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A new genus of Malachiidae from Asia (Coleoptera)

by A. Mayor and W. Wittmer

Abstract: The genus *Anhomodactylus* is proposed to accommodate 4 species of *Malachius* and one species of *Anthocomus*. The genus is distinguished from *Malachius* and *Anthocomus* by the asymmetrically lobed foretarsi.

Recent studies involving a classification of the species of *Malachius* into subgenera have disclosed the need for generic reassignment of several Japanese, Chinese and Siberian species of *Malachius* and *Anthocomus*. These species can not be assigned to any known genus of Malachiidae, consequently a new name is being proposed. This action is being taken in anticipation of the results of our subgeneric classification of *Malachius*.

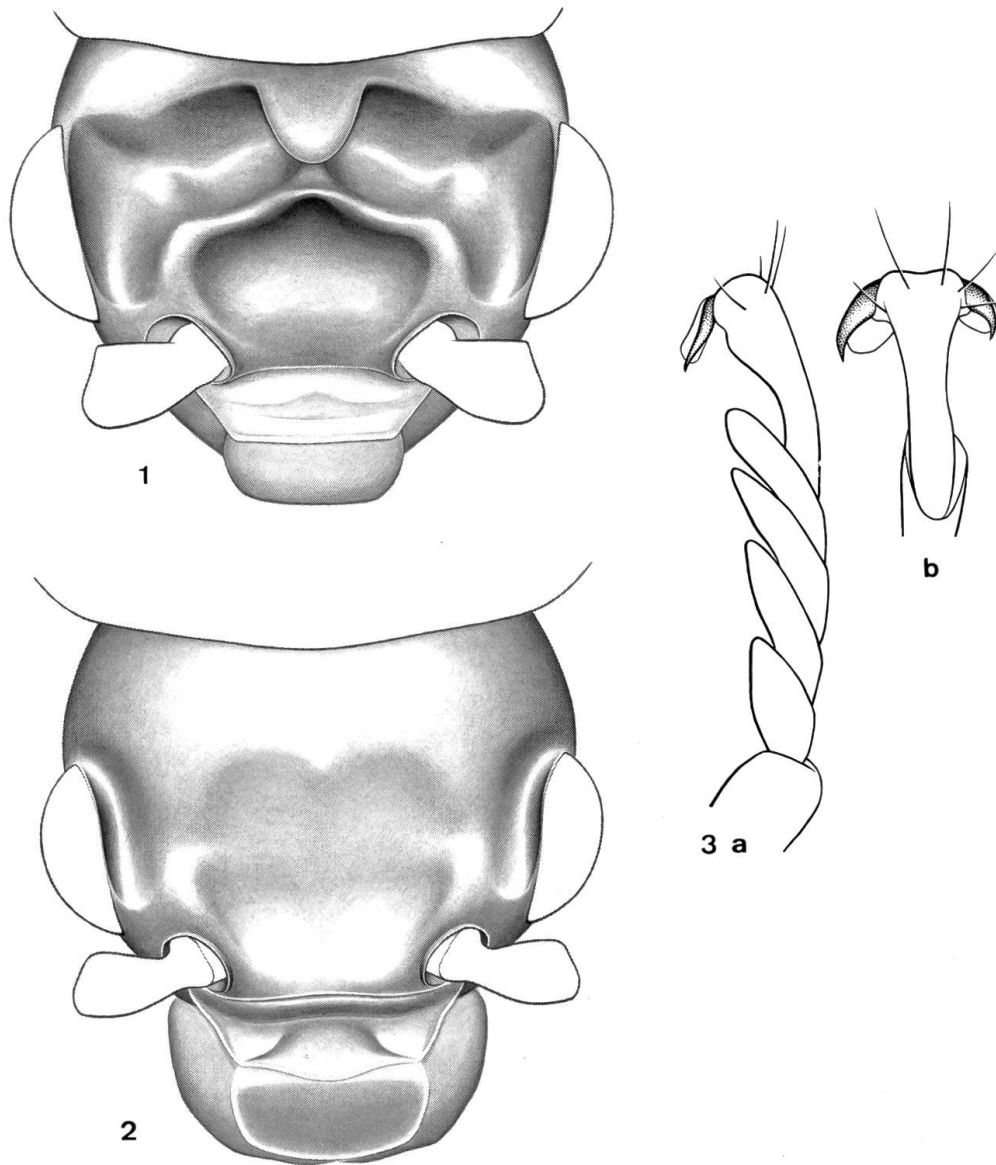
Anhomodactylus n. gen.

Type species: *Malachius eximius* LEWIS, 1895

Elongate, moderately graciliform to moderately robust. Surface feebly shining to dull, microreticulate. Color variable, typically dark green above, legs often pale. Pubescence short, inconspicuous; elytra typically with pale reclining setae intermixed with black suberect to erect setae.

Head (Figs 1 & 2) transversely sulcate between eyes in male, unmodified in female. Interocular margins (including vertex posterior to interocular margins in *M. biimpressifrons*) longitudinally sulcate in both sexes, sulcus more pronounced in male. Clypeus short, sclerotized in basal $1/4-1/3$, membranous apically; epistomal suture tangential to antennal sockets. Antennae 11-segmented, filiform to subserrate.

Pronotum variable; elongate, as wide as long to transverse; angles broadly rounded; apex slightly to strongly produced; sides slightly, evenly produced or converging anteriorly; posterior angles slightly reflexed or not. Elytra elongate, completely covering abdomen or leaving terminal 1 to 2 terga exposed; apex unmodified in both sexes. Wings present, fully developed in both sexes. Tarsi 5-segmented in both sexes, foretarsi vaguely asymmetrical in female; male foretarsi (Fig. 3a) distinctly asymmetrically lobed; anterior surface of segments I



Figs 1–3: 1–2. Head, frontal aspect: 1, *Anhomodactylus eximius* ♂. 2, *A. ohbayashii* ♀. 3. Protarsus, *A. eximius* ♂: a, anterior aspect. b, dorsal aspect, segment V.

to IV elongate, elongation most pronounced in segments III and IV; foretarsal claws (Fig. 3b) asymmetrical in both sexes, anterior claw greatly reduced in male, slightly reduced in female.

Abdominal sterna with posterior margin narrowly membranous, sterna typically completely sclerotized; terminal abdominal sternum of male shallowly emarginate, broadly rounded in female; pygidium broadly rounded to truncate in both sexes. Aedeagus of male genitalia with median lobe elongate, becoming gradually acute at apex; internal sac covered with numerous small, inconspicuous spines.

The following species are included in *Anhomodactylus*:

Malachius biimpressifrons PIC, 1932, Ent. Anz. 12: 252 (China)

Malachius eximius LEWIS, 1895, Ann. Mag. N. H. (6) 16: 117, Fig. 2 (Japan)

Malachius gotoi NAKANE, 1956, Sci. Rep. Saikyo Univ. Ser. A, 2 (3): 31 or A 161 (Japan)

Malachius ohbayashii WITTMER, 1953, Ent. Rev. Japan 6: 37 (Japan)

Anthocomus albilabrus PIC, 1914, L'Echange 30: 73 (Amur)

M. biimpressifrons, *M. ohbayashii* and *A. albilabrus* were described from females. Their inclusion in *Anhomodactylus* is based primarily on the presence in these species of a shallow longitudinal sulcus at the interocular margins. *M. biimpressifrons* differs from the others in that the sulcus begins near the middle of the interocular margins and extends to the vertex posterior to the eye. It is tentatively included in *Anhomodactylus* pending discovery of the male. Males of *Anhomodactylus gotoi* and *A. eximius* have antennal segments III to V broader than the following segments and antero-posteriorly compressed. In the female of *A. ohbayashii* and presumably *A. gotoi* and *A. eximius* antennal segments III and IV are broader than the following segments, while in *A. albilabrus* and *A. biimpressifrons* segments III and IV are not broader than the following segments.

Adults of *Anhomodactylus* are not likely to be confused with those of other malachiid genera. They are distinctive in having the head transversely sulcate in males, and the interocular margins longitudinally sulcate and the fortarsi asymmetrically lobed in both sexes. The relationship of *Anhomodactylus* to other malachiid genera is currently problematic. It does not appear to be closely related to *Malachius* or *Anthocomus*. *Anhomodactylus* shares no derived features with *Anthocomus*, a genus whose species typically have the male elytral apices excavated and appendiculate. Although the head of some species of *Malachius* is sulcate, the sulcus typically occurs in the epistomal region rather than more posteriorly as it does in *Anhomodactylus*.

lus. This difference in the position of the cephalic sulcus suggests an independent derivation of this character in the two genera. The modification of the foretarsi in *Anhomodactylus* appears to be unique and other derived characters are not helpful in indicating relationship.

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