An interesting form of *Protaetia cuprea metallica* (Herbst, 1782)

by Olivier Décobert

Ordinarily, *Protaetia cuprea metallica* is dark green, without (or with a few) white marks on the elytra (Photo 1), with a size of about 20 mm or more. After a few trips in the French Alps, I stopped collecting these insects and only observed them on the flowers.

But one day, near the village of Abriès (the closest town in the valley is Guillestre), not far from the Italian frontier, I saw a curious form of this scarab. It was smaller (18 mm), red, and with many white marks (Photo 2). Of course, I took this interesting specimen, which could be associated with the form *rubrocuprea* (Mulsant). The colour is unusual for the species *cuprea*. I also read in an iconography of French Cetoniinae by Jean Darnaud that a special form of *P. cuprea metallica* with many white spots was sometimes found in the French Alps (localities: Villars de Lans, Col de l’Izoard, Col de Menée, Mont Viso) and called *daniellae* (Darnaud). Nevertheless, there is no information about this colour...
form and it is not written that this form is red.

Anyway, these form names are not important (they are not accepted by the International Code of Zoology) and all that we have to remember is that sometimes, *Protaetia cuprea metallica* can present this curious and rare aspect. Cetoniniæ are known for chromatic variability, but it is not the case for *P. cuprea metallica*, which is habitually very constant, according to the many specimens that I had the opportunity to observe in the Alps mountains (Photo 3).

Bibliography:


PAULIAN R. (1941) – *Faune de France – Coléoptères Scarabeides*
Interesting stories about field trips usually involve unexpected events, often ones that seem funny only in retrospect. The more trips a person takes, the fewer unfortunate events are likely. So it was with Anne and I as we went again to Australia in July of 1978. We now had many contacts and friends there, as well as all necessary collecting permits, support from the CSIRO (Australian Commonwealth Scientific and Industrial Research Organization) and from Canada. A few odd events have already been mentioned, such as the frozen Coke, which upon opening, sprayed the interior of the car. This type of misadventure was largely avoided thereafter. To lighten the dull moments, I have added the occasional mention of Australian bureaucracy, which, even in the 1970’s, had reached a high level of idiocy.

As mentioned before, Ottawa is rather a “back water” and to make connections we had to overnight in Toronto. The next day we flew to Los Angeles, then to Hawaii, on to Auckland finally arriving in Sydney on July third. As before, Geoff Holloway and family hosted us for a day before we flew on to Canberra. There we were met by John Lawrence, Brian Selman (who was visiting from the British Museum) and Elwood Zimmerman, who took us to the CSIRO. There we picked up a government Toyota Land Cruiser and some other things needed for a trip “out back”. Ev Britton, as usual, hosted us. Two days later we picked up Geoff Holloway at the airport and the three of us then left Canberra, driving as far as Hay, NSW (New South Wales) that day.

Photo 1: Hungry pelicans hoping Anne will feed them; Mildura, NSW.
The next day we went as far as Morgan, SA (South Australia), stopping along the way at Mildura, NSW. There we saw a large number of very hungry pelicans. For the past several years Lake Eyer, normally dry, had water and the pelicans had increased their numbers. Now the lake was drying up again and the pelicans had to find a new source of food. So they moved south to greener areas, such as Mildura, for example (Photo 1), and helped Anne eat her lunch!

As we moved westward there were a number of showers and for most of the trip we had rain every few days, making it ideal for bolboceratine collecting. Morgan was in a largely salt bush - sheep area (Photo 2) but beyond that there were very few days when we did not get one or more bolboceratines. More than a dozen new species were found in addition to many described ones. An account of species collected is given elsewhere (Zootaxa, 1499, 2007). In general, sandy areas with some bushes or trees were typically good collecting sites (Photo 3).

After several days we reached the Nullarbor, a treeless area extending along the southern coastal area for over 1,500 km (Photo 4) - not good bolboceratine collecting nor, for that matter, general beetle collecting.

We drove almost non-stop about 1,000 km to Eucla, the only...
isolated gas station/motel that I know of that is marked on the National Geographic World Map, simply, I believe, because there is nothing else to put on that long stretch across the southern edge of Australia. At Eucla and westward a sandy coastline begins and one of the first trans-Australian telegraph stations was built there. It was abandoned years ago and gradually became covered with the shifting sand (Photo 5). We were surprised that some idiots had carried cans of spray paint that far in order to decorate the walls! Also, on the back of one of the large road signs warning that the next gas/drinking water stop was 300 km further, some wit had painted “300 km to next Kentucky Fried Wombat”. We did see the humor in that.

From then on collecting improved and our progress slowed. We finally reached Wilga, WA (Western Australia), on July 14 and the home of Keith and Edie Carnaby, our field companions in WA since 1975. Keith was growling because a friend had just been arrested and fined. The reason: he had driven up to Perth in his pick-up truck to help a relative tear down an old shed. Some of the lumber was still good, so he threw it into his truck and started back to Wilga. Along the way he was arrested. The reason: a rail road line ran between Perth and within a mile of Wilga, so one must use the railroad to carry goods unless you have a permit! The fine was double the freight charge. This particular law was enacted to help pay for building the line, but the locals were not asked what they thought of it! You can guess.

The next day we picked up the same tent trailer we had used before and headed north up the coast. The Carnabys met us later with their old Land Rover and home-made trailer. We stopped for two days in Perth and spent one evening with James Ridsdill-Smith (CSIRO, Perth). We were to meet the Carnabys at Arrowsmith River, at a camp site suggested by them.

We arrived before the Carnabys and set up our tent trailer. We were surprised by another camper pulling in and asking if it was a good site. We said it was fine, except they might not like our insect collecting. They said that it was OK, might even be interesting. We then told them that we used black lights that gave off light which was bad for the eyes and
that, along with another group that was joining us, they might find the area noisy! We finally talked them into leaving and shortly thereafter the Carnabys arrived.

At Arrowsmith and elsewhere we tried to set our lights in an area free of ground cover. The bolboceratines often stopped 10 to 20 feet away from a light and would then dig in, their fresh burrows easily seen the next morning. We would spend an hour or so in the morning digging burrows, as the beetles dug down several feet over night. We often had a rather late start when moving on.

It took us two days to reach Carnarvon, where the Carnabys had relatives. They stayed there while we went just north to camp on the Blow Hole road. The name comes from an old, flat rock formation that has been eroded and perforated with holes of different sizes. When the sea has swells, which is most of the time, plumes of water come up from the holes (Photo 6), but not in any predictable way. Spending any time on the formation is a great way to get an unexpected shower! We camped inland in a clay-sand area near the road. It rained hard over night and we learned why using many dirt roads in WA after a rain could cause problems. While the road was a well maintained dirt-clay road with a distinct camber to a ditch on each side, the wet surface was like driving on ice. Several cars and a school bus were in the ditches and, even with four wheel drive, we had a difficult time staying on the road, particularly with the trailer.
We finally made it to the sealed (in Australia = paved) road, found the Carnabys, and headed north. At the base of the Northwest Cape we headed east following the coastal road.

The winter rains were unusually heavy in 1978 and extended further than usual in the northeastern part of WA. As we drove east toward Port Headland, the sparse vegetation was green and many plants were in bloom (Photo 7). In spite of the rain, the insects were harder to fool than the plants; some did not emerge with off season rains.

Traveling east we entered the region that normally had summer (December - March) rains and many insects seemed to be active mainly in that period (or so I thought). We collected a few bolboceratines, but general collecting was disappointing.

The Ashburton River (Photo 8) was one of the few places with permanent water in that part of WA, but even there most of the insects collected were found dead under litter at the bases of eucalyptus trees. We continued east, crossing the dry (at the crossing) Fortescue River with miles of spinifex (Photo 9) nearby until we reached Port Sampson. We camped there that night and finding the area very dry, collected only two dead and one live Blackburnium, plus some weevils which seemed to be found almost anywhere, dry or not.

Photo 8: The Ashburton River, one of the few places with permanent water near the North West Cape, WA.

Photo 9: Spinifex desert near Fortescue River, WA. Tips of hard leaves are equal to large cactus spines!

Photo 10: Our camp at Onslow, WA. One of the warmer places we visited.
The next day we retraced our route to the small coastal town of Onslow where we camped near the beach (Photo 10). Night collecting was good as it stayed warm and was not windy. Bolboceratines were present, but not numerous, so we left Onslow after a day’s collecting. Anne and I decided if we ever struck it rich, that Onslow was the place to spend a month during the Canadian winter. It was a great small town, with the usual pub, a library and wonderful sea food. Unfortunately the area was also known as “typhoon alley”, often experiencing these storms during the monsoon season. We have not been back.

We moved on to the North West Cape in the vicinity of Exmouth, spending almost a week in the area. Collecting was good, both for bolboceratines and other Coleoptera.

One day, on the west side of the cape, I was digging a burrow in the middle of a dirt tract and didn’t notice that a car had driven up, stopped, the occupants wondering what I was doing. Just then I found the beetle and triumphantly showed it to the people in the car. They obviously didn’t see why I thought I had made a useful discovery, and drove around the hole I had made in the tract shaking their heads. Many people just don’t appreciate some of the finer things in life!

Driving south, at the Coral Bay turnoff north of Carnarvon, on the edge of the sealed road, we found one of the odd animals of the Australian desert regions: *Moloch horridus*, commonly called the “Thorny Devil” or “Mountain Devil”. I fail to see why it is called by the latter name, since anywhere we saw specimens of it, there was not a mountain within hundreds of miles! It is a most interesting lizard (Photo 11), with spines similar to those of some lizards in Arizona, but with a wart-like growth on the neck that gets larger if the food...

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**Photo 11: Moloch horridus**, one common name - the Thorny (Mountain) Devil. They like to warm up on asphalt roads, thus adding to the “flatened fauna”.

**Photo 12: One bolboceratine predator found at the bottom of a burrow. Their bite can mess up your finger!**
supply is good. In addition, it needs to be hot! The first specimen we saw was sitting on black asphalt that, for me, was almost too hot to touch with the air temperature in the 80's F. It was just warming up to feed on ants, which were already warm. This habit of warming up on sealed roads is not leading to a population increase, as we saw several flattened “devils”. This was only one species among the many that we saw. The Australian outback dry areas certainly have a great variety of odd lizards, many competing with entomologists!

We camped again near Carnarvon which had had some recent rains. Digging for bolboceratines was great, but not entirely free of surprises. In one burrow I found a very efficient predator (Photo 12) with bits of *Blackburnium*. This type of flightless carabid was subsequently found in other burrows. One even had the gall to attack my finger, drawing blood, and in the process of my jerking my hand out of the burrow, was flung in the air and escaped my ire.

The area around and just north of Carnarvon was very productive for bolboceratines, with one day’s digging yielding over 100 specimens. South of Carnarvon it was a different story. The rolling sandy country became a sparsely vegetated, relatively flat, poorly drained area with mostly a clay soil.

There was a dirt track marked on our map that went to the coast and we intended to take it. Doing so proved difficult. At some time the track had been scraped to level it and was, therefore, slightly below ground level. The heavy clay soil did not absorb the recent rains and the “road” (Photo 13) resembled an elongate, shallow lake; we gave up the idea of going to the nearby coast. Instead, we drove south and somewhat inland to an old settlement (a pub and one or two houses) called Wurarga. The area was a mass of flowers (Photo 14) due to the recent rains and the

![Photo 13: A so called “road” to the coast marked on our map south of Carnarvon, WA. Several tires show that the police have closed the road, as if that was needed.](image13)

![Photo 14: After some heavy rains, WA becomes a flower garden, at least near Wurarga.](image14)
areas of sandy soil yielded some different species of bolboceratines. At night, frost formed on the windshield of our car shortly after dark, but several bolboceratines still flew to the black light.

We continued south to Wilga, dropped off the tent trailer and headed east. Just a short distance before we reached Eucla, there was a dirt track in the direction of the coast. It took us to an extensive sand dune area that extended for miles west of Eucla. A few bolboceratines were collected, but several species of dynastines turned out to be of more interest.

While collecting, Anne noticed a large reptilian head protruding from under a bush. When she saw it, it opened its mouth and showed a red-blue interior; a warning? For a minute we all thought it was some type of large snake, but with some prodding with a long stick it turned out to be a large lizard called a “stumpy tail” or “shingleback,” possibly *Tiliqua rugosa* (Photo 15) for those vitally interested. It is not supposed to have any venom, but we did not test its bite. Stumpy tails turned out to be common and had a variety of color forms; different species? Anyway, it was just another odd lizard among many in the dryer areas of the out-back.

East of Eucla, the road traversed the limestone plain (the nullarbor) along the edge of a steep cliff above the ocean which continues without a break into South Australia (Photo 16). According to Geoff, whose stories were sometimes true, the early explorers had to use ropes to go down the cliff to get drinking water that seeped through the limestone. Even then you would not want to drink it unless you had to!

Time being short, we drove to Broken Hill, an old mining town that was having some problems with parts of the town settling; by that I mean that some old mine shafts under parts of the town were giving way, causing
problems for building above the shafts. The Post Office (Photo 17) had a somewhat uneven roof line, according to Geoff, due to settling (note Christmas lights at top of photo). Stops were fairly infrequent, as there were few bolboceratine species and many of these had been collected on our way to WA.

Three days were spent in Canberra before leaving for Sydney and our return to Ottawa. We departed Australia at 5 PM after spending the morning at the Australian Museum in Sydney. We had a long and uneventful trip until we arrived in Toronto. The trip was via New Zealand, Tahiti (Photo 18), Los Angeles, Chicago and on to Toronto. There we ran into a problem that could not have been foreseen: Air Canada workers were on strike! After a day and a half of traveling we were unhappy to say the least. We finally boarded a small plane run by Great Lakes Airline (now out of business), arriving in Ottawa at 1 PM. Despite the last-minute marathon, it was a great trip.
Dinacoma caseyi Blaisdell is found in a somewhat limited habitat: the vicinity of the mouth of Palm Canyon, adjacent to Palm Springs, Riverside County, California. These photographs were taken on April 16, 1993. This scarab is associated with what is probably its larval food plant, *Hymenoclea salsola* Gray. This plant tends to colonize areas of water runoff, such as the banks of arroyos and the sides of paved roads.

The males take flight at dusk in search of the flightless females. After dark, the males are attracted to light. The females are predated by small rodents that are probably able to smell their pheromone. As can be seen by these photographs, females were often found still, halfway out of their burrows, reminiscent of photographs of a breaching whale.

While I was visiting this site, a car with a pretty girl pulled over. She asked me what I was doing. I told her about this beautiful little scarab, whereupon she mentioned that a golf course was about to be built upon this very spot.

“How do you know this?” I asked.

“Because my boyfriend did the environmental impact study.”

“Did he mention this scarab beetle in his report?”

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**The Plight of *Dinacoma caseyi* Blaisdell**

by Barney D. Streit

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Photo 1: Just before dusk, the males take flight in search of the flightless females. Sometimes they fly into plants, as shown here, and then take flight again. Neither sex feeds as adults.

Photo 2: Locating the females under or near the *Hymenoclea salsola* plants can be difficult. There is a female to the right of the lantern.
“No.”

My late friend Frank Hovore (see *Scarabs* #18, December, 2006) also did environmental impact studies for a living. Frank was always worried that he would miss something, which would put him in a position of being sued. This is not the place to discuss the merits of such legal actions, so I will not discuss it here.

I have not visited this area since 1993, and do not know if this beetle is nearly extinct or not. Suffice it to say, if *Dinacoma caseyi* is still with us, it should be considered critically endangered.

I look forward to Delbert LaRue’s forthcoming revision of the genus *Dinacoma*. Delbert will undoubtedly provide more precise information on the habits and distribution of this beautiful little scarab.

Photo 3: A female breaking the surface of the soil.

Photo 4: Another female breaking the surface of the soil.

Photo 5: Note the short antennal lamellae - typical of flightless female scarabs.
Photo 6: A female emerging from her burrow.

Photo 7: When the female is halfway out of her burrow she reminds me of a breaching whale.

Photo 8: This female has been discovered by a male before she had fully emerged from the burrow.

Photo 9-11: A female completely emerges from her burrow.

Photo 10.

Photo 11.
Photo 12: This female is heading back down into her burrow. It is not known if she had mated.

Photo 13: The hair on the female retains sand, making them difficult to detect.

Photo 14: A completely emerged female poised over her burrow.

Photo 15: A mating pair.

Photos 16-17: Mating pairs. I blew the sand off them so detail could be seen on the female.

Photo 17.
In my travels to collect in the tropics, I have met some amazingly friendly people, many curious people, and others who are, well, interesting! Two of my most memorable encounters were with the same person in Panama. It was 20 May 1976, and I had driven up to Madden Dam in the Canal Zone to check the lights at night. At that time, the road going across the dam was just off the trans-isthmian highway, and the forest surrounding Madden Lake was relatively pristine. The huge floodlights illuminating the dam served as a giant light trap, and collecting there was usually very good. In 1976, American guards working for the Panama Canal Company were stationed in a small guardhouse on either end of the dam, and they communicated with one another by walkie-talkie. These days, however, the guards are gone, and the dam is monitored by cameras linked to an operations center in the hydroelectric office near the base of the dam.

I parked by the first guardhouse and walked up to the guard station to introduce myself and to say I was an entomologist collecting beetles. This was a prudent measure to keep from being detained… or shot. I met a very friendly guard named Ed Duffy from New York, who had been here since 1955. He was pot-bellied, bald, and had a heavy Brooklyn accent. He was also starting to lose a bit of his mental acuity and quickness. He was full of observations about the creatures he had seen on the roadway, whether they be the insects attracted to the lights or the herptiles and mammals feeding on those insects. He readily gave permission to collect on the dam, although he couldn't understand them “scientifical names”. I had told him I was after beetles, but he wondered whether I was collecting snakes and lizards like them “botamitists.” He called the other guardhouse to say there would be an anthropologist on the dam collecting bugs! Collecting was good that night, and Ed Duffy stuck in my memory.

A year later, 1977, I traveled from Manaus in the Amazon Basin of Brazil to go collecting in Panama. Good grief, never satisfied! The night of 22 May I drove up to Madden Dam to collect. Ed Duffy was still working there! He said he remembered me… but he asked if I was still working for the United Nations and still after crickets!! I concluded that there was no real security for the dam. Again, collecting was lively.
My last trip to Panama was in 1995. There were no more guards at Madden Dam but, instead, a startling, loud, disembodied voice coming from a loudspeaker somewhere demanding to know what I was doing. The remote cameras had seen me! Yelling up into the ether in response to someone I could not see, while intrinsically interesting, did not have the same rewarding feeling of talking to a slightly confused and befuddled, yet friendly, Ed Duffy. Swimming at the bottom of the spillway may be hazardous!

Lights on the top of the dam can provide excellent collecting opportunities.
Most Unusual Scarab Story/Picture Festival
by The Editors

Our fourth call for stories and/or photographs is now on. This time, we are calling for your comments and/or photographs of what you believe is the most unusual scarab. This can be unusual in relation to its habits or morphology, or both.

As an incentive to contribute, everyone who does so will receive a large, glossy, inscribed print of this portrait of our other curator Cindy (see Scarabs #19, May, 2007), shown below.

Please submit your photos and/or comments by April 30. We look forward to your submissions.