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A "NEW" NITIDULID BEETLE FROM SUMATRA

by

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Some time ago I was asked to identify a fossil coleopteron which had been found in the drill cuttings of an oil well in the Southern part of Sumatra. As the fossil is only a few millimetres long it may be mentioned as an amazing fact that so small an object has been found during rather rough work like oil drilling.

The details of the locality as given by Mr. A. Wright Jr. of the N.V. Standard-Vacuum Petroleum Maatschappij are as follows: "The well is one of our Kaja wells, a wildcat well located 3.3 kilometres N. 30° E. from the northeast edge of the Djirah oilfield. The drill cutting was obtained from a depth of 1930 feet subsea. Although, in drill cuttings, there is a certain measure of uncertainty as to the exact level of derivation, we have sufficient evidence to be sure that the fossil actually derives from this depth. The age is Tertiary-e; it occurs below beds of Baturadja stage age, but 200 feet above a lepidocyclina-bearing horizon. The fossil occurs in a shale interval of a formation which is generally non-fossiliferous; conditions were presumably marine, but either oligotrophe or toxic; the water at the time of deposition was shallow."

The fossil is pyritized, dark bronze-greyish in colour. It is nearly free from substrate, though in some crevices a light grey, rather soft, somewhat fattish substance is found which can be taken away rather easily.

The fossil was sent to the Rijksmuseum van Natuurlijke Historie at Leiden, mounted in a small box on a slide, pasted to the bottom with tragacanth. During the studies it was left in the small box, and kept in an exsiccator to preserve the fossil against deterioration by atmospheric influence.

By its general form the fossil insect was at once recognized as a member of the family Nitidulidae (Coleoptera; Clavicornia). Only a relatively small number of fossil species are known in this family, most of them from amber from the Baltic coast, from Miocene layers in France and Germany, and also a few from localities in other parts of the world. The present specimen is the first fossil of this family found in Sumatra.

On closer study the shape of the pronotum, the shape of the elytra with their strongly developed epipleurae, the two free adbominal dorsal segments, not covered by the elytra, give the indication that the animal without any doubt should be classified with the subfamily Nitidulinae, tribe Carpophilini. When comparing the fossil beetle with recent material of Carpophilini in the Rijksmuseum van Natuurlijke Historie at Leiden, the close relationship with the species of the genus *Carpophilus*, which also includes a great many species found in the tropics, was very obvious to me.

However, I am not convinced that identification with *Carpophilus* is justified, because there are some distinct differences. So I prefer to classify the fossil beetle in a separate genus for which I propose the name:

Procarpophilus nov. gen.

The genus is distinguished from *Carpophilus* Leach by the relatively long elytra with very distinct epipleurae, the more stretched scutellum, the shape of the head which was probably non-retractable. The borders of the pronotum are not distinctly emarginate.

Further details which might help to classify the insect, such as antennae, mouth parts, and legs, are not present in the specimen under consideration.

Type species: *Procarpophilus macgillavryi* nov. spec.

Procarpophilus macgillavryi nov. spec.

Holotype: a pyritized fossil specimen from a Tertiary layer in Southern Sumatra (details: see above). Length: 3 mm, breadth: 1 mm.

The general form of the animal is more elongate than in recent *Carpophilus*. The elytra are longer than their common breadth. The last two abdominal segments are free, in which character the species shows resemblance to *Carpophilus* (*Ecnomorphus*) *sexpustulatus* Fabr., but it distinctly differs from this species in the general structure of the pronotum and the head. The shape of the head points to the probability that the head was non-retractable. In the specimen it is not retracted as in all recent species. In my opinion the non-retractable head is a primitive character.

The elytra are moderately convex, their surface is finely punctulated like

also the pronotum, the scutellum, and the dorsal surface of the head. The pronotum is twice as broad as long, the lateral borders being subparallel in their basal half, and strongly rounded towards the anterior border in their

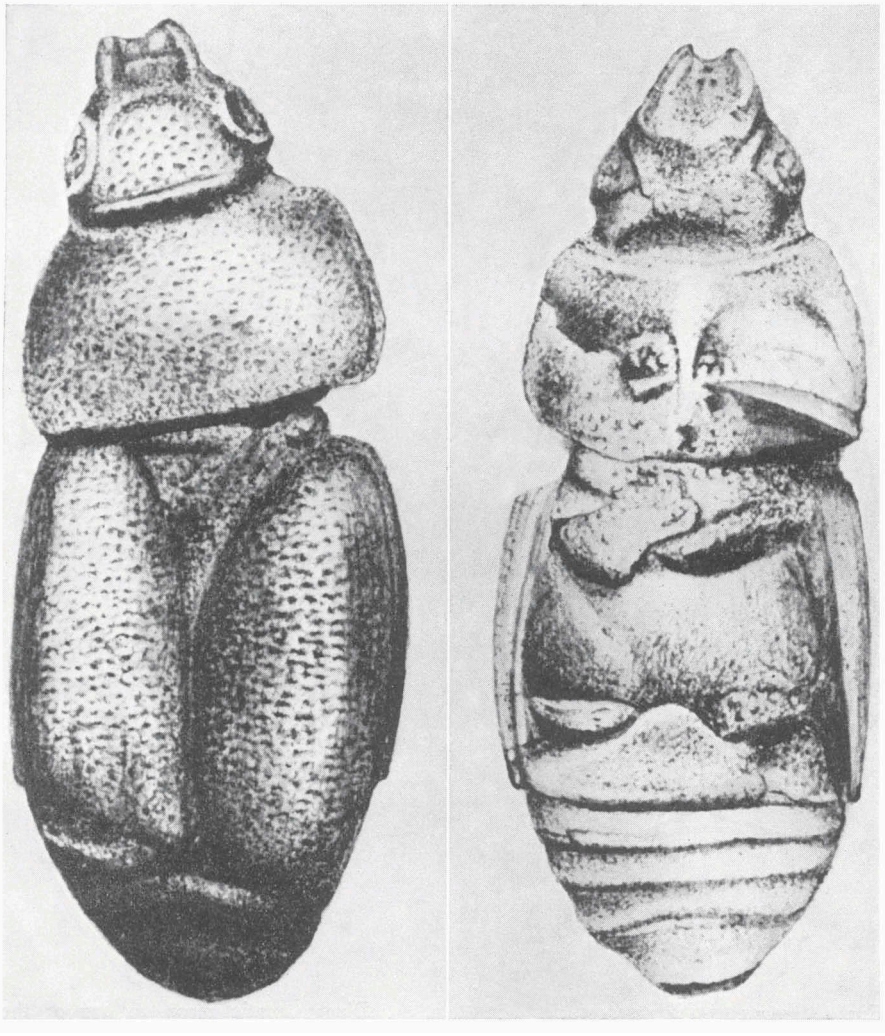

Fig. 1. *Procarpophilus macgillavryi* n. g., n. sp.; left, dorsal view; right, ventral view. × 45.

anterior half. The anterior border itself is nearly straight. In the fossil it cannot be seen whether this border shows any ridge or rim. The posterior and lateral borders show distinctly elevated margins which are not smooth

but are also punctulated. They are not like the distinct smooth borders in recent species. The scutellum is relatively long.

Ventrally the animal shows little detail of specific value, except that the anterior border of the prosternum is nearly straight. In recent species of

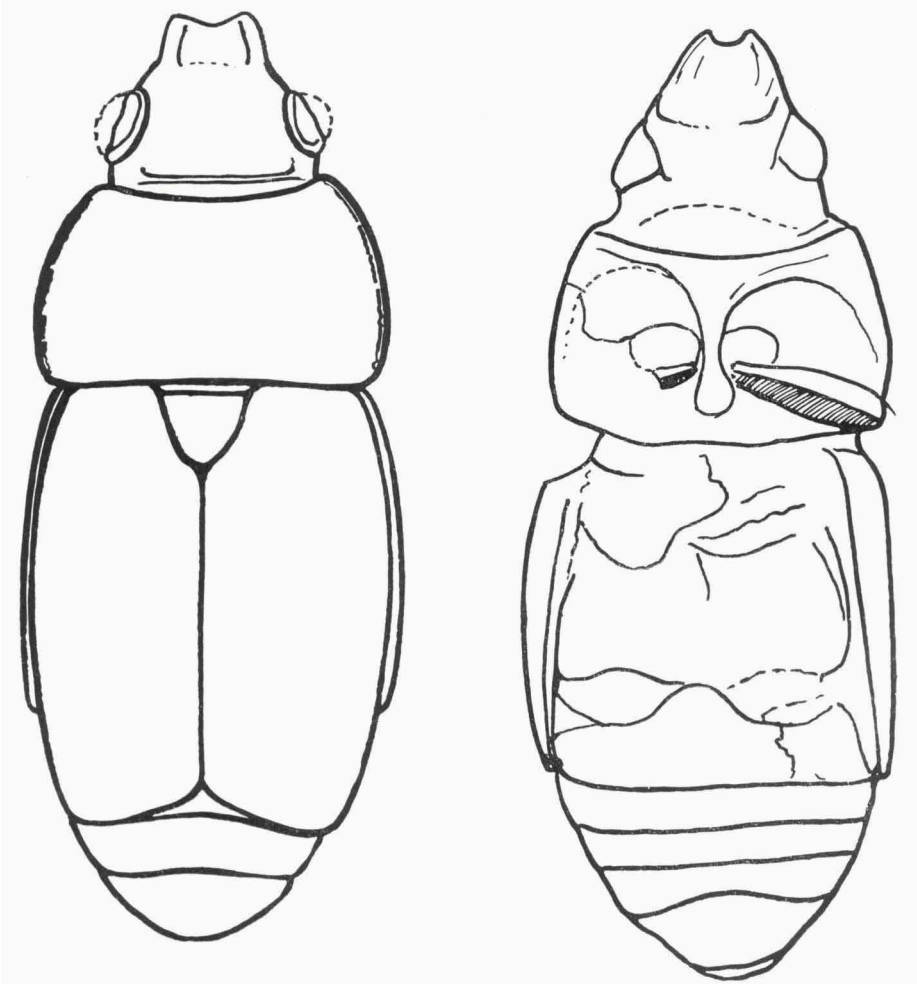

Fig. 2. *Procarpophilus macgillavryi* n. g., n. sp. Diagrammatic reconstruction of the specimen; left, dorsal view; right, ventral view. × 45.

Carpophilus this border shows a distinct broad, almost rectangular excavation which seems to be connected with the new position of the head: not before the thorax like in the fossil, but halfway covered by the pronotum. The shape of the sterna is similar to those in recent *Carpophilus*. The whole ventral surface shows a thin but distinct punctulation.

The legs and other appendages are no more present in the specimen, except for the left anterior femur which is still in position. It is of normal dimensions and ventrally shows a kind of keel.

In general the head is somewhat longer than in recent species of *Carpophilus*. Vertex and frons are distinctly punctulated. The clypeus is strongly developed and punctulated likewise. Ventrally no distinct details are found concerning the mouth-parts except that they must have been somewhat more protruding than, e.g., in *Carpophilus humeralis* from Sumatra.

Fig. 1 represents a photographic copy of two camera lucida drawings, a dorsal view and a ventral view, made by Mr. Beken.

These figures, however, show details which are not present in the specimen, and which are due to strong light from one side, e.g., the apparent transverse crests at the vertex and the clypeus, which actually are grooves. Other details are better visible in various directions of the light. They are given in the reconstruction-diagrams (fig. 2).

The species is named in honour of the late Dr. D. MacGillavry, to whom I owe the opportunity to examine the interesting specimen.