Koleopterologische Rundschau	78	233–240	Wien, Juli 2008

New species and records of *Algon* SHARP (Coleoptera: Staphylinidae: Staphylininae)

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Abstract

A first supplement to the revision of *Algon* SHARP (Coleoptera: Staphylinidae: Staphylininae) published by SCHILLHAMMER (2006) is presented. The following new species are described: *Algon atroviridis* (China), *A. holzschuhi* (China), *A. leigongshanus* (China), *A. fortepunctatus* (E-Malaysia), and *A. murzini* (China). Additional faunistic records are provided for *Algon crockerensis* SCHILLHAMMER, 2006, *A. fredricki* SCHILLHAMMER, 2006, *A. gemmatus* SCHILLHAMMER, 2006, and *A. sinoculatus* SCHILLHAMMER, 2006. The aedeagi of all new species are illustrated. The aedeagus of *A. gemmatus* is depicted for the first time.

Key words: Coleoptera, Staphylinidae, Staphylininae, Staphylinini, Xanthopygina, *Algon*, new species, new records, taxonomy, systematics, zoogeography.

Introduction

Shortly after the revision of the genus *Algon* SHARP, 1874 was published (SCHILLHAMMER 2006), I received additional material which contained another five species new to science, as well as further specimens of already described species which provided new distributional information.

Also, the first male of *A. gemmatus* SCHILLHAMMER, 2006 has become available, so that it is now possible to illustrate its aedeagus for the first time.

Acknowledgements and abbreviations

CPK Coll. Petr Kresl, Janovice nad Úhlavou
CRL Coll. G. DeRougemont, London
CSB Coll. M. Schülke, Berlin
CSH Coll. Y. Shibata, Tokyo
NHML The Natural History Museum, London (R. Booth)
NMW Naturhistorisches Museum Wien

The cooperation of the colleagues mentioned above by providing the material used in this paper is greatly appreciated.

Algon grandicollis species group

Algon atroviridis sp.n.

TYPE MATERIAL: **Holotype** ♂: "China, W Fujian, 25.IV.-25.VII. Ziyungdongshan, NW slope, 25°46'N 117°20'E, 900-1100 m, Jaroslav Turna leg., 2006" (NMW).

DESCRIPTION: 23.5 mm long (10.5 mm, abdomen excluded). – Black, head and pronotum dark metallic green, very shiny; base of mandibles and palpi dark reddish brown; legs black, first tarsal segment black, remaining tarsi gradually becoming reddish brown distally, antennae black

at base, gradually becoming reddish distally, but color difficult to interpret under dense tomentose pubescence.

Head rounded quadrangular, 1.3 times as wide as long; eyes large, 1.3 times as long as inconspicuously convergent tempora; entire temporal area coarsely and densely punctate and pubescent, setae black; entire disc of head glabrous but covered with numerous stitch-like micropunctures becoming sparser on clypeus; antennae long and slender, all segments markedly oblong; mandibles short and stout, last segments of all palpi broadly triangular; pronotum slightly wider than long (ratio about 1.1 times), widest in anterior third, rather distinctly narrowed toward broadly rounded base; surface covered with micropunctures similar to those on disc of head; elytra short, suture about half as long as pronotum along midline, slightly widened posteriad, very densely, asperately punctate, punctures contiguous; scutellum rather densely punctate but not as dense and coarse as elytra, surface between punctures with fine wavy microsculpture; abdominal tergites very densely and coarsely, asperately punctate, punctural grooves more or less contiguous, oblong, slightly widened posteriad; posterior margin of tergite VII without whitish seam (length of alae not studied).

Aedeagus (Fig. 1) similar to that of *A. grandicollis* SHARP, 1874 but paramere much shorter, and more slender without any noticeable lateral extensions, peg setae (Fig. 1c) similarly arranged but slightly more numerous.

DIAGNOSIS: The species is distinguished from all large species of the *A. grandicollis* group by the color combination of black elytra and metallic head and pronotum (all other species are either entirely black or have metallic elytra), by the short elytra and the lack of the whitish seam at the posterior margin of tergite VII, and by the shape of the aedeagus.

DISTRIBUTION: The species is at present known only from the type locality.

ETYMOLOGY: The specific epithet is a combination of the Latin adjectives ater, -a, -um (dark) and viridis, -e (green) and refers to the color of head and pronotum.

Algon gemmatus SCHILLHAMMER, 2006

Algon gemmatus SCHILLHAMMER, 2006: 155

ADDITIONAL MATERIAL EXAMINED: ♂: "India \ Sharp Coll. 1905-313. \ Algon splendens D.S. m.s. \ Algon semiaureus Fauvel" (NHML); ♀: "Nepal cent., 7.6.2001, Kathmandu – Balaju water garden, Petr Kresl leg." (CPK).

These two specimens differ slightly from the type series by the more coppery color of the fore body.

Aedeagus (Fig. 2) very similar to that of *A. aureoviridis* SCHILLHAMMER, 2006, but median lobe in lateral view distinctly constricted; paramere (Fig. 2c) somewhat broader, peg setae similarly arranged.

DISTRIBUTION: The species is with certainty known only from Nepal. Although it is here recorded from India for the first time, the locality "India" mentioned on the label can not with certainty be assigned to India as we know it today.

Algon oculatus species group

Algon sinoculatus SCHILLHAMMER, 2006

Algon sinoculatus SCHILLHAMMER, 2006: 162

ADDITIONAL MATERIAL EXAMINED: ♂: "CHINA, W. Yunnan, env. Xiaguan, 2400m, 29.VII.2002, S. Murzin, I. Shokhin leg." (CST).

The specimen was already available when the *Algon* revision was written but was overlooked because it was erroneously placed among a series of *Rientis* SHARP. Externally and in genital characters, the specimen does not differ from the type specimen.

Algon kaiserianus species group

The species of this group are very similar in external appearance. The discovery of three new species makes differentiation even more difficult. Thus, the descriptions of the new species are reduced to simple diagnoses pointing out the few differences from the already known species, and I refer the reader to the descriptions and diagnoses of the species of this group in SCHILLHAMMER (2000: 169).

Algon leigongshanus sp.n.

TYPE MATERIAL: **Holotype** ♂: "S CHINA SE-Guizhou, Leishan Co., Leigong mt., 1924 m, VI-2007, N:26°22'57.7" E:108°11'54,9", lgt. M. Häckel & R. Sehnal" (CSB). – **Paratypes** (2 ♀♀): "CHINA: Guizhou, Leishan Co., SE Kaili, NE Leishan, Leigong Shan, E-slope, 26°22.70'N 108°12.01'E \ ca. 2 km W of pass, 17.-24.6.2001, ca. 1700 m, pitfall traps, leg. Schillhammer (12A)" (NMW). – The two female paratypes were already mentioned in SCHILLHAMMER (2006) in the description of *A. hubeiensis* (see p. 171 "Remark").

DIAGNOSIS: 13.0–17.5 mm long (6.5–7.4 mm, abdomen excluded). – The species is very similar to *A. kaiserianus* BERNHAUER, 1933 and *A. hubeiensis* SCHILLHAMMER, 2006. It differs from both species by the ground punctation of the elytra: while *A. kaiserianus* has virtually no ground punctation and *A. hubeiensis* has entirely, uniformly punctate elytra, *A. leigongshanus* has a broad impunctate area along the suture and the lateral halves of the elytra punctate like in *A. hubeiensis*. In addition, it differs from *A. hubeiensis* by the larger eyes (tempora : eyes = 1.26–1.29 : 1). From the following two species which have a similar ground punctation pattern, it differs by the larger eyes and by the less transverse pronotum (1.07–1.09 times as wide as long).

Aedeagus (Fig. 3) similar to that of *A. kaiserianus*, but with slightly more slender median lobe in lateral view and with distinctly longer paramere.

DISTRIBUTION: The species is at present known only from the type locality.

ETYMOLOGY: The species is named after the type locality.

Algon holzschuhi sp.n.

TYPE MATERIAL: **Holotype** ♂:"CHINA: Yunnan, Dali Zhou, Weishan County, Weibaoshan, 2700-3000m, 30.6.-17.7.1993, leg. Holzschuh" (NMW).

DIAGNOSIS: 13.7 mm long (6.6 mm, abdomen excluded). – The species is very similar to *A. leigongshanus* with which it shares the impunctate elytral area along the suture. It differs by the slightly smaller eyes (tempora : eyes = 1.38 : 1), shorter antennae with less oblong antennomeres, more distinctly transverse pronotum (1.13 times as wide as long) and by a completely different aedeagus.

Aedeagus (Fig. 4) with exceedingly slender apical portion of median lobe in lateral view, apical tooth thus rather small but still more pronounced than in *A. hubeiensis* which also has a very slender median lobe in lateral view. In ventral view, the aedeagus is very similar to that of *A. hubeiensis*.

DISTRIBUTION: The species is at present known only from the type locality.

ETYMOLOGY: The species is named after its discoverer, Carolus Holzschuh, whose company I had the pleasure of sharing on several joint expeditions (including two trips to China).

Algon murzini sp.n.

TYPE MATERIAL: **Holotype** ♂: "CHINA: N-Yunnan, SE Huize, 2400-2800 m, 27.-29.VI.2004, leg. S. Murzin" (CSB). – **Paratypes** (2 ♂♂, 1 ♀): same data as holotype (2 CSB, 1 NMW).

DIAGNOSIS: 13.5–15.0 mm long (7.1–7.7 mm, abdomen excluded). – The species is very similar to *A. leigongshanus* and *A. holzschuhi*, displaying the same elytral punctation pattern, but differs from both by the smaller eyes (tempora : eyes = 1.53–1.60 : 1), denser ground punctation on lateral and basal portions of the elytra, and by the shape of the aedeagus. In addition, it differs from *A. leigongshanus* by the distinctly broader pronotum (about 1.15 times as wide as long) and from *A. holzschuhi* by the more robust build.

Aedeagus (Fig. 5) very similar to that of *A. holzschuhi*, almost identically shaped in ventral view, but in lateral view with apical portion of median lobe less distinctly bent towards paramere; paramere (lateral view) differently shaped, distinctly less dorso-ventrally extended.

DISTRIBUTION: The species is at present known only from the type locality.

ETYMOLOGY: The species is named in honor of its discoveror, Sergej Murzin, a field-hardy collector who ventures into places where hardly anybody else dares to go.

Algon elegans species group

Algon fortepunctatus sp.n.

TYPE MATERIAL: **Holotype** ♂: "SABAH Danum Valley, B.R.I., f.i.t. 14-16.II.2007, G. de Rougemont (CRL)". **Paratype** ♀: "MALAYSIA, Borneo, Sabah, Ulu Segama Forest Reserve, Danum Valley Conservation Area, ca. 10 km from Danum Valley F.C. \ Borneo Rainforest Lodge area, Plot 3, 12.III.2004, F.I.Trap, ca. N05°02 E117°45.55, Leg. E. Slade + J. Villanueva" (NMW). **Additional material**: According to a hand written note, there is one more specimen (slightly damaged) in CRL with same data as the holotype.

DESCRIPTION: 12.5 mm long (6.5–6.7 mm, abdomen excluded). – Black, head and pronotum metallic violaceous with strong purplish hue, elytra metallic blue with black base, mandibles black with dark reddish brown basal half, palpi reddish, antennae dark reddish with inconspicuously darker middle segments, legs black, tarsi with basal segments blackish to dark reddish brown, tarsi becoming gradually paler distally, last segments almost reddish yellow.

Head slightly trapezoid, about three times as wide as long, eyes very large, prominent, about 2.6 times as long as slightly convergent tempora, tempora with dense, pit-like punctation, punctural grooves partly confluent, forming transverse ridges, base of grooves and furrow along medial margin of eyes with distinct iso-diametrical micro-reticulation (type III), disc of head shiny, with uniformly distributed micro-punctures and with numerous, pit-like setiferous punctures, surface of disc of head with faint microsculpture (type II); mandibles rather long and slender, antennae with segments 4–7 oblong, remaining segments about as long as wide; pronotum about as long as wide, widest approximately in anterior third, distinctly narrowed toward base in almost straight line, with rather irregular dorsal rows of 4–7 punctures, with a large number of sublateral setiferous punctures, surface of pronotum moderately densely, uniformly covered with micro-punctation as on head and with micro-sculpture (type II) as on head, but markedly weaker and hardly discernible.

Elytra with dense and very distinct micro-sculpture (type III), with irregular longitudinal rows of numerous setiferous punctures bearing stout black setae; abdominal segments hardly differing

from that of other species of the *elegans* group; male sternite VIII with deep and narrow medio-apical emargination, entire apical margin lined by narrow semi-mebranous extension.

Aedeagus (Fig. 6) very similar to that of *A. biru* SCHILLHAMMER, 2006, but with slightly differently shaped median lobe in lateral view, particularly apical portion; ostial operculum of different shape and with different setation.

DIAGNOSIS: Although the aedeagus looks strikingly similar to that of *A. biru*, the species differs considerably by external characters, particularly by the large number of pit-like setiferous punctures on head, pronotum and elytra. The only other species with a comparable punctation, *A. fredricki* SCHILLHAMMER, 2006, is much larger, has a less transverse head and a completely different aedeagus.

DISTRIBUTION: The species is at present known only from the type locality.

ETYMOLOGY: The name of the species refers to the conspicuous pit-like punctation of the fore body.

Algon crockerensis SCHILLHAMMER, 2006

Algon crockerensis SCHILLHAMMER, 2006: 177

ADDITIONAL MATERIAL: 2 ♂♂: "BORNEO, Sabah, DANUM VALLEY, 10 km W Lahad Datu, M.J. J.P. Duffles \ sample Sab. 68, E Ridge Trail, 150m, 14.XII.1989" (CRL); 1 ♂: "SABAH Danum Valley, B.R.I., f.i.t. 14-16.II.2007, G. de Rougemont" (NMW).

DISTRIBUTION: The species was originally described from the north-western portion of Sabah (Crocker Range). These new records shed a new light on the possible distribution of all species in that area, which was originally considered to be rather confined.

Algon fredricki SCHILLHAMMER, 2006

Algon fredricki SCHILLHAMMER, 2006: 179

ADDITIONAL MATERIAL: 1 ♂, 1 ♀: "MALAYSIA, Borneo, Sabah, Ulu Segama Forest Reserve, Yayasan Sabah logging concession, ca. 6 km from Danum Valley F.C. \ Secondary selectively logged forest, 13.III.2004, F.I.Trap Coupe 88, Plot 1, ca. N04°04 [sic!] 59.74 E117°50.17, Leg. E. Slade + J. Villanueva" (CRL); 1 ♀: "SABAH Danum Valley, B.R.I., f.i.t. 14-16.II.2007, G. de Rougemont" (NMW).

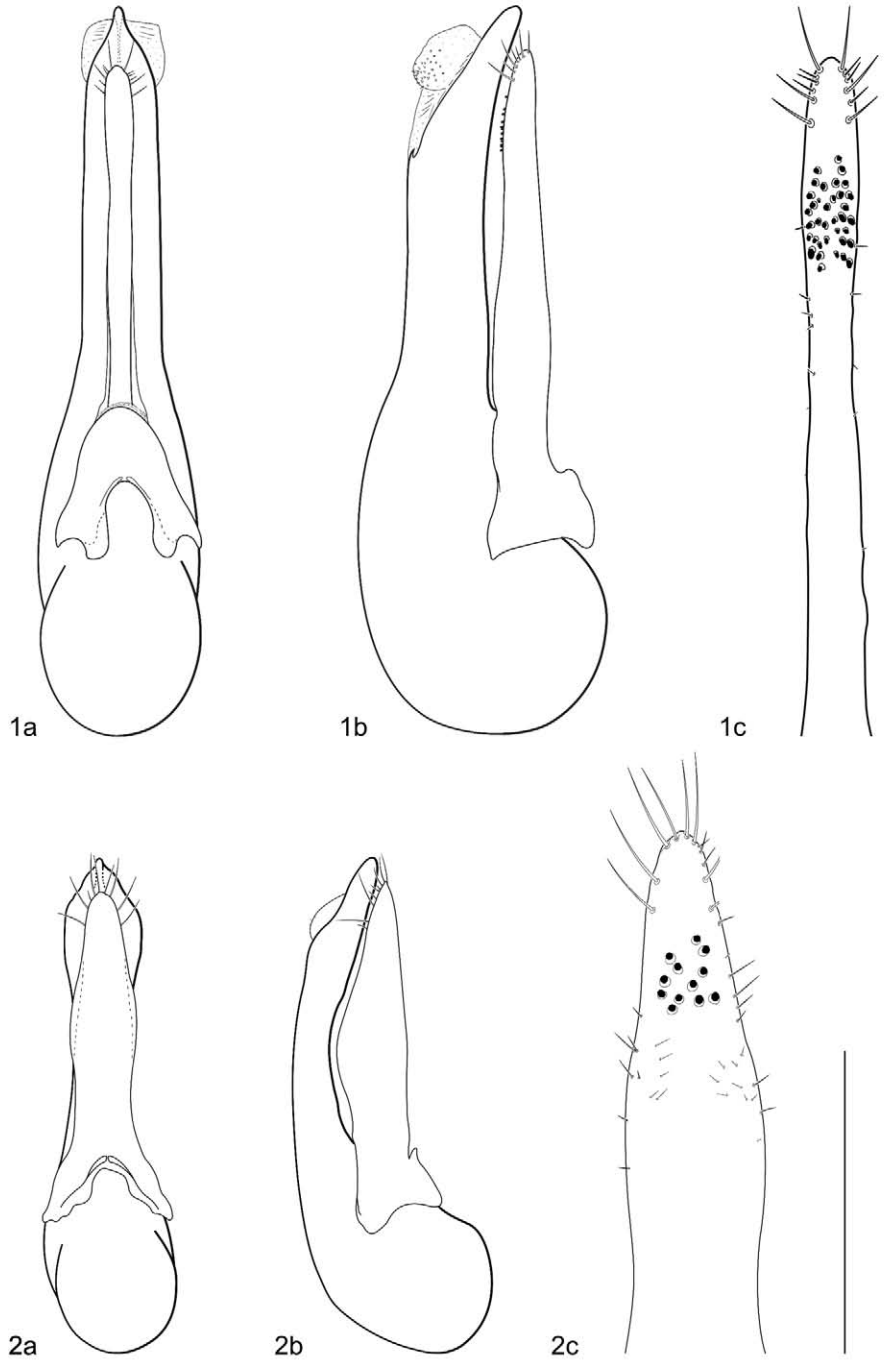
DISTRIBUTION: The species seems to be more widely distributed in the eastern lowland portion of Sabah.

Corrigenda

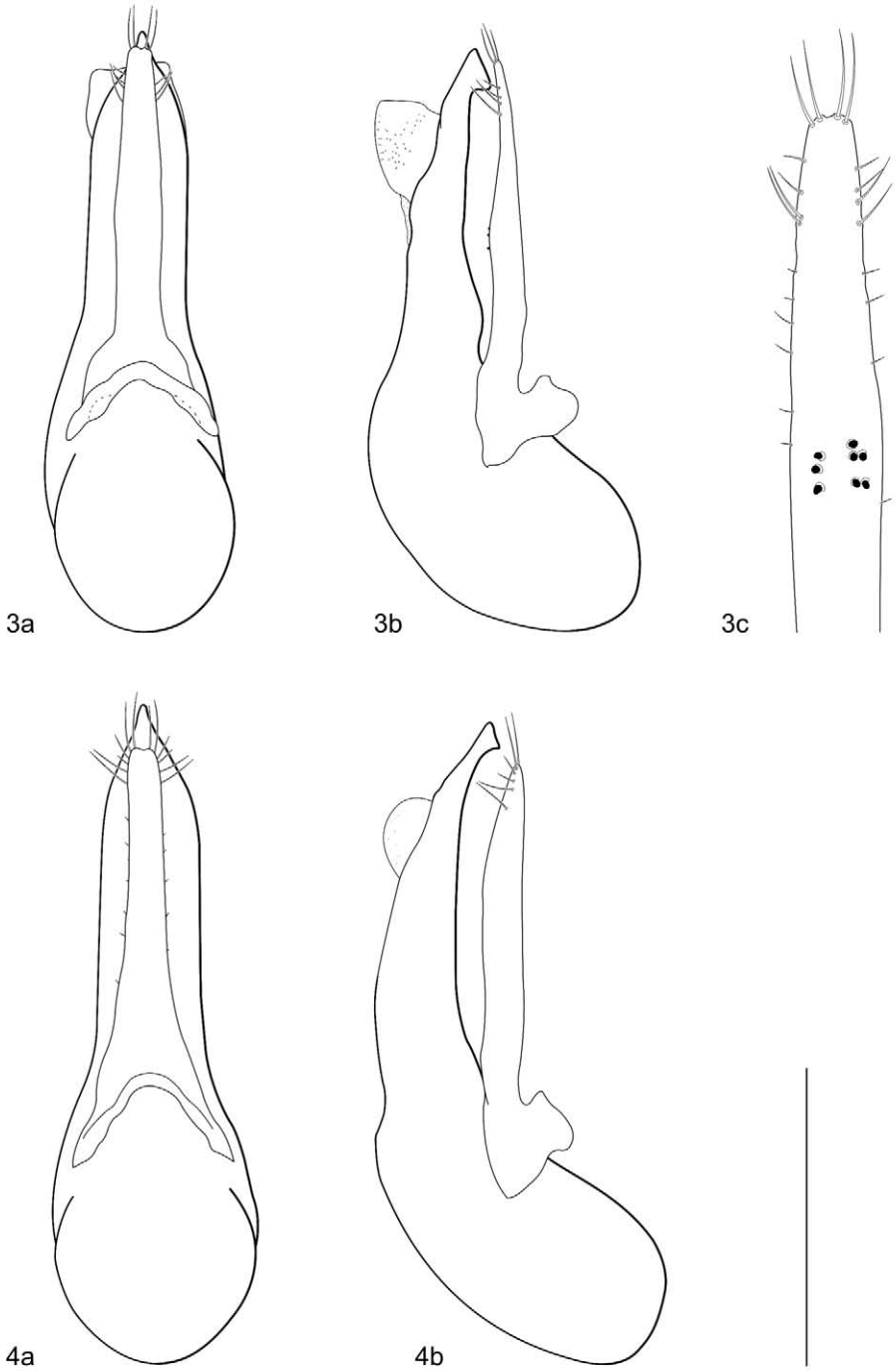
There are a few glitches in the *Algon* revision that happened either during the earlier or later editing process of Koleopterologische Rundschau 76 and had been overlooked when screening the final proofs. Two of them are of major importance and are treated in detail below.

p. 139: The page numbers in the check list are incorrect and differ by 10 pages which should be added to the given number.

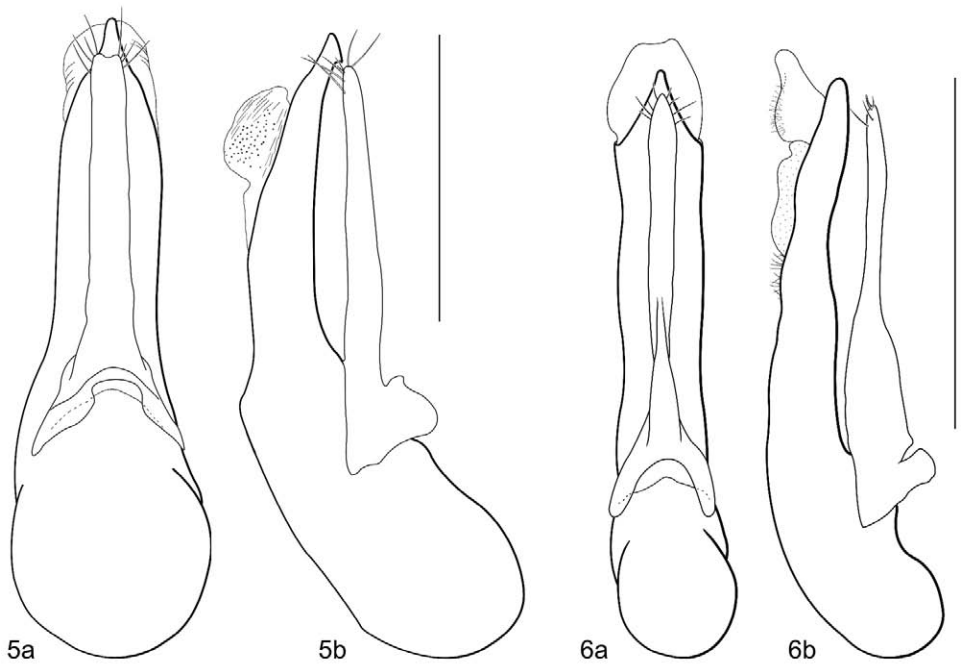
p. 215: The numbering of the illustrations is incorrect. Figure "136" should read "140", the subsequent figures on that page should be changed accordingly.



Figs. 1–2: Aedeagus of 1) *Algon atroviridis*, 2) *A. gemmatus*; a) ventral view, b) lateral view, c) paramere. Scale bar: 1.0 mm (a, b), 0.5 mm (c).



Figs. 3–4: Aedeagus of 3) *Algon leigongshanus*, 4) *A. holzschuhi*; a) ventral view, b) lateral view, c) paramere. Scale bar: 1.0 mm (a, b), 0.5 mm (c).



Figs. 5–6: Aedeagus of 5) *Algon murzini*, 6) *A. fortepunctatus*; a) ventral view, b) lateral view. Scale bar: 1.0 mm.

Zusammenfassung

Diese Arbeit stellt eine erste Ergänzung zur *Algon*-Revision (SCHILLHAMMER 2006) dar, basierend auf zusätzlichem Material hauptsächlich aus China and Ost-Malaysia. Neue Arten: *Algon atroviridis* (China), *A. leigongshanus* (China), *A. holzschuhi* (China), *A. murzini* (China), *A. fortepunctatus* (O-Malaysia). Neue oder ergänzende Nachweise werden erbracht für *Algon crockerensis* SCHILLHAMMER, 2006, *A. fredricki* SCHILLHAMMER, 2006, *A. gemmatus* SCHILLHAMMER, 2006, und *A. sinoculatus* SCHILLHAMMER, 2006. Die Aedeagi aller neuen Arten werden abgebildet, der Aedeagus von *A. gemmatus* zum ersten Mal. Einige Fehler in der *Algon*-Revision werden berichtigt.

References

SCHILLHAMMER, H. 2006: Revision of the genus *Algon* Sharp. – Koleopterologische Rundschau 76: 135–218.

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