and we met Monty and crew at the airport. Our return flight was uneventful. Everyone kept occupied exchanging stories, like finding a palm viper actually in a palm. We arrived back, finding Ottawa weather normal (for Ottawa that is - Photo 11), thanked Monty for organizing a great trip and then went our various ways.