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Descriptions of Fossil Insects

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PROCEEDINGS
OF THE
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DESCRIPTIONS OF FOSSIL INSECTS.

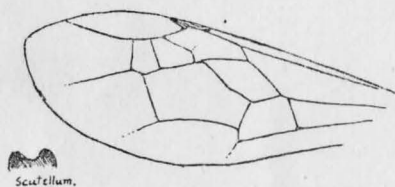
BY T. D. A. COCKERELL.

The insects described below are of special interest, since the first represents a family not before known fossil, the second a family new to American strata, and the third an additional species of a rare family represented previously in America by only two species, though in Europe by five.

HYMENOPTERA.

Trigonalys pervetus, new species.

Probable length about 6 mm., but only part of thorax, wings and middle and hind legs of one side, and abdomen (lacking apex), are preserved. Thorax, abdomen and middle and hind legs black, the middle tibiae with

Fig. 1. *Trigonalys pervetus*.

the basal half reddish; wings dusky hyaline, nervures dark, stigma small; marginal cell ordinary, pointed on costa; three submarginal cells, first receiving first recurrent nervure a moderate distance from its apex, third receiving second recurrent nervure beyond middle; second submarginal cell subtriangular, third short; basal nervure falling short of transverse medial; hind wing with discoidal cell contracted at base, so that the cubital and discoidal nervures roughly form a cross; scutellum strongly bilobed, the lobes rounded; abdomen not hairy; surface of wing delicately hairy; middle and hind femora short, angulate beneath; tibiae long and slender, each with two spurs; tarsi very long and slender, the hind tarsi about 3 mm.; mid tarsi with first joint about as long as 2 to 4 together, the latter successively shorter, fifth joint nearly as long as second.

Burmese Amber (Miocene), received from Mr. R. C. J. Swinhoe.

This is the first fossil species of Trigonaliidae to be recorded; the family consists to-day of a relatively small number of species widely scattered over the world. The present insect should perhaps constitute a distinct genus, on account of the venation of hind wings and very long tarsi, but the anterior wings agree fairly well with *Trigonalys*, and it appears permissible to refer the species there. Until rather recently, the species of Trigonaliidae have been placed in few genera, but W. A. Schulz, in revising the group, has separated a much larger number.

PROTORTHOPTERA.

Palaeocarria, new genus (Pachytylopsiidae).

A genus of Protorthoptera, with elongated thorax in the manner of the Spanioideridae, but with the costal area large, the costa arched, the subcosta ending on the margin, and giving off about six oblique branches, several of which are forked. The surface of the anterior wing is coarsely and very distinctly reticulated, and the cubitus is connected with the media by an oblique vein, exactly as in *Pachytylopsiis*. The anterior wing is ornamented with a series of three large black patches. The hind wing, so far as visible, has almost exactly the venation of *Palorthopteron melas*. Type *P. ornata*.

Palaeocarria ornata, new species.

Head and thorax, anterior to the insertion of the wings, about 15 mm. long, but the details of structure obliterated. Anterior wings ample,

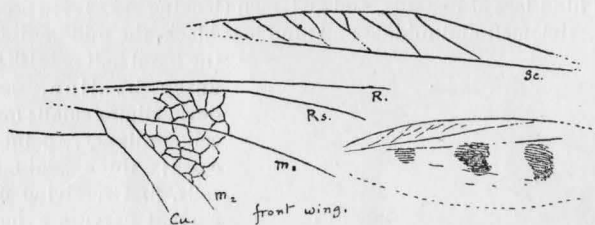


Fig. 2. *Palaeocarria ornata*.

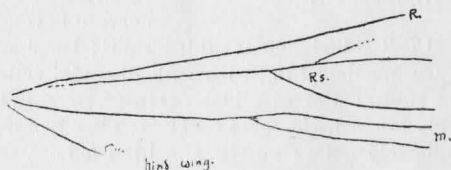


Fig. 3. *Palaeocarria ornata*.

probable length about 45 mm., of which only 33 mm. is preserved; middle of first spot about 9 mm. from base of wing and 6 from costal margin; middle of second spot about 8 mm. from middle of first, the apical side

of second spot distinctly emarginate; third spot reniform, its middle about 10 mm. from middle of second.

Carboniferous (Pennsylvanian), in a nodule at Mazon Creek, Illinois; discovered by Mr. J. C. Carr, after whom the genus is named, and submitted for examination through the kindness of Mr. L. E. Daniels. This genus seems to be closely allied to *Pachytyloopsis* DeBorre, from the Westphalian of Belgium; so much so that it might be possible to interpret the genus in a broad sense to include *Palaeocarria*. The structure of the thorax in *Pachytyloopsis* is unknown; and there are differences in the venation which, taken with the difference in locality, indicate that the Belgian and American insects can hardly be congeneric. The beautiful photographic figure of *Pachytyloopsis* published by Handlirsch in 1904 suggests that the wing was banded, though this appearance may possibly be due to inequalities in the rock. *Palorthopteron melas* Handlirsch, also from the Westphalian of Belgium, closely resembles the hind wing of *Palaeocarria* and *Spaniodera*. May it not be the hind wing of *Pachytyloopsis persenairei* DeBorre?

***Genentomum carri*, new species.**

Wings about 48 mm. long and 12 broad; differing from *G. validum* Scudder as follows: Anterior wing. Radius with a single branch from upper side, this very long, taking its origin about 5 mm. before end of

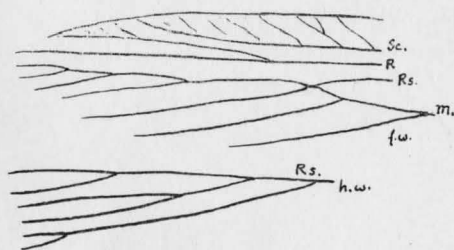


Fig. 4. *Genentomum carri*.

subcosta, and running nearly parallel with radius; combined radial sector and media with four oblique branches from lower side, the first (as in *G. validum*) very near the junction of the two veins; last oblique branch of media before the junction more than

twice as far from penultimate branch as from junction.

Hind wing. Radial sector with a simple branch, beyond the last forked one.

In a nodule from the Carboniferous (Pennsylvanian) of Mazon Creek, Ill. (J. C. Carr). Transmitted by Mr. L. E. Daniels. This very fine specimen shows only the wings, but they are very characteristic of the genus. The *Cedisciidae*, to which *Genentomum* belongs, are only known in America from Mazon Creek; in Europe several genera have been found in the upper Carboniferous of France and Germany.