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ALYCULUS, NEW GENUS, FIRST BRACHYPTEROUS MALE LYCID (INSECTA: COLEOPTERA)

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ABSTRACT. - A new genus, *Alyculus*, with the type species *A. kurbatovi*, new species, is described from Java. The new taxon does not approach any existing genus due to the peculiarities of the morphology of the pronotum, elytra, wing venation, etc., being the first known brachypterous male lycid at the same time.

KEY WORDS. - Coleoptera, Lycidae, Leptolycinae, new genus, new species, Southeast Asia.

INTRODUCTION

In Lycidae, unlike in other members of the superfamily Cantharoidea, no taxa with shortened elytra in both sexes have so far been known. Only rarely females of certain species possess elytra that do not cover apical segments of their abdomen (i.e. *Metriorrhynchus apterus* Lea, *Lycus sanguineus* Gorham). Quite separately, also from the biological point of view, stand the well-known larviform females of *Duliticola* group (Mjöberg, 1925; Wong, 1996).

Discovery of a male specimen with fundamentally shortened elytra that leave the whole of the abdomen uncovered has changed the situation. The insect from near Jakarta, Java, having the appearance of a *Malthodes* Kiesenwetter, 1852 (Cantharidae, Malthininae) was found to belong to Lycidae.

The definition of Lycidae allowing their separation from the closely allied Lampyridae, Drilidae and Cantharidae suggested by Crowson (1972) was delineated by Bocák & Bocáková (1990) who justly noted that the mesosternum in lycids is usually emarginate, but erroneously attributed to them presence of elytral epipleura. The diagnosis of the family was further developed in a paper by Medvedev & Kazantsev (1992) who transferred the genera *Euanoma* Reitter, 1889 and *Thilmanus* Redtenbacher, 1874 to Drilidae, leaving the Lycidae as a group uniformly characterized by the membranous tentorium, while some of the characters proposed by Crowson were rejected (absent or short intercoxal process of the prosternum, the shape

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of the parameres that may never be hooked outwardly), some were more precisely diagnosed (the trochanters may well be transverse, the point being the way they are linked to the femora), and some neglected before were added (absence of the elytral epipleura). Thus the features distinguishing the Lycidae from otherwise similar sister families were shown to be as follows: the membranous tentorium, the absence of the elytral epipleura, the trochanters that are rightly connected to the femora, the flattened legs, the distinctly separated middle coxae, the antennal insertions located close together on a raised part of frons (Medvedev & Kazantsev, 1992).

All characters of the brachypterous beetle from Mt. Gede, Java, except the degree of sclerotization of the tentorium that was not studied, testified to its belonging to the family Lycidae. The closer examination of this odd looking lycid has indicated however that the reduction of the elytra that initially seemed to be the most remarkable feature about the insect in fact was rather insignificant compared to its other morphological peculiarities.

MORPHOLOGY AND SYSTEMATIC ACCOUNT

Alyculus, new genus

Type species. - *Alyculus kurbatovi*, new species, by present designation.

Diagnosis. - Head wider behind the eyes, above flat and glabrous, antennal insertions placed on a conspicuously raised part of frons (Figs 1-2). Clypeus transverse. Labrum minute, hardly noticeable. Mouth parts reduced. Eyes relatively small, with rather angular emargination posteriorly (Fig. 2). Maxillary palpi 4-segmented, slender and short, with apical joint long and tapering to apex. Labial palpi 1-segmented, indistinct. Antennae 11-segmented, slightly compressed, with third joint much longer than second and conspicuously longer than first. Third and subsequent joints of antennae with short erect pubescence. Pronotum transverse, margined only anteriorly and posteriorly, with lateral margins discontinuous, stretched outward posteriorly in a process overlaying the bulk of the margin, concave anteriorly and convex posteriorly, flat and glabrous above, with no traces of carinae or longitudinal impression, with very slightly raised front third and slightly rugulose wide median stripe (Fig. 1). Scutellum small, not occupying the whole of the elytral incision, covered from above by the elytra. Elytra rugulose, deprived of any trace of longitudinal costae or rows of punctures, finely pubescent, covering only basal abdominal segments (Fig. 1). Wing venation with only two (radian and median) nerves developed (Fig. 3). Legs slender and flattened, all tarsal joints narrow and without adhesive lobes, last tarsomere conspicuously exceeding each of the preceding ones in length; all claws simple. Aedeagus constituting one conglomerate piece, with rounded phallobase attached to elongate narrow parameres (Fig. 4).

Etymology. - The name is derived from a combination of "alicula", the Latin for cape, alluding to the resemblance of the shortened elytra of the new taxon to the aforesaid clothing item, and the generic name *Lycus* that gives name to the whole family. Gender masculine.

Remarks. - *Alyculus* n. gen. bears certain resemblance to the genus *Leptolycus* Leng & Mutchler, 1922, differing in the structure of the antennae, of the pronotum, of the elytra, etc. In the structure of the pronotum that is almost absolutely flat and glabrous and margined only anteriorly and posteriorly (Fig. 1) the new genus is quite unique. The same applies to the wing venation, though its extreme simplification is apparently a consequence of the tiny size of the animal (the extension of the wings in Fig. 1 is an artefact of mounting, before

dissecting the abdomen the wings were normally folded). By the structure of the elytra deprived not only of reticulation, but also of any traces of longitudinal costae, *Alyculus* somewhat resembles the African genus *Dexoris* Waterhouse, 1878, being completely different in the pronotal and antennal structure.

The nearest approach of *Alyculus* could be *Lyropaeus* Waterhouse, 1878, due to the similar structure of the head with reduced mouth parts and of the tarsi with narrow and having no adhesive lobes segments, differing at the same time by the 10-segmented antennae and the elytral structure. A detailed investigation of such structures as labium that would considerably destroy the unique specimen seems premature before either satisfactory characters separating suprageneric taxa are found in Lycidae, or additional specimens of *Alyculus kurbatovi* n. gen., n. sp. are collected.

Preliminarily the new genus is placed in the tribe Lyropaeini.

Alyculus kurbatovi, new species
(Fig. 1-4)

Material examined. - Holotype - male, W Java, Mt. Gede, 1400-1500 m, primary forest, litter sifting, 25-27 May.1997, S.Kurbatov (Insect Centre, Severtzov Institute of Ecology and Evolution Problems of the Russian Academy of Sciences, Moscow).

Description. - Male. Uniformly dark brown.

Head glabrous, flat behind, with inconspicuous round impression behind antennal prominence, finely and scarcely punctured. Eyes relatively small (interocular distance twice as wide as the radius), with relatively large grain. Clypeus minute, straight anteriorly. Maxillary palpi slender, with ultimate joint about 1.5 times longer than penultimate, tapering toward apex. Antennae reaching over the elytra, with 3rd joint 3 times longer than 2nd and 1.2 times longer than 1st; 3rd to 10th joints subequal in length; 11th the longest, slightly longer than 4th; two basal joints in somewhat more decumbent pubescence than following joints.

Pronotum transverse, twice as wide as long; lateral margins straight in anterior half and stretched outward posteriorly, with front angles rounded and hind angles acute and long. Scutellum small and narrow, emarginate and bifurcate at apex (Fig. 1).

Elytra short, only 1.5 times as long as wide humerally, slightly tapering posteriorly, rather densely rugulose. Uniform erect pubescence short and relatively scarce.

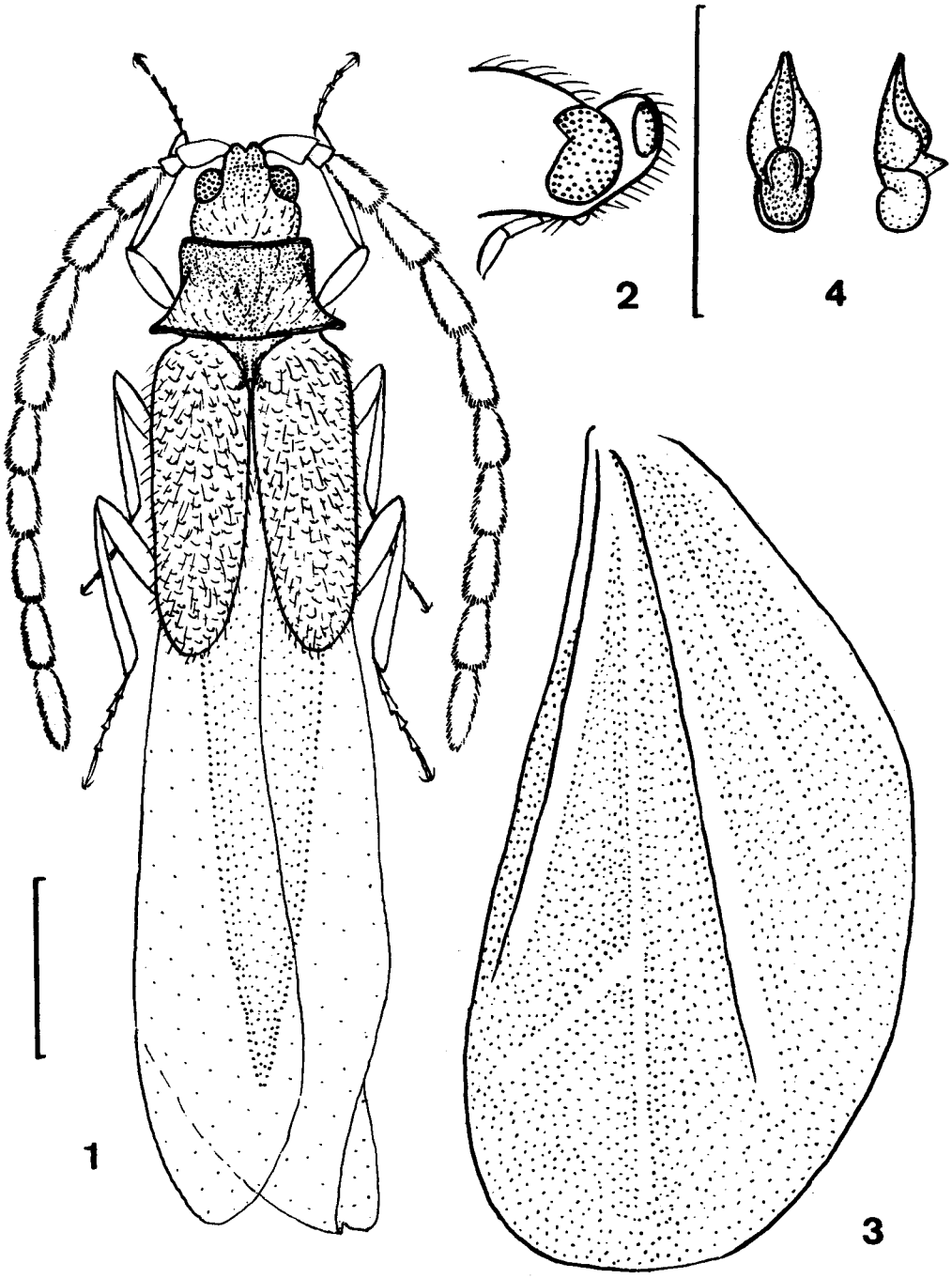
Legs rather narrow, with front tibiae 1.25 times longer than front femora; front tarsomeres ratio: 4:4:4:4:7.

Aedeagus - Fig. 4.

Length: 2.6 mm. Width (humerally): 0.6 mm.

Female. Unknown.

Etymology. - The species is named after the collector of the unique specimen, my friend and Pselaphinae (Staphylinidae) specialist Serguei Kurbatov, Moscow.



Figs. 1-3. *Alyculus kurbatovi,* new genus, new species. Holotype male: 1, General view of the body; 2, Head, laterally; 3, wing venation; 4, Aedeagus. Scale = 0.5 mm.

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