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A Macrocephalic New Species of *Acoptolabrus* from South Korea (Coleoptera, Carabidae, Genus *Damaster*)

Ryôsuke ISHIKAWA and Thierry DEUVE

Synopsis

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A remarkable macrocephalic new species of *Damaster* belonging to the subgenus *Acoptolabrus* is described under the name of *mirabilissimus* from South Korea. This species is distinguished from other species of the subgenus by conspicuous hypertrophy of the head and features due to it, including the shape of prothorax. Some of the outstanding characters of this species are unusually developed anterior tooth of right retinaculum, strongly projecting median tooth of mentum, extraordinarily constricted pronotum without posterior marginal setae. The genitalic characters of the male are also very distinctive.

R. ISHIKAWA: Department of Natural History, Faculty of Science, Tokyo Metropolitan University, Fukazawa 2-1-1, Setagaya-ku, Tokyo 158, Japan.
Th. DEUVE: 1, Abbé-Rousselot, 16000 Angoulême, France.

The subgenus *Acoptolabrus* is distributed in limited areas of eastern Asia, Sakhalin and Hokkaido, but our knowledge of it is yet very incomplete. Three species have been known to occur in Korea, namely, *schrencki* (MOTSCHULSKY), *constricticollis* (KRAATZ) and *leechi* (BATES), but the latter two are closely related, having in common a peculiar constriction near the base of the pronotum. It is, however, not certain whether they are specifically distinct from each other or nothing but geographical races of a species.

A new species described in this paper also shares the characteristic features with them, but this species is remarkable for its noticeable hypertrophy of the head with all adaptive features which develop in most macrocephalic Carabina (see ISHIKAWA, 1978), and the prothorax is extraordinarily transformed corresponding with the enlarged head. It is noteworthy that this species is sympatric with *constricticollis* at a locality.

Damaster* (*Acoptolabrus*) *mirabilissimus sp. nov.

Length of body (measured from the apical margin of labrum to the anal end of elytra) : ♂, 24.5 mm. ♀, 25.2–27.0 mm.

Ground color of body and appendages black. Head above and pronotum coppery red; underside of head and prothorax purplish coppery, the latter with stronger coppery lustre at the upper part. Elytra bright green or bluish, with elevated parts of intervals black. Elytral epipleuron, meso- and metathoracic pleura, metacoxa, abdominal sternites and all femora with strong purplish lustre.

Head enlarged; genae below eyes extended laterally, with a dorsal depression on either side below antennal insertion, the sides in dorsal view feebly widened from the bases of mandibles to below eyes, slightly narrowed therefrom posteriorly to form the nack; the basal angles of the maxillae not or barely visible from above. Frons much broader than long (measured from a line connecting posterior margins of eyes to the clypeofrontal suture), its median part very weakly convex with frontal impressions broad and irregularly wrinkled. Neck with coarse transverse wrinkles stronger laterally behind eyes. Clypeus with sublateral impressions strong, and median part very weakly convex. Labrum barely extending laterally, nearly as long as clypeus, with its anterior margin deeply emarginate medially. Median tooth of mentum very long, strongly raised and pointed. Mandibles long but very weakly arcuate, their inner margins only slightly arched, with apices not so strongly tapered nor sharply pointed as in other species of the subgenus. Left mandible with a longitudinal impression along the incisor margin at its basal half where the retinaculum is fused to form a ventral callosity as in most macrocephalic species of the Carabina. The retinaculum of right mandible with its anterior tooth unusually large and subquadrate, the posterior tooth atrophied or lost. Macrocephalism is slightly more conspicuous in the female than in the male.

Pronotum smaller for the size of head, about 1.2× as broad as long; in general structure resembles that of *constricticollis* but the lateral margins are extraordinarily narrowed posteriorly from the widest part to the subbasal constriction. The anterior margin slightly emarginate medially and strongly raised to form a conspicuous ridge with a distinct constriction behind. The lateral margins arcuately convex at the anterior half, subangulate medially where there is an anterior marginal seta on either side, strongly convergent therefrom to the subbasal constriction, where the marginal carinae are rudimentary and pronotal epipleura are wholly visible from above. The lateral margins diverge abruptly

from the constriction so that the postero-lateral corners are acutely produced outwards. The posterior marginal seta absent. The posterior margin feebly sinuous. Upper surface convex, with sub-transverse wrinkles, densely rugulose postero-medially, shallowly concave medially with a finely impressed median line which is not carinate posteriorly; no basal impressions. Proepisternum short, convex, with at most weak transverse rugae near upper margin.

Elytra elongate oval, more elliptical in the female; broadest at the middle in the female, but distinctly behind middle in the male; broader than in *constricticollis* and rather evenly convex. The primaries composed of regular rows of very broad, gently convex rectangular callosities with smooth surface which are mostly fused laterally with rudimentary tertiaries; secondaries similar to the primaries but much smaller; the tertiaries granular, or may be continuous longitudinally to form short, irregular lines, the fusion with the primary callosities makes their sides irregularly notched. Umbilicate series unusually developed to form a row of small callosities as in the secondaries.

Posterior upper corner of metepisternum bluntly subangulate, not evenly arched as in *constricticollis*. Legs comparatively short, with femora distinctly thicker than in the other species of *Acoptolabrus*; the

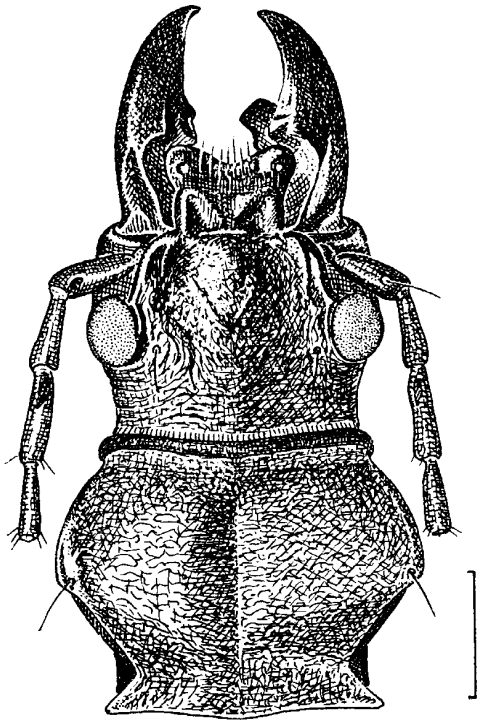
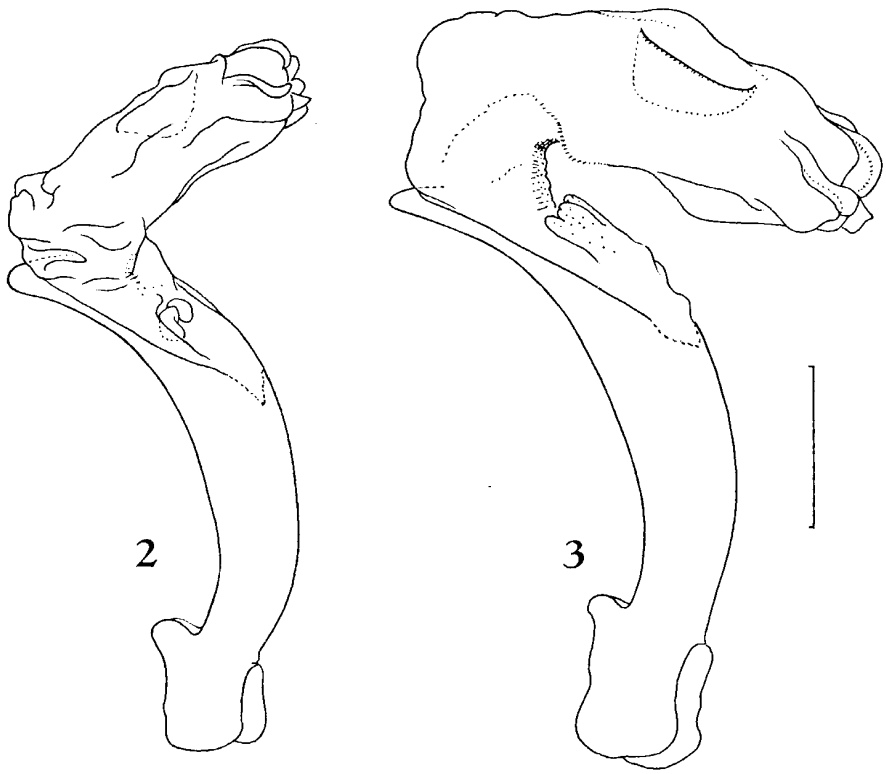


Fig. 1. *Damaster* (*Acoptolabrus*) *mirabilissimus* ISHIKAWA et DEUVE, sp. nov., ♂. Head and pronotum. Holotype. Scale: 2 mm.



Figs. 2 & 3. Aedeagus and endophallus. —— 2. *D.* (*Ac.*) *mirabilissimus* ISHIKAWA et DEUVE, sp. nov.——3. *D.* (*Ac.*) *constricticollis* (KRAATZ). Scale: 2 mm.

fore femur of the male distinctly broadest at the middle in lateral view.

Male genitalia (Fig. 2): Aedeagus with its apex very broadly rounded. The ostium lobe rudimentary. Endophallus narrow and short.

Holotype: ♂, Mt. Taebaeg-san, 1,600 m, Gang-Weon-Do, S. Korea, viii. 31–ix. 4, 1977, J. WADA leg. (in coll. R. ISHIKAWA).

Paratypes: 1 ♀, the same locality as the holotype, vii. 7–9, 1977, J. WADA leg. (in coll. R. ISHIKAWA); 1 ♀, "Corée du Sud, Sorak City, Mt. Sorak, 2 août 1979, G. MINET leg." (in coll. G. MINET).

Range: South Korea.

This new species is apparently very closely related to *Damaster* (*Acoptolabrus*) *constricticollis* (KRAATZ, 1886) and is doubtless a derivative from it, but the sympatry of these two species was confirmed by Mr. Jun WADA on Mt. Odae-san, Gang-Weon-Do, in South Korea. *D.* (*Ac.*) *mirabilissimus* is distinguished from other species of the subgenus *Acoptolabrus* by a number of conspicuous characters mostly due to the development of remarkable macrocephalism as given in the description, a large and raised median tooth of mentum and the extraordinarily constricted pronotum. The shape of the apex of aedeagus presents a striking

contrast to that of *constricticollis* in which it is unusually narrowed for the subgenus, and small endophallus and the rudimentary ostium lobe are also important characters of this species. It is noteworthy that such noticeable apomorphic characters for *Acoptolabrus* as raised median line at the posterior part and deep basal depressions both in pronotum are completely lost in this species.

Acknowledgements

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摘　　要

石川良輔(東京都立大学理学部自然史研究室)・Th. DEUVE (Angoulême, France)——南朝鮮産の頭部の巨大化したクビナガオサムシ亜属の1新種.

クビナガオサムシ亜属 *Acoptolabrus* は東アジアの一部と樺太，北海道に分布するが分類学的知見は未だに極めて不完全である．朝鮮半島からは従来3種が知られているが，そのうち *constricticollis* と *leechi* は明らかに近縁で果して別種であるか，または同一種の亜種関係にあるのか不明である．本論文に記載した新種 *mirabilissimus* も *constricticollis* に近縁であることは前胸部の特徴的な構造の類似からも容易に推定される．しかし本種は頭部の巨大化が著しく，これに伴なって生じたと考えられる形質の他，更に著しく変形した前胸部の形状などはクビナガオサムシ亜属には全く例を見ない．また，本種は *constricticollis* と混棲することが韓国五台山において和田潤氏によって確認されている．この点からも独立種であることは明らかである.

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