

## **A new species of *Acolastus* Gerstäcker from Tibet** (Coleoptera: Chrysomelidae: Cryptocephalinae)

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**Abstract:** A new species of *Acolastus* Gerstäcker from South-east Tibet is described, and the female genitalia are figured. This is the first record of this genus from Tibet. This species was found to be close to *A. albopilosus* (Tan) and *A. karakirgiza* (Jacobson). The female and male genitalia as well as the variability in coloration of *A. batangensis* (Tan) from Yunnan are figured. A key to species is provided for the species of *Acolastus* recorded from Nepal and China.

**Key words:** Coleoptera, Chrysomelidae, Pachybrachini, *Acolastus*, new species, Palaearctic region, Tibet

### **Introduction**

The genus *Acolastus* Gerstäcker, 1855 is represented in the Afro-tropical, Palaearctic and Oriental regions. The most eastern records are isolated ones, mostly of species known only by single or few type specimen. However, the knowledge of these taxa is important to reveal the distribution of the genus, and the species-groups within the genus. In this study, the first representative of *Acolastus* from Tibet is described.

### **Material and Methods**

Dried adults were dissected, the abdomen was separated in water, the contents were soaked in cold dilute KOH for several hours and then

washed in water. The eye length was measured from lateral view, the interocular space from frontal view. The specimens used in this study were borrowed from the following 3 collections. The acronyms are those used in the text.

DSPC : Davide Sassi personal Collection, Castelmarte, Italy

JBPC : Jan Bezdék personal Collection, Brno, Czech Republic

MMCB : Moravian Museum Collection Brno, Brno, Czech Republic.

## Results

### *Acolastus furcatus* n. sp.

(Figs. 1, 2, 9, 12-13)

Holotype:

Locus typicus: Tibet, Yanjing (28°51'N/98°41'E).

Labeling: Holotypus (female, MMCB): / SE Tibet, 24.VI.1997, Yanjing - Nenv., 2600m, 28°51'N, 98°41'E, Jaroslav Turna leg. [white] / (my label)

Holotypus *Acolastus furcatus* MIHI, det. Matthias SCHÖLLER 2000 [red] / Ex Collection Jan BEZDÉK [white] /.

### Diagnosis

A black species with brown margin of elytra and pronotum, and apices of elytra; dorsum covered densely by forked setae. From both *A. karakirgiza* (Jacobson, 1925), *A. nanus* (Lopatin, 1976) and *A. albopilosus* (Tan, 1992) it may be distinguished by the coloration, and from *A. nanus* also by the deep puncturation.

### Description (female only)

Habitus: cylindrical species (Fig. 14), size [mm]: length 3.25, width of elytra at humeri 1.5, length of pronotum 1.0, width 1.3, colour black with brown margin of elytra and pronotum, and apices of elytra, puncturation strong and irregular, the diameter of the punctures wider than the intervals, surfaces clothed with strong white setae.

Head: strongly punctured, black, covered with simple white setae, clypeus black, labrum, labial and maxillary palpi light brown, last segment of maxillary palp oval. Eyes oval, inner margin only very slightly emarginate, interocular space 1.88 times eye length. Antennal segments 3

to 5 narrow, longer than the following, 6 to 11 slightly dilated, antennal segments black, segments 3 and 4 light brown.

Thorax: 1.25 times broader than wide, covered with silvery white long simple setae, surface of pronotum diffusely and dense punctured, lateral margins and anterior edges brown, simultaneously visible from above, lateral margin crenulate, the small tubercles bearing a bristle each; scutellum strongly punctured, covered with white setae, width about 2.1 times length; elytra truncate, broader than pronotum at base, basal margin only feebly raised except for a small prominent triangle, with side margin brown, margins simultaneously visible from above, anterior margin brown up to the triangle, interrupted by the black humerus; legs including coxae brown, femur partly, tip of tibia and tarsi dark brown, last tarsomer longer than second by 50%, claws simple. The dorsal side is covered densely by scale-like white setae which are split at the apex (Fig. 13), for this type of bristle I propose the term forked seta (*seta furcata*).

Abdomen: sternites and pygidium densely and strongly punctured, black, densely covered with simple white setae, which are about twice the length of the forked setae.

Spermatheca simple, with spermathecal duct spiral (Fig. 9), kotpresse with dorsal central plate narrow (Fig. 1), saddle-shaped, ventral apodemes joined by a narrow junction (Fig. 2). Male not known.

Etymology: named after the forked setae covering the elytra.

Distribution: Tibet. No information on the biology available.

### *Acolastus batangensis* (Tan, 1992)

*Serrinotus batangensis* Tan, 1992: 819

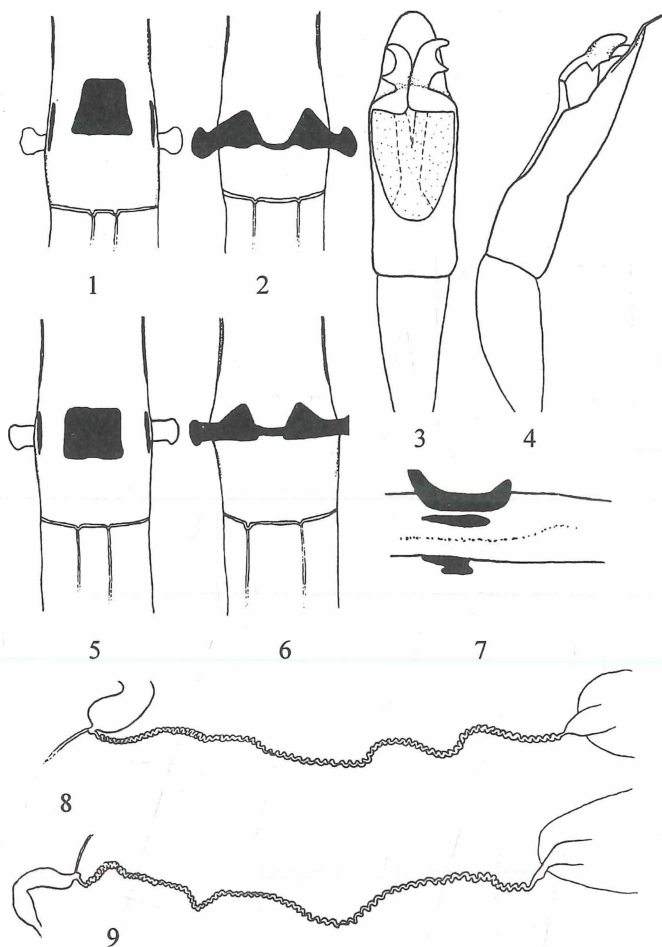
Specimen studied:

1 ♂, 1 ♀, DSPC: China, Yunnan, Daju (50km N of Lijiang), 27.21N 100.19E, 27-28.VI.1992 / 1 ♂, 2 ♀♀, JBPC: China, Yunnan, 50km N Lijiang, Yulongshan nature reserve, 24.- 29.VI.1993, leg. JENDEK & SAUSA.

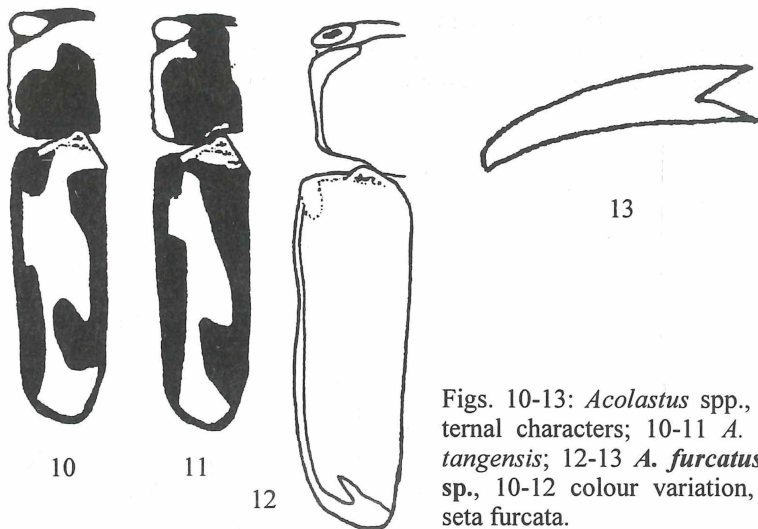
♂: The ventral side of the aedeagan lobe is prolonged (Fig. 4), the tip of the prolongation is round, the apical orifice is large, the dorsal endophallic sclerite is visible in the dorsal view, the apex of this structure is half-moon-shaped (Fig. 3).

♀: Spermatheca simple, round at base, with spermathecal duct spiral (Fig. 8), kotpresse with dorsal central plate quadrate (Fig. 5), saddle-shaped (Fig. 7), ventral apodemes joined by a narrow junction (Fig. 6).

Variability: the variability in coloration is illustrated in Figs. 10 and 11, the black markings on the elytra may be extend to the humeral spot, and the black markings on the pronotum to the anterior border.



Figs. 1-9: *Acolastus* spp., 1, 2, 9 *A. furcatus* n. sp., 3-8 *A. batangensis*; 1, 5 kotpresse dorsal; 2, 6 kotpresse ventral; 7 kotpresse lateral; 3 aedeagus dorsal; 4 aedeagus lateral; 8, 9 spermatheca and spermatheca.



Figs. 10-13: *Acolastus* spp., external characters; 10-11 *A. batangensis*; 12-13 *A. furcatus* n. sp., 10-12 colour variation, 13 seta furcata.

### Key to the species of *Acolastus* of Nepal and China

- 1 Elytra and pronotum bare, not pubescent, elytra with ridges; Western Nepal ..... *A. costatus* (Medvedev & Sprecher-Uebersax, 1999)
- Elytra covered with setae..... 2
- 2(1) Elytra covered with simple setae, elytra and pronotum yellow with black markings. China, Yunnan, Szechuan  
..... *A. batangensis* (Tan, 1992)
- Elytra covered with short and broad scale-like setae ..... 3
- 3(2) Antennae long, reaching basal third of elytra, elytra yellow-brown, humerus of elytron with a black spot, anterior margin of prothorax yellow-brown;. China, Yunnan ..... *A. albopilosus* (Tan, 1992)
- Antennae shorter, reaching just the hind margin of the pronotum, elytra black, with the lateral border and a transverse spot at the apex brown, only edges of anterior margin of prothorax brown; Tibet  
..... *A. furcatus* n. sp.

### Discussion

The new species from Tibet is a further record of *Acolastus* east of the Himalaya, where only a small number of isolated records were known so far. Another group of eight species is known east of 80°E from Mon-

golia, and these species share a number of characters with *A. karakirgiza* and *A. furcatus* like the shape and position of the eyes and the lateral margins of the pronotum. The dorsum is setose in the majority of species close to *A. karakirgiza*. Setae are present on the elytra and the pronotum in different species-groups of *Acolastus*, and in some species of the related genus *Pachybrachis* as well, this character is therefore of minor taxonomic value. The degree of pubescence may rather depend on the intensity of UV-radiation in the habitat of the individuals. Two species from the Sahara and the Sahara-transition zone bear the largest scale-like setae and the most dense pubescence, *A. senegalensis* Bryant, 1944 and *A. wittmeri* (Lopatin, 1979). However, no forked setae were detected in the latter two species, this type of setae may be restricted to *A. furcatus* and maybe also to *A. albopilosus*, a species which was not available for study. Another remarkable character found in *A. batangensis* and *A. furcatus* is the junction of the ventral apodemes, recorded so far only for *A. karatavicus* (Lopatin, 1976), *A. brunneomaculatus* (Pic) (SCHÖLLER 2000) and in the *A. carinatus* Bryant, 1944 species-group (SCHÖLLER 1999).

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