

## TERTIARY INSECTS FROM ARGENTINA

By T. D. A. COCKERELL  
*Of the University of Colorado, Boulder*

Until recently no fossil insects were known from South America. The first to be recorded were two Diptera in amber from Colombia, unfortunately of uncertain age.<sup>1</sup> As early as 1917 Dr. G. R. Wieland found two species in Upper Triassic (Rhaetic) rock at Minas de Petroleo, southwest of Mendoza, Argentina. These he described and figured in a recent paper<sup>2</sup> regarding them as new genera and species of Tipulidae (Diptera). The smaller species is Dipterous but the large one (*Tipuloidea rhaetica*) is in fact one of the Homoptera, with the clavus missing, as is so often the case in fossils. In any case, however, Doctor Wieland's discovery is of extraordinary interest, and his well-illustrated account will remain one of the most important contributions to paleoentomology. We now have to chronicle a third find of South American fossil insects, made by G. L. Harrington, of Buenos Aires. The material was kindly forwarded to me by Dr. R. S. Bassler and belongs to the United States National Museum. The locality is Sunchal in the Province of Jujuy, apparently more than 500 miles north of Doctor Wieland's locality. The rock is gray, and is known to be of Tertiary age. In appearance and in the absence of compression of the specimens it is just like the Oligocene insect-bearing rock at Gurnet Bay, Isle of Wight.<sup>3</sup>

Fragments of numerous insects are present, but I have felt obliged to restrict myself to the description of seven species of beetles (from elytra) and one caddis-fly (from a wing). There can be no doubt that extensive collecting would greatly increase the list of recognizable species, and would presumably reveal forms of greater interest and significance. The assemblage now recorded is unsatisfactory, yet important as giving us a first idea of the Tertiary insect life of the region. I should not venture to name the beetle elytra but for

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Surface without striae or punctures.....	<i>Tenebrionites inclinans</i>
Surface with striae but no punctures.....	Carabid (?) species uncertain.
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1. Length 2.5 mm.....	<i>Curculionites jujuyensis</i>
Length 4 mm. or over.....	2
2. Long and parallel-sided, the width not quite one-third of length	<i>Cossonus (?) devoratus</i>
Shorter or broader, the width much more than a third of length.....	3
3. Large and black, width 3 mm., punctures very strong.....	<i>Otiorhynchites aterrimus</i>
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5. Apical region broad, apex very obtuse.....	<i>Curculionites harringtoni</i>
Apical region narrowed, apex narrower.....	<i>Anthonomus (?) sunchalensis</i>

It will be seen that six of the seven described species are considered to be weevils.

## TRICHOPTERA

The small specimen described below appears to represent a family (Molannidae) new to South America, but it is so imperfect that its generic position remains in doubt.

### MOLANNA (?) DEROSA, new species

Anterior wing; length as preserved 4 mm., probable total length 5 mm.; shape of wing about as usual in the genus; as preserved it is colorless, with the venation pale brown. It is not possible to see all the details, but most of what is visible agrees quite closely with the male of the European *M. angustata* Curtis. The apparently reduced and simple condition of the radius, the only moderately oblique end of the cell between the radius and its sector, the r.-m. cross-vein only just beyond the end of the radial cell, and the media with two straight branches above, reaching edge of wing above the apex, are all *Molanna* characters. Below this it is only possible to see part of an apparently simple vein, then a fork and then part of another simple vein. In principle this is not very different from the condition in some species of *Molannodes*. In view of the imperfection of the specimen and the extreme differences in venation known to exist in this group, especially when the living and amber (Oligocene) species are compared, there is no basis for proposing a new generic name.

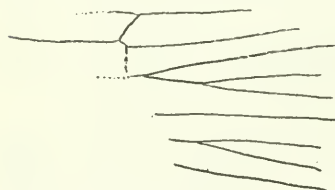


FIG. 1.—MOLANNA DEROSA. ANTERIOR WING

Sunchal, Dept. Sta. Barbara, Prov. Jujuy, Argentina, in rock of Tertiary age.

*Holotype*.—Cat. No. 70809, U.S.N.M.

The Molannidae, although specialized (by reduction of veins), appear to be on the wane at the present time. Ulmer cites 7 species from the Palaearctic region (excluding Japan), 2 from Japan, 4 from the Nearctic region, and 2 from the Orient. In 1914 Banks added another Nearctic species from Winnipeg. The genus *Beraeodes* Eaton, found in Baltic amber and the Oligocene of the Isle of Wight, and with also a living European species, is placed under Molannidae by Ulmer in 1909, but excluded from it in 1912.

## COLEOPTERA

The rather numerous species are represented by elytra and other fragments, in no case complete beetles, and we get the impression that they may have come from the excrement of some insectivorous bird or fish. Under these circumstances accurate determination of the genera is difficult or impossible, but the species described should be recognizable.

### OTIORHYNCHITES ATERRIMUS, new species

Plate 1, fig. 1

Elytron 5 mm. long and 3 wide; 4 to 5 punctures in 1 mm. of length. Black, convex, with eight broad longitudinal grooves containing large round punctures, which are larger than the intervals between them; there are about or rather over 20 punctures in the middle grooves; in addition to the above, along the lower margin is a row of close-set small punctures, the upper part of which is divided into two widely separated rows; apex of elytron obtuse.

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### COSSONUS (?) DEVORATUS, new species

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Elytron pale brown, parallel-sided; length 6.2, breadth 2 mm.; about five punctures in 1 mm. of length; apex rounded. Ten rows of close-set rather large punctures, so arranged that they form oblique transverse rows; two raised V-shaped marks due to converging ridges near apex.

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In the same piece of rock as the type of *Molanna derosa*, and only 5 mm. from it. This may not be a true *Cossonus*, but it is more convincing than the two fossil species recorded by Scudder from North America so far as the shape of the elytron goes. *C. (?) devoratus* might be referred to such a Chrysomelid genus as *Anisodera* or *Anisoderopsis* but it is easily separated by the punctures not being in geminate rows.

ANTHONOMUS (?) SUNCHALENSIS, new species

Plate 1, figs. 3, 4

Elytron dark reddish brown; length 5 mm., breadth 2.4 mm.; outer (upper) margin gently convex, apex obtusely angled. Nine fine punctate striae, the punctures small and somewhat elongate, over 30 in each stria; distance between successive punctures about half the distance between striae; the striae converge apically, the innermost meeting some distance before the apex. A delicate linear groove runs parallel with and close to the margin.

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The arrangement of the striae suggests *Anthonomus*, but of course whatever scales (or pubescence) may have existed have been lost. The type is on the same piece of rock as *Cossonus devoratus*, and less than 2 mm. from it. Other elytra of *A. (?) sunchalensis* are on the same rock.

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Elytron 5.5 mm. long, 2.5 mm. wide; black, moderately convex, apex very obtuse, eight punctured striae, the punctures small and round, striae separated by distances much greater than those between successive punctures.

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Elytron 2.5 mm. long, 1 mm. wide; pale brown, moderately convex, apex obtuse but subangulate; nine rows of strong, large punctures, over 20 in a row.

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Sunchal, Argentina, in rock of Tertiary age.

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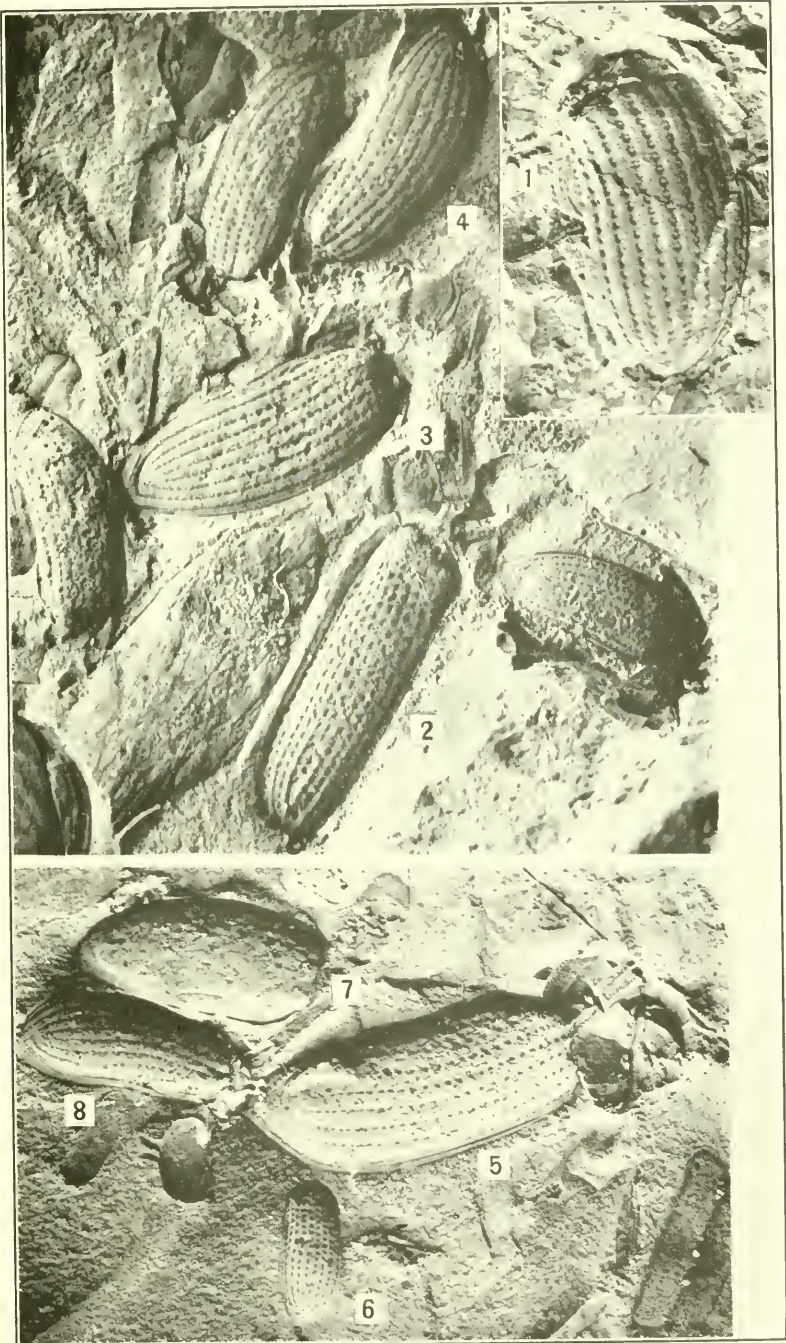
## EXPLANATION OF PLATE

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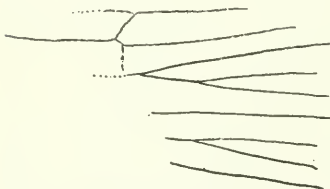


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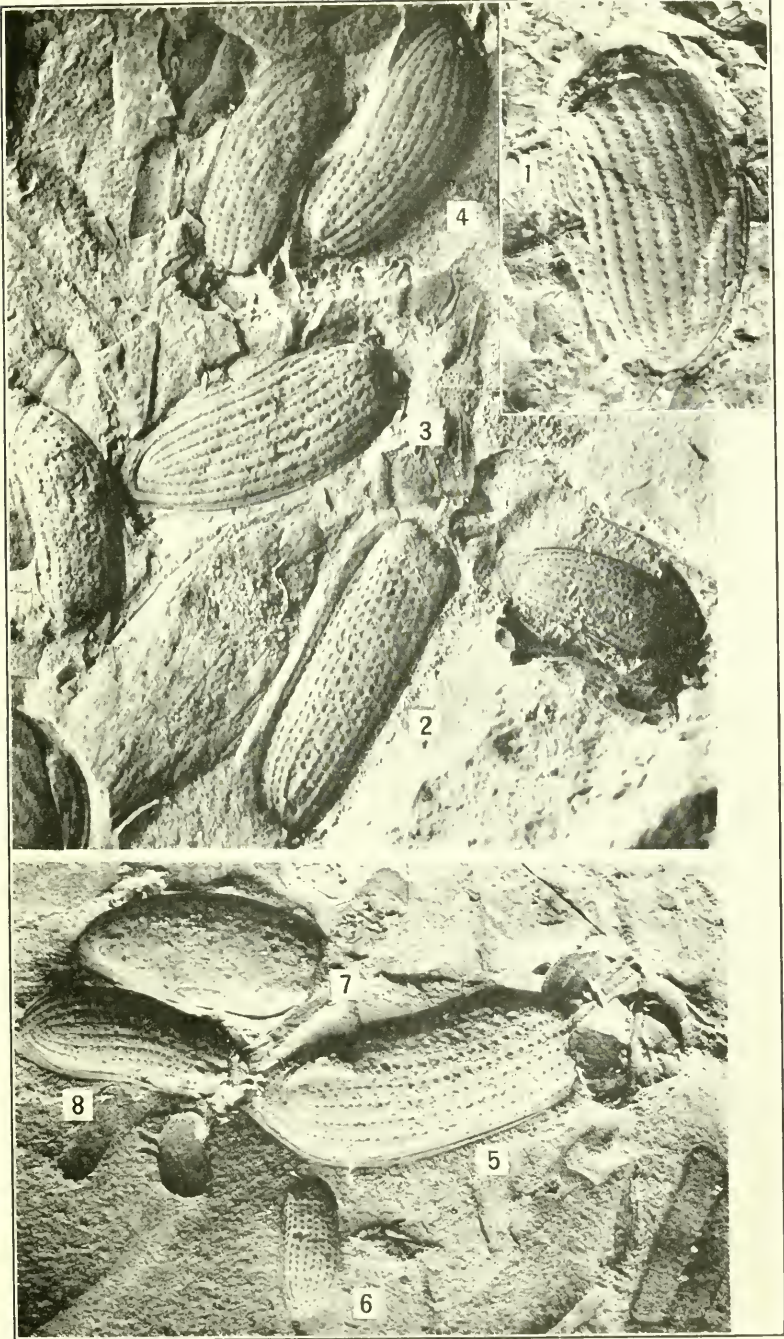
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