

COLEOPTERA COLLECTED IN THE SOUTH ORKNEY AND SOUTH SHETLAND ISLANDS

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DURING a quantitative and semi-quantitative investigation in 1962–63 of the micro-arthropods present in the mosses and soils of Signy Island, South Orkney Islands, five small beetles belonging to two taxa were collected. Another specimen was found among material obtained in 1960 by N. V. Jones on King George Island, South Shetland Islands. Their occurrence and status in these latitudes is of interest since the only pterygote insects known to be native to the Antarctic are the two Diptera, *Belgica antarctica* Jacobs and *Parochlus steineri* (Gercke) (Gressitt, 1964).

The two Coleoptera are *Lathridius minutus* L. and *Cartodere apicalis* (Blackburn). The latter is very uncommon in collections and is re-described in the Appendix.

Both species belong to Lathridiidae, Lathridiini, a group known both in larval and imaginal stages to feed on hyphae and spores of moulds. They are commonly known as "plaster beetles" as certain species frequently can be extremely numerous on new, incompletely dried, plaster rendering of walls. Very many of these species are common on any damp surface where moulds have developed—in grass tufts, haystacks or flood refuse—and in nature such is their more usual habitat. Some species may, however, also occur under dead bark which has been invaded by moulds. There is a tendency to regard some species as synanthropic, because they are so commonly met with in habitats connected with man. This is not always a true synanthropism, however, but it may be due to their obtrusiveness in such habitats.

Because of their simple requirements of a moist habitat and fungal spores and hyphae, species of Lathridiidae are easily transported and many have become established far from their known points of origin; *Coninomus bifasciatus* Reitter, an Australian species now established wild in Britain, and *Aridius nodifer* (Westwood) now cosmopolitan. The description of *Cartodere apicalis* on a single Australian specimen may be a parallel occurrence of a species of South American origin taken by ship to Australia and there, by chance, captured. However, there are three other Australian specimens in the British Museum (Nat. Hist.)—one labelled "West Australia" and two labelled "Hobart, Tas[mania], Lea"—showing that the species is widely distributed in that continent.

Lathridius minutus is a widespread insect, often assumed to be synanthropic. Both of the Antarctic specimens were obtained by crude dry funnel extraction of vegetation. The one from Signy Island came from moss (probably *Drepanocladus uncinatus*) collected about 10 yd. (9.1 m.) from the British Antarctic Survey station hut. This hut has been occupied since 1955 and the area around it has been frequently used for depositing and unpacking stores, and hence has been much affected by man. The second specimen (from King George Island) was collected by N. V. Jones on 5 October 1960. A sample of "dead wet moss and grass" was taken from the north side of a small mound which the summer thaw had only just exposed. The location of this mound was approximately 142 yd. (130 m.) north of the station hut where the ground had been little affected by man. Extraction of the material, however, was carried out in the loft of the hut by means of a large funnel, open at the top, and hence there was an opportunity for the insect to have entered at this stage.

Cartodere apicalis is not known to be synanthropic and hitherto it has been recorded only from the Southern Hemisphere localities stated in the Appendix. That one of these is Magellanic South American suggests a logical source area for natural emigration to the Antarctic. The collecting localities for the four specimens taken on Signy Island do, however, raise doubts as to its status. Two specimens appear to have come from natural vegetation, one being extracted on 25 January 1963 from a core of a *Polytrichum strictum*/*Dicranum aciphyllum* mat 220 yd. (200 m.) from the station and the other on 10 March 1963 from a *Drepanocladus*/

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Polytrichum sample from the older of the two lateral moraines of Orwell Glacier about 875 yd. (800 m.) from the station. With the first of these specimens especially, the extraction techniques used offered little opportunity for the animal to have been introduced subsequent to coring and would therefore indicate that the beetle was living in the moss at the sample site. These two records are offset by the other two, one specimen being taken on 7 April 1963 whilst crawling on a laboratory bench top near to where fresh material of *Deschampsia antarctica* had been sorted, and the other on 2 February 1964 as it was walking over the kitchen table.

In view of this inconsistency, and taking into account the collection of the synanthropic *Lathridius minutus* from equally natural situations, it would be unwise to claim native status for either species at the present time. Contamination during the extraction process cannot be completely eliminated and it seems desirable that in future a more careful and controlled search for small and inconspicuous insects of this kind be made in sub-Antarctic and maritime Antarctic localities.

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APPENDIX

FAMILY LATHRIDIIDAE SUB-FAMILY LATHRIDIINI

Cartodere apicalis (Blackburn)

Fig. 1

Lathridius apicalis Blackburn 1888

Derm rufo-testaceous, antennae, palpi and legs testaceous. Antennae 11 segmented, pedicel inflated, as long as wide, second segment oval, half as wide as long, segments 3-9 progressively slightly shorter, 10 and 11 strongly dilated and rather flattened, forming a two-segmented club. Head twice as long as wide between the eyes, clypeus transverse, frons and vertex weakly arcuate, coarsely densely punctured, median line shallowly canalicate, particularly anteriorly. Eyes small, lateral, one-quarter length of head, not particularly prominent, finely faceted. Temples as long as eyes. Pronotum slightly longer than anterior width, strongly waisted at basal third; base as wide as apex; on disc an admedian longitudinal ridge on each side, posteriorly regularly convergent enclosing a shallow anteriorly foveolate sulcus; base straight. *Elytra* three times as long as basal width at shoulders, shoulders prominent; slightly widened basal third, middle third parallel-sided; posterior third regularly rounded to sutural apex; rather strongly convex, slightly depressed on disc at basal third, sides steeply declivous; 8 seriate-punctate, the series barely striate-impressed, serial punctures large anteriorly (about size of basal funicular segment), progressively smaller towards apex; interseries at middle about as wide as serial punctures at that level, 1st, 3rd, 5th and 7th flat, 2nd, 4th and 6th weakly but distinctly longitudinally costate, side margin weakly raised; apical declivity abrupt, nearly vertical.

The unique type specimen, re-described above, was stated by Blackburn (1888) to be from Australia: Port Lincoln. No other published record has been traced. The attribution to *Lathridius* is corrected in the light of Walkley (1952). Apart from the specimens from Signy Island, which obviously agree with the unique type, there are four specimens in the British Museum (Nat. Hist.) labelled "Chili 65/65" (a part of Germain's Chilean Coleoptera), which have remained until now undetermined.

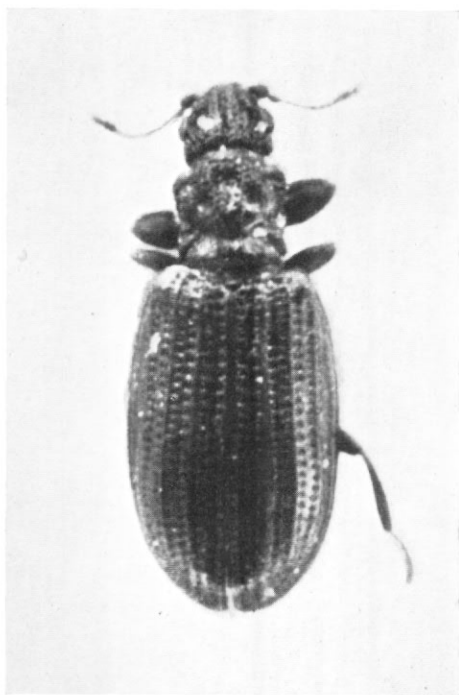


Fig. 1. Dorsal view of *Cartodere apicalis* ($\times 50$).