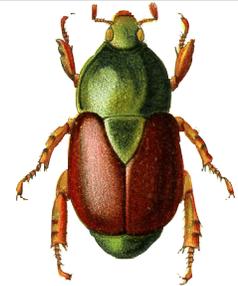


SCARABS



MJ MX WXMROW, XLIC AMPP GSQL.

Occasional Issue Number 51

Print ISSN 1937-8343 Online ISSN 1937-8351

May, 2010

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Melanistic *Mitracephala humboldti* Thomson (Coleoptera: Scarabaeidae: Dynastinae). A Tale from the Dark Side

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Many scarabs have melanistic color forms, whereby some specimens are black or nearly so relative to normally lighter colored individuals. We have seen this, for example, in species of *Lichnanthe* (Glaphyridae), *Hoplia* and *Dichelonyx* (Melolonthinae), *Cyclocephala* and *Mitracephala* (Dynastinae), and *Gymnetis*, *Hoplopyga*, *Guatemalica*, and *Euphoria* (Cetoniinae). The peppered moth, *Biston betularia* (L.) (Geometridae), in the United Kingdom is probably the best known example of industrial melanism, whereby darker colored individuals that blended better with a dark (polluted) substrate were better adapted for escaping bird predation than the normally colored white individuals that contrasted strongly with their background. In scarabs, however, we do not know why melanistic forms exist other than to attribute

it to random genetic variation. No one to date has been able to correlate melanism in scarabs with habitat or climate.

Mitracephala humboldti Thomson, 1859 is one of the larger species of Agaoccephalini in the scarab subfamily Dynastinae. It is known from Peru, Bolivia and Ecuador (Endrödi 1970, 1985). Nothing is known of its life history, and the immature stages remain undescribed. Most specimens in research collections have light yellowish-brown elytra with a dark brown pronotum. A few relatively uncommon specimens are completely dark brown, which prompted Endrödi (1970) to name a dark Peruvian specimen as a new variety: *Mitracephala humboldti* var. *nero*. The name *nero* is infrasubspecific (Article 45.6.3, International Commission on Zoological Nomenclature 1999)



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and is thereby unavailable (Article 45.5). In other words, don't use it in formal nomenclature because it is meaningless.

We report here the range of color variation in *M. humboldti* specimens recently collected (1982-2009) in Peru. We are confident that these dark specimens (Plates 1, 6-7) are natural in their color and not dark as a result of a killing agent or preservative. Plate 1 illustrates the total range of color variation in both males (length range 34.0-44.0 mm) and females (length range 36.0-40.0 mm) from four widely spaced areas in Peru (Plates 2-5). Plate 6 details dark males, and Plate 7 details dark females. We examined dark specimens to see if they might be a different species than *M. humboldti*, but they were all conspecific.

Plate 3 (top) shows that specimens from Pucallpa (two males collected in December) have the normal

elytral color that we customarily associate with this species. Plate 3 (bottom) shows that there is a range of color in specimens from Carpish (three males, one female, all collected in January). Plate 4 shows the color of specimens from Chachapoyas (on the road to Leymebamba). There are eight males and three females. The two lighter males were collected in December. The six dark males and two dark females were collected in April, while one dark female was collected in January. The total range of color is present, but specimens from here are even darker than those from other locales. The color of the females shown in Plates 3-4 are all darker, but this probably reflects a smaller sample size that did not include normally colored specimens. Plate 5 illustrates the color of specimens from Puerto Maldonado (two males, one female, all collected in November), and the color of the elytra is generally lighter. The take-home message here, as exemplified in Plates 3 (bottom) and 4 especially, is that both light and dark colored forms have been taken at the same location, and that they are not taxonomically different from one another. Some specimens are simply melanistic... and we do not know why. There is no correlation for dark elytra associated with locality or month of collection.

Variations of this nature are often significant for fully delineating the appearance of a species, but they still fall within the bounds of intraspecific variation as



10 mm

P E R U

 Pucallpa
 (Ucayali)

 Carpish
 (Huanuco)

 Chachapoyas,
 Leymebamba
 (Amazonas)

 Puerto
 Maldonado
 (Madre de Dios)

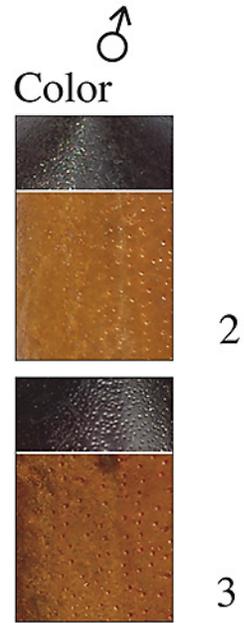


■ Pucallpa (Ucayali)

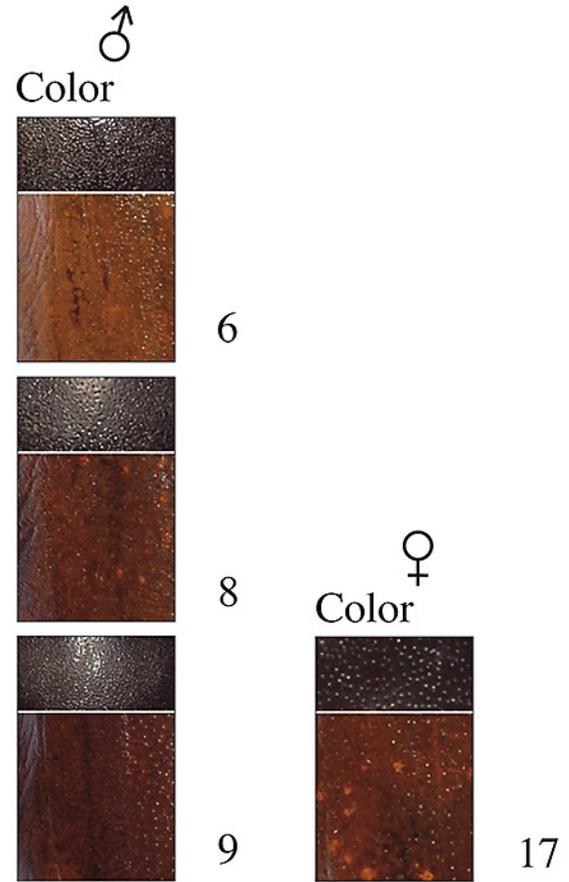
■ Carpish (Huanuco)

■ Chachapoyas, Leymebamba (Amazonas)

■ Puerto Maldonado (Madre de Dios)



 Pucallpa (Ucayali)

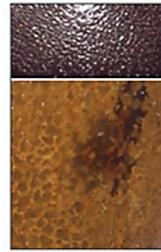


 Carpish (Huanuco)



 Chachapoyas, Leymebamba
(Amazonas)

♂
Color



4



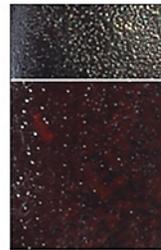
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10



11



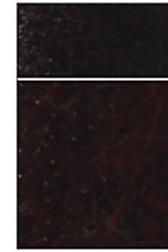
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13

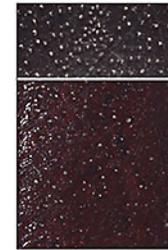


14



15

♀
Color



18



19



20

exemplified by the Phylogenetic Species Concept as outlined by Wheeler and Platnick (2000). This concept defines species as the smallest aggregation of populations diagnosable by a unique combination of character states. Individual scarab species vary in their color and patterns on the pronotum and/or elytra, development of male secondary sex characters (horns, tubercles, claw size, leg length), and body size. *Mitracephala humboldti* is a good example of color variation (melanism in this case) within a single species of Dynastinae. Until we are able to ascertain the precise genetic basis for this, it has no special taxonomic significance other than demonstrating a range of color in this species.

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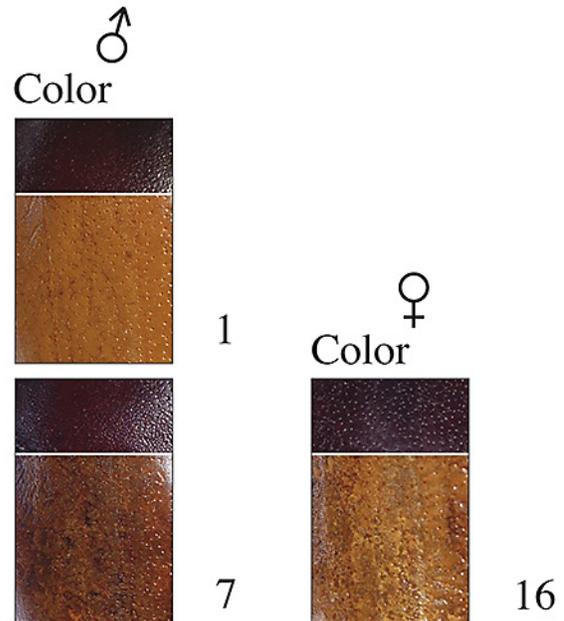
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 Puerto Maldonado
(Madre de Dios)



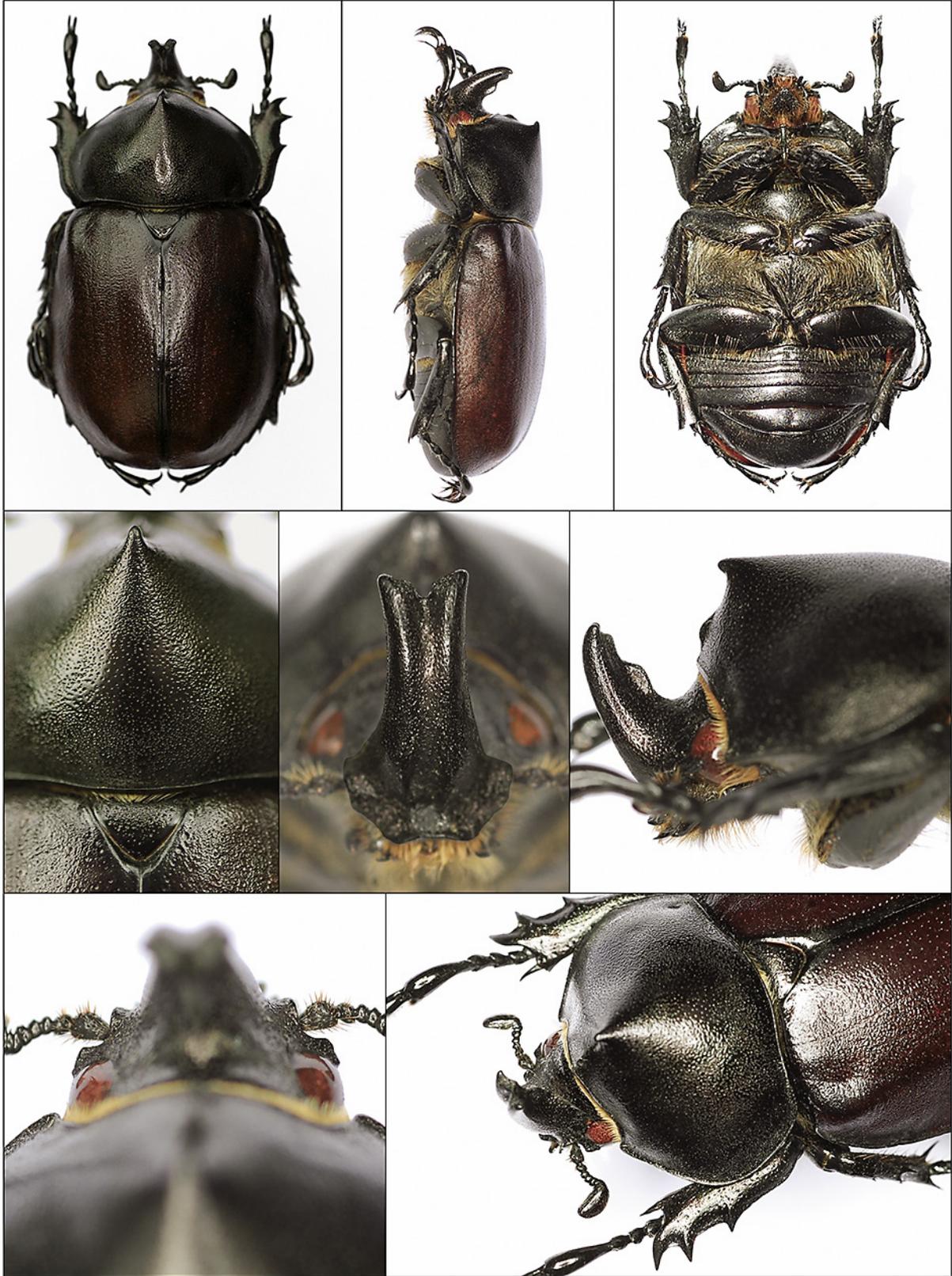




Plate 7.

The Genera *Euoniticellus*, *Onitis* and *Cheironitis* in France and Surrounding Countries

by Olivier Décobert

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Scarabs of the genera *Euoniticellus*, *Onitis* and *Cheironitis* have a similar shape because of their phylogenetic proximity, but their sizes are quite different. In the first genus, it is always less than 11 mm, for the second, it is between 12 and 27 mm, and in the last genus *Cheironitis* (= *Chironitis*), the size is from 13 to 20 mm. They are all dung-feeders.

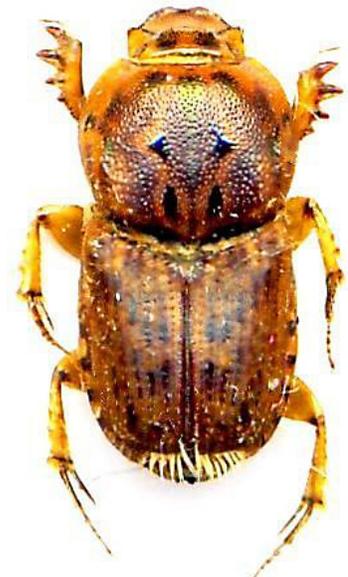
Euoniticellus fulvus (Goeze) is relatively common and geographically widespread. *Euoniticellus pallipes* (Fabricius) and *Euoniticellus pallens* (Olivier) are two other closely-related species of the genus that exist in France, but they are much rarer and localized. They live in the Mediterranean area, and *E. pallens* is restricted to the Island of Corsica for its French distribution. The scarabs of the genus *Euoniticellus* have the peculiarity of erect hair on the apical part of the elytra.



Euoniticellus fulvus (Goeze)



Euoniticellus pallipes (Fabricius)



Euoniticellus pallens (Olivier)

Onitis ion (Olivier) is the smaller species of the second genus. It was once recorded in France in the Department of Landes in the southwest. This information is written in the well known *Coléoptères Scarabéides* by Renaud Paulian (1941), which was one of the first books to present a complete study of French scarabs. Nevertheless, it was never found again in my country and one thinks that these western specimens may have been accidentally introduced. *Onitis ion* is known to be a Spanish species. *Onitis belial* (Fabricius) is also native to Spain, but contrary to its smaller cousin, it actually exists on the southern coast of France.

My friend Pascal Stéfani even found this *Onitis* in the mountains of the Oriental Pyrenees called “Les Albères.” It was a novelty, as French entomologists thought that this species was only present on the coast. It was collected in July 1991 in the area of Saint-Jean-d’Albère at an altitude of about 500 meters. This information has been confirmed by other people living in the South of France. *O. belial* is a big *Onitis*, sometimes measuring 27 mm long.



Onitis ion (Olivier)



Onitis belial (Fabricius)

Onitis alexis septentrionalis (Balthasar) is smaller (18-21 mm) and is a “metallic” species, with a green or coppery pronotum and yellow-brown elytra. *Onitis alexis* Klug exists in North Africa, Asia Minor, and countries of the Mediterranean area. In France, it can only be found in Corsica (the subspecies *septentrionalis*), and was only recorded in a small region of this island, around the “Col de San Colombiano” (in English, “San Colombiano Pass”). The figured specimen was found in the region of Rabat (Morocco).



Onitis alexis Klug

Cheironitis ungaricus irroratus (Rossi) is also a Corsican dung-feeder, but the other subspecies *Cheironitis ungaricus ungaricus* (Herbst) can be encountered on the French Mediterranean coast. Some time ago these two scarabs were separated as different species but we now have only one species in the genus *Cheironitis* in France.



Cheironitis ungaricus irroratus (Rossi)



Here is a good place to find dung scarabs in the Albères mountains – Oriental Pyrenees. Look carefully on the trail behind the cow to understand why.

A field guide of the Dynastidae family of the south of South America

by Esteban I. Abadie, Paschoal Coelho Grossi and Pablo S. Wagner

At a cost of \$71.50 U.S., most coleopterists will think twice before taking this book into the field. Still, its paperback binding and small size 6 1/4 x 8 5/8" render it easily transportable. Being a field guide, there are no keys; it is organized by tribe. Of course, it is not comprehensive. Instead, there are 40 color plates containing over 330 images of about 180 species spanning the tribes Cyclocephalini, Agaocephalini, Pentodontini, Oryctini, Dynastini and Phileurini. Temporal, distributional and biological data are given for several species. The English translation could use some work, but is a minor annoyance. The reader can always understand the authors' intent.

Pablo Wagner and Paschoal Grossi are doctoral students in Argentina and Brazil, respectively. Esteban Abadie is an instructor in Buenos Aires. The authors' love of Dynastidae clearly shows in this wonderful little 120 page book. Available from BioQuip Products (<http://www.bioquip.com/>) Order # 9032.



Our 5' 4" (162.5 cm), 95 pound (43 kg) librarian Andrelica demonstrating the size and front cover of the field guide.

In Past Years - XXXIV - 1988-9

by Henry F. Howden

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Ed. Note: In the last issue, we left our intrepid travelers (in the middle of their 9-month Australian expedition) in Cape Le Grand National Park.

Several days later we joined Keith and Edie Carnaby in the Cape Arid National Park, in a new campground (Photo 1) where there was actually an outhouse - but no fresh water. The locality, as we had found on an earlier trip, was very windy and only a few melolonthids

came to light. A moderate number of bolboceratines were dug up, but nothing that we hadn't seen before. On the second day Keith wasn't feeling well, so they drove to a friend's house in Hopetoun, telling us to meet them there in a few days.



Photo 1: Our home at Cape Arid campground; we were the only occupants in the entire park!



Photo 2: After some winter rains, Western Australia becomes a flower garden.

Several days later, while driving south from Route 1 to Hopetoun, we experienced something we had only read about. All of a sudden the air was filled with flying insects, so many that we had trouble seeing the road. We drove for a short distance, then stopped and started to collect the beetles that made up part of the swarm of insects. Very quickly we became selective, taking only scarabs, cerambycids, buprestids and weevils. After 15 or 20 minutes we decided to tell the Carnabys about the swarm, so we drove the short distance to their friend's house and, within half an hour returned with them to the place where we had encountered the swarm. Except for a few insects sitting on the sparse vegetation, there was no sign of the swarm. The Carnabys were skeptical about the swarm, but couldn't argue with us when shown our bottles full of beetles! We never saw another swarm of insects like that.

The next day the Carnabys left for their home in Wilga, and Anne and I went to Lake Grace

and several other localities (Photo 2) we had visited on earlier trips. In general, the weather was cool and damp, but the bolboceratine collecting was not as good as in some previous years. The end of October found us at Wilga where we spent two days with Keith and Edie. We reluctantly said goodbye, since we suspected it could be the last time we would see them. Keith died a year later.

From Wilga, we traveled to the Pemberton area of large eucalyptus. It was wet and cool and while the collecting was not bad, nothing new was found.

Perth and the W. A. Museum was our next stop and we spent several days studying their collection and visiting with Terry Houston, their very active entomologist. At that time, Terry was working on burrowing bees, but in doing so excavated a number of bolboceratines, including some undescribed ones. At present, Terry is investigating one of his many interests: the habits of the western bolboceratines, and has discovered several larvae of different species. It is nice to know that someone is learning more about these elusive beetles.

We then went north of Perth, spending several days collecting near the coast, finally reaching Eneabba near the Arrowsmith River. We spent a day at Eneabba, with our best bolboceratine collecting at the base of an illuminated outdoor telephone booth. The dim light* in the



Photo 3: Some fair-sized hills in Western Australia called the Stirling Range.

booth had attracted five or six specimens; we only collected three as it did not seem advisable to dig up the entire base of the phone booth! The evening turned windy and little came to light. The next morning we learned that there had been no rain north of Eneabba for some time and, with the weather both windy and hot, we decided to head back (Photo 3) toward South Australia.

That day we were glad to have an air-conditioned car. By midday it was about 42° C. (111° F.) and very windy. As we drove along, about 2 PM, we heard a loud BANG and the right rear window of the car exploded! Since we had never experienced that before, we wondered if a stray bullet from some kangaroo hunter had hit the window, but later learned that the temperature difference between the outside and inside was the likely culprit. The next nearest town was Merredin, Western Australia, and we went to the “auto basher’s yard” (Australian for “car

**Editors Note: See Scarabs 15, page 16, for a note about the possible association of dim light and bolboceratines.*

repair shop”). We were lucky, there was one good window left in a wrecked Ford similar to ours, the right, back one and within half an hour we were back on the road.

By that time it was late afternoon, so we found a nearby caravan park and stopped for the evening. That night our lights yielded one black dynastid and two other beetles!

The following day we reached Balladonia; it was still hot and very windy and since we didn't want a



Photo 4: Forest in Alfred National Park, Victoria, a long way from Western Australia.

repeat of the night at Coober Pedy, we stayed in a motel! The next day was just as hot and windy, so we drove to Eucla, where we again spent the night in the one motel. We did try to do some collecting along the way, but because of the heat and dryness, the catch consisted mainly of weevils and one fragmented *Australobolbus* found under a log in a spider web.

On November 20th we reached Ceduna in South Australia. There it was windy, cool and with a light rain. The catch for the day was three beetles; I will not comment further. We stopped the next day near some sand hills on our way to Port Augusta. The soil was dry a few inches below the surface and in Port Augusta we learned that there had been no rain for five months! Our total catch consisted of tenebrionids and weevils.

From Port Augusta we drove south toward the state of Victoria and the Little Desert. I didn't expect to find any new species of bolboceratines such as we had collected previously in the western portions of New South Wales. Much of Victoria had been surveyed by a number of good entomologists. Nevertheless, new records were always welcome, and it was a part of the country we had not seen. Driving south to Barmera, South Australia, we were plagued by wind and intermittent showers. The next day we stopped at an area of red sand hills where we collected a series of *Blackburnium sloanei* (Blackburn) and a number of other scarabs. We spent the night

at Ouyen, Victoria, and the next night at Dimboola. Along the way we hit one of the bureaucratic obstacles that is becoming more and more common. Most of the non-agricultural land was in various parks, including the “Little Desert”. For all of these we needed permits, and there was just too much red tape for us to bother with. We partly solved the problem just south of Dimboola by setting our black light just outside of a park fence in a sandy fire-break (Photo 4). We still did not have the best conditions weather-wise, but we did get a series of an odd melolonthid that was later described by Peter Allsopp.

We did make occasional short stops on our way to Melbourne, but most of the countryside was in agriculture and when the land was cleared, it was cleared! We camped for two days east of Melbourne near Cann River. General collecting on flowers was good and several species of lucanids were found under logs. We did not have to worry about things being too dry, if anything the reverse was the problem. There was no indication of any bolboceratines, and the vegetation was so lush and dense that trying to dig any burrows, even if we found them, would have been difficult.

After leaving Cann River we drove eastward along the coast and then turned inland to the Snowy Mountain area near Cooma, New South Wales. Near Cooma (Photo 5) we drove through a rain-hail storm that left some small pits on our windshield. There was no



Photo 5: Cooma, New South Wales. the picture taken after the rain and hail had stopped.

collecting worth mentioning. From Cooma it was a short day's drive to Canberra.

Our first day in Canberra at the CSIRO was spent studying their collection and visiting with old friends. That evening several people joined us at our caravan park, where we set up a 500-watt mercury vapor light. No bolboceratines came to light, but the light attracted hundreds of “Christmas beetles” (*Anoplognathus* spp.).



Photo 6: The Warrenbungels, New South Wales, picture included because of the odd name. The practice of giving odd names to various localities seems fairly common in Australia.



Photo 7: A monitor lizard, known as a goanna, and a renowned chicken thief, in the camp ground of the Warrenbungels.



Photo 8: The Blackdown Tablelands, Queensland. It is too bad that I do not have a picture of the road up.

A collecting trip to the Brindabellas was planned for the next day. It turned out to be a ground beetle trip, not a scarab collecting trip, with Barry Moore (CSIRO), Ross and Joyce Bell (visiting from United States) and Michael Hansen (I believe from Scandinavia, interested in aquatics). The people that we were with were much more interesting than the beetles we caught that day!

We left Canberra and drove north-westward to the Warrenbungle National Park, an old volcanic rim (Photo 6) surrounding a forested, fertile, flattened interior. Wildlife was plentiful, but bolboceratines were not; we collected only one *Elephastomus*, plus a moderate number of other scarabs. Some of the other fauna were more interesting: the birds, monitor lizards (Photo 7) and a flightless grasshopper that put on quite a show when disturbed. We camped there for two days and then drove, with several overnight stops, to Brisbane, Queensland.

We spent a day at the Queensland Museum with Geoff Monteith, and a day collecting on nearby Mount Glorious, before moving on up the coast. We stopped briefly at Bundaberg to replenish my supply of rum (in case of snake bite), and then went on to Rockhampton. We visited Ernie Adams and family at Edungalba, who then took us to the Blackdown Tablelands (Photo 8) for a day. The road up to the Tablelands is worth mentioning.

While classified as a “dirt” road, the surface consisted of rounded gravel like small marbles that made driving quite challenging. A quick stop was impossible and staying on the road on a steep curve was tricky. The trip was worth it, however, since we took several specimens of an endemic *Australobolbus* that seemed to be limited to the tablelands.

After leaving Ernie, we drove up the coast for two days, often in rain showers which precluded much collecting. We then took a short side trip to a mountain resort called Paluma and set up our camp in a small clearing beside the one motel. The area was heavily wooded as it was on the upper edge of the escarpment - an area known for good collecting. It maintained its reputation that evening by nearly filling six small dung traps and by keeping both of us very busy at our lights. It was probably the most productive single night, beetle wise, of the entire trip. Several species of lucanids came to our lights, including a large male *Phalacrognathus mulleri* (subsequently given to Ross Storey), at least three species of *Anoplognathus*, several dynastids and numerous melolonthids, not to mention lots of other small scarabs, cerambycids, clerids and many other beetles. It was even hard to ignore some of the lovely moths.

One extra day was spent at Paluma and then we drove on to Mareeba on the Atherton Plateau. We spent



Photo 9: At Paluma, Queensland, our lights attracted many insects. The picture shows one that we resisted, it would have taken up too much space!

two nights in a caravan park, then moved to an empty section of Ross Storey’s garage. Our tent trailer mostly fitted in the empty space, but about three feet stuck out and was shaded by an overhanging exotic pine tree. It was great to camp in the shade, as the days were often HOT. The disadvantage occurred when the pine tree shed a large cone and it landed on our trailer. The resulting thud* made us jump, often to the detriment of anything we were handling - occasionally a good beetle!

**Ed. Note: See Scarabs #34, page 13 for another “pine cone thud” story.*



Photo 10: Hidden Valley to the west of Paluma, a somewhat drier locality. Ernie Adams is directing his son to net the beetles on a high clump of eucalyptus flowers.

Almost three months were spent collecting within a one day's drive of Mareeba, mostly on the Atherton Plateau. We did make a three-day trip back to Paluma (Photo 9) where we were joined by Ernie Adams, his son and several others. Collecting on eucalyptus flowers was good in a dryer area (Photo 10), but otherwise nothing matched our earlier stay.

We concentrated on two localities near Mareeba, one of which was a large patch of protected rain forest called Wongabel State Forest, 4 to 8 km south of Atherton. There were several well-marked paths through the forest and a number of the larger trees were identified. It was a great place to collect except for numerous land leeches and stinging trees. A repellent kept most of the leeches at bay and the stinging trees were not difficult to identify and avoid.

The most difficult part, as usual, was getting a permit to collect in

the park. A day was spent doing this, but since Ross worked for the Queensland government, we finally got our permit; readers of earlier sections already know my opinion of this type of red tape.

We made several diurnal trips to Wongabel, but since most of the Australian marsupials are nocturnal we did not see any daytime activity around the small dung pellets deposited at night. The first evening we visited Wongabel, we collected a number of Scarabaeinae, mostly species of the genus *Onthophagus*.

A number of these were sitting on leaves, and this reminded us of the daytime perchers of the New World tropics. A few people had suggested that beetles perched to thermoregulate; if so, it still did not explain why small species perched closer to the ground than larger species. We had suggested that perching close to the ground let small species detect the odor of small bits of dung. It is not necessary to go into all the details; if night perching showed the same type of results as found for daytime perchers, then sunlight was not a major factor.

Over a number of nights Ross, Anne and I collected 22 species of dung beetles perching, totaling 561 specimens. While not as clearly stratified as the daytime perchers, they still clearly showed that small species perched closer to the ground. The results, if one really needs to know, are published in *Biotropica*, #23:51-57 (1991). While

we used a long-winded title about Nocturnal Perching, we really would have preferred “Night Life in Wongabel”.

Our second, often visited, locality was the South Edge Research Station about 15 km west of Mareeba. While much of the land was planted in various crops, several parts of the station remained in relatively untouched native vegetation. One hillside was rather open scrub and I set several flight intercept traps under low trees, partly to avoid cooking the specimens (daytime temperatures often were 40° C or more). The traps produced a number of different beetles, including an undescribed *Gilletinus*. Around the station there were also a number of planted flowering bushes that attracted a variety of cetonids making the station a great place to collect, as well as being a relatively safe place to leave our various traps.

Christmas day was spent with Ross and some of his friends in the hills near Mareeba at a place called Davis Creek. It was a pleasant place to stay on a hot day, and since there was permanent water in the creek, it also offered some different types of collecting. Some days later we were surprised to attract a small *Phalacrognathus mulleri* to our lights set near Davis Creek, as the area seemed dryer than places usually inhabited by this lucanid.

On New Years Eve, Anne and I were told that we were free to use the forestry cabin (Photo 11) at



Photo 11: The forestry station at Black Mountain, Queensland.

Black Mountain near Kuranda, as the staff were gone for the week. The cabin was in a small clearing surrounded by rain forest and seemed to be an ideal place for both day and night collecting. We were wrong; it poured rain the entire time we were there! We did get a few different scarabs by running one light on the sheltered porch of the cabin and during a brief period when it stopped raining during the day. One might say that the trip was a “wash-out”.

During January we found that flower collecting on various trees yielded a variety of cetonids, particularly north of Mareeba on the road to Cooktown. The same was true of the side trip we took to Paluma, where the eucalyptus trees by the dirt road to the west of the motel were in bloom. Some of the more unusual or undescribed dung scarabs, mostly *Onthophagus*, were collected in the more open grass-eucalyptus habitats. Actually the nearby rainforest patches seemed to attract collectors. The larger,

open, grassland areas were thus often neglected. For Scarabaeinae, open areas were great since it was the preferred habitat for grass feeding bait producers! I have not tried to list the dung feeding scarabs taken near Mareeba (or elsewhere on our trip) for the simple reason that they are still being described; there are over 200 species of *Onthophagus* now known for Australia, many of these occurring in Queensland.

There are many odd insects in Australia and one of these occurs in some sandy areas near Mareeba. This odd insect is a giant burrowing cockroach, *Macropaanesthia rhinoceras* Saussure. Although it looks like many other large, wingless cockroaches, its habits are quite different. It uses leaves in the burrow to feed its offspring, which are produced live as first instars, and then nurtured by the

cockroach until able to live on their own. In some of the burrows they also support a dynastine called *Dasygnathus blattocomes* Carne. These may live elsewhere, but are commonly found in the cockroach burrows which is certainly an unusual habit for this type of beetle. I was introduced to this oddity by Geoff Monteith, Queensland Museum, when he was visiting Mareeba.

In northern tropical Australia there are a number of odd scarabs which have been collected in flight intercept traps. In 1992 Ross and I described a new tribe for some of these odd beetles in the *Canadian Journal of Zoology*, naming the tribe the Stereomerini. One new genus we called *Australoxenus* Howden & Storey. One of the included was a species we named after a locality east of Darwin, *A. humptydoensis* Howden & Storey (Photo 12). Some of the Australian place names are highly original! Unfortunately, flight intercept traps don't produce much useful information, only that most specimens caught are able to fly. We do suspect that many in the tribe may live in termite or ant nests.

In early February we began to be plagued by rain. We had four days of rain, then one sunny day, then more rain. We tried driving westward to dryer habitats which worked for two days, then the rains caught up with us. By mid February we decided that it was time to leave, so we picked up all of our traps, said goodbye to



Photo 12: *Australoxenus humptydoensis* Howden & Storey, an odd looking beetle and an even odder name. The genus is known to occur in rain forest areas of the Northern Territory and northern Queensland. Photo taken by Bruce Gill at my request.

our friends and drove to the coast. We intended to make a side trip to Charters Towers, but that day we received a warning of an approaching cyclone.

We decided to skip any side trips and headed directly south. A number of stops were made along the way, mostly to see friends. The rain seemed to follow us down the coast, so we had little good collecting. We had good collecting on flowering trees near Rockhampton.

Our next stop was Brisbane with a side trip to Mount Glorious. Even there we experienced rain showers which did not improve our collecting. We continued south, stopping in Dorrigo to camp on a friend's farm. The weather improved somewhat and we had fairly good collecting, but nothing that we had not collected before. We wandered through the granite country of northwestern New South Wales and finally arrived in Sydney on March 12th. Once again we visited the Holloways while we sold the car and trailer.

When all was complete the cost of our nine months of using the car and trailer was slightly more than \$4,000. I doubt that one could have spent nine months touring the country in any less expensive way. It was a great trip and we were sorry to have to leave.

Before leaving Australia, I decided to see if I should turn in the export papers for dead insects. I saw a customs agent near the check-in area and asked him where I should turn in the papers. He looked at me and asked "You have the permits?" When I said "Yes" he said "Keep them, they just mean more paper work!" A sentiment I agree with; I still have lots of unwanted permits.

On our way back to Ottawa we made short stops in New Zealand and in Hawaii, mainly to check a few things in the collections at both places. We finally arrived back in Ottawa on March 21, 1989.

Bug People VIII

from the Secret Files of Henry Howden

Do you know who this coleopterist is, and what scarab genus he was interested in? The answers are at the bottom of this page.



He published a paper with Ed Becker on Pselaphids and also did some papers on a small group of aquatic beetles. While his main job was working on one genus (*sensu lato*) of scarabs, he never finished his North American monograph. He worked for a State Survey.

Answers: Milt Sanderson, and the genus *Phyllophaga*.