Yunomela Chen, 1964 and Vietocerus Lopatin, 2003, new synonyms of Sikkimia Duvivier, 1891 (Coleoptera: Chrysomelidae: Galerucinae)

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ABSTRACT. The genera Yunomela Chen, 1964 and Vietocerus Lopatin, 2003 are synonymised with Sikkimia Duvivier, 1891. The primary types of the type species of all three genera have been examined. The following new combinations are proposed: Sikkimia kabakovi (Lopatin, 2003), comb. nov., S. miranda (Lopatin, 2003), comb. nov. and S. rufa (Chen, 1964), comb. nov. The type materials of Sikkimia metallica Jacoby, 1903 and S. tamra Maulik, 1936 were not studied. According to the original descriptions of Sikkimia metallica and S. tamra, their generic position within genus Sikkimia is doubtful and probably they will be transferred to another genus in the future. Sikkimia rufa is recorded for the first time from Laos and Myanmar. Male genitalia of S. antennata Duvivier, 1891, S. kabakovi, S. miranda and S. rufa, and spermatheca of S. rufa are figured.

Key words: entomology, taxonomy, synonymy, Coleoptera, Chrysomelidae, Galerucinae, *Sikkimia, Yunomela, Vietocerus*, Oriental Region.

The following abbreviations of the collections housing the material examined are used in the text:

FKCC - Czech Republic, České Budějovice, František Kantner collection; ISNB - Belgium, Brussels, Institut Royal des Sciences Naturelles de Belgique; IZCAS - China, Beijing, Chinese Academy of Sciences, Institute of Zoology; JBCB - Czech Republic, Brno, Jan Bezděk collection;

JVCJ - Czech Republic, Jirkov, Jiří Voříšek collection;

MNHN - France, Paris, Muséum National d'Historie naturelle;

ZIN - Russia, St. Petersburg, Russian Academy of Sciences, Zoological Institute

Exact label data are cited for all type specimens; a double slash (//) divides the data on different labels and a single slash (/) divides the data in different rows. Type localities are cited in the original spelling. Other comments and remarks are placed in square brackets: [p] – preceding data are printed; [h] – the same, but handwritten; [w] - white label; x/y - number of males/number of females.

Genus Sikkimia Duvivier, 1891

Sikkimia Duvivier, 1891, Compt.-rend. Soc. Ent. Belg., 35: 154 (Type species: Sikkimia antennata Duvivier, 1891, by monotypy); Maulik 1936: 520; Wilcox 1973: 608; Seeno & Wilcox 1982: 111.

Yunomela Chen, 1964, Acta Entomol. Sinica 13: 201, 208 (Type species: Yunomela rufa Chen, 1964, by original designation); WILCOX, 1973: 509; SEENO & WILCOX, 1982: 111; syn. nov.

Vietocerus LOPATIN, 2003, Genus 14: 103 (Type species: Vietocerus kabakovi LOPATIN, 2003, by original designation); syn. nov.

DUVIVIER (1891) described the new genus and species *Sikkimia antennata* from Sikkim. Subsequently, another two species were described: *S. metallica* Jacoby, 1903 and *S. tamra* Maulik, 1936, both from Nilgiri hills (Southern India). The monotypic genus *Yunomela* was described from Yunnan by Chen (1964), with the new species *Yunomela rufa* as the type species. Lopatin (2003) erected the genus *Vietocerus* for two new species from Vietnam. The comparison of the relevant primary types has shown that all three generotypes are congeneric, thus, *Yunomela* and *Vietocerus* are synonymized with *Sikkimia*.

Detailed generic descriptions of the genus *Sikkimia* were given by DUVIVIER (1891), CHEN (1964) and LOPATIN (2003). Genus *Sikkimia* can be distinguished from the other galerucine genera within the tribe Luperini by the combination of the following characters: body robust, orange to red, last two segments of antennae strongly enlarged in male, pronotum with antebasal transverse impression limited on sides by short longitudinal furrows, procoxal cavities closed behind, claws appendiculate and trilobed last sternite in male.

Sikkimia antennata Duvivier, 1891

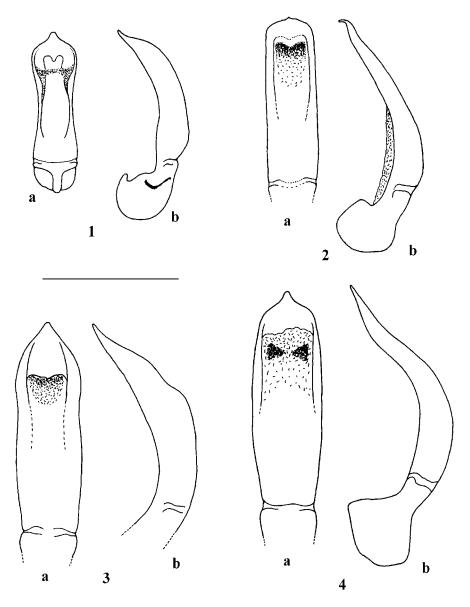
Sikkimia antennata Duvivier, 1891: 155 (Type locality: Sikkim); Maulik 1936: 521; Laboissière 1940: 9; Wilcox 1973: 608.

Type material examined

Holotype (male), labelled: "Sikkim / 1890 [w, h] // Collect. / Duvivier [w, p] // TYPE [w, p] // det [p] Duvivier [h] [white label on which following one is stuck]

 $\label{eq:continuous} $$// Sikkimia / antennata / Duviv. [w, h] // TYPE [pink label, p] // cf. Ann. Soc. Ent. / Belg., [p] 1891, p. 155 / XXXV [w, h] // V. Laboissière [p] vid [h] ., 1939: [w, p] / Sikkimia / antennata Duv. / Type [w, h]" (in ISNB).$

Aedeagus as in Fig. 1. Male antenna as in Fig. 10.



1-4. Aedeagus (a - dorsal view, b - lateral view): 1 - Sikkimia antennata, 2 - S. kabakovi, 3 - S. miranda, 4 - S. rufa. Scale: 2 mm

ADDITIONAL MATERIAL EXAMINED

INDIA: Sikkim, 1890, Harmand leg. (1/0 in MNHN).

DISTRIBUTION India (Sikkim).

Comments

Sikkimia antennata was described based on 1 male (holotype). It can be distinguished from its congeners by the shorter body (8.20-9.00 mm), by the structure of aedeagus (Figs 1-4), by not so dilated antennomere 10 in male (Figs 7-10), by distinctly paler apical third of elytra, and by not dilated first segment of male protarsi (distinctly dilated in *S. kabakovi*, *S. miranda* and *S. rufa*).

Sikkimia kabakovi (LOPATIN, 2003), comb. nov.

Vietocerus kabakovi Lopatin, 2003: 105 (Type locality: Vietnam, prov. Zialai-Kontum).

Type material examined

Holotype (male), labelled: "Vietnam Gialai / Contum Buonluoi / 5 V 1995 Gorochov [w, h] // Vietocerus / kabakovi sp. n. [h] / det. I. Lopatin 200 [p] 2 [w, h] // Holotypus [red label, p] // Zoological Institute / Russian Academy / of Sciences / St. Petersburg [yellow label, p]" (in ZIN).

Aedeagus as in Fig. 2. Male antenna as in Fig. 7.

DISTRIBUTION

Vietnam. Known only from the type series (2 males) from the province Zialai-Kontum.

Diagnosis

Sikkimia kabakovi is closely related to S. rufa. The aedeagi of both species are very similar but the aedeagus of S. kabakovi is more slender, nearly parallel, shorter, its apex is obtuse with the tip distinctly curved (Figs 2, 4). Antennomere 10 of S. kabakovi is not produced as apically as in S. rufa and the concave area on ventral side of antennomere 10 is rounded, while it is angular in S. rufa (Figs 7, 9).

Sikkimia metallica Jacoby, 1903

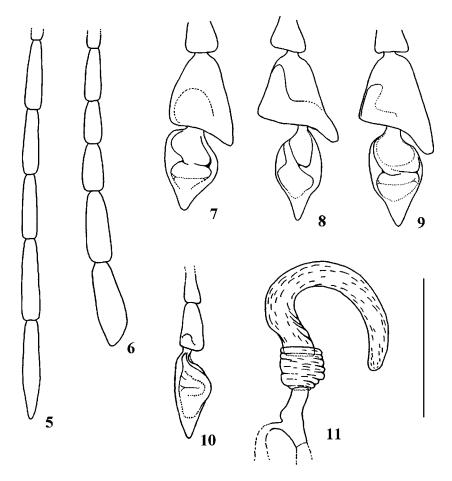
Sikkimia metallica Jacoby, 1903: 122 (Type locality: Nilgiri); Maulik 1936: 521; Wilcox 1973: 608

No material examined

DISTRIBUTION India (Nilgiri hills).

Comments

Jacoby (1903) described it based on females from Nilgiri Hills. Although Jacoby mentioned deeply bifoveolate pronotum, the drawing of habitus based on the type specimen published by Maulik (1936) shows transverse impression without short longitudinal furrows on posterior margin of pronotum. Also shorter body (5 mm) and metallic bright green colour do not fit the large orange-red body colour of true *Sikkimia* species. Probably it will be transferred to another genus in the future.



5-6. Female antenna: 5 – Sikkimia miranda, 6 – S. rufa; 7-10. Male antenna in ventral view: 7 – S. kabakovi, 8 – S. miranda, 9 – S. rufa, 10 – S. antennata; 11 – spematheca of S. rufa. Scales: 2 mm for Figs 5-10; 0.5 mm for Fig. 11

Sikkimia miranda (Lopatin, 2003), comb. nov.

Vietocerus mirandus Lopatin, 2003: 107 (Type locality: Vietnam, prov. Zialai-Kontum).

Type material examined

Holotype (male), labelled: "Vietnam Gialai / Contum Tram Lap / VI 1996 Orlov [w, h] // Holotypus [red label, p] // Vietocerus / mirabilis sp. n. [sic!, h] / det. I. Lopatin 200 [p] 2 [w, h] // Zoological Institute / Russian Academy / of Sciences / St. Petersburg [yellow label, p]" (in ZIN).

ADDITIONAL MATERIAL EXAMINED

VIETNAM: Tam Dao, 8.-22.v.1990, Dudycha leg. (0/1 in JVCJ).

Aedeagus as in Fig. 3. Male antenna as in Fig. 8.

DISTRIBUTION

Vietnam.

DIAGNOSIS

S. miranda can be distinguished from its congeners by the apex of all femora black (femora completely yellow in S. antennata, S. rufa and S. kabakovi) and from S. kabakovi also by larger eyes (interocular space 2.6 times broader than transverse diameter of eye in S. miranda; 3 times in S. kabakovi). Female antennae are filiform, including apical segments, while last three segments are slightly dilated in females of S. rufa (Figs 5-6). Male antenna as in Fig. 8. The spermatheca was not pictured because it was damaged in the available female.

Sikkimia rufa (CHEN, 1964), comb. nov.

Yunomela rufa Chen, 1964: 202 (in Chinese), 208 (in English) (Type locality: Yunnan); Wilcox 1973: 509

Type material examined

1 paratype (female), labelled: "[in Chinese, w, p] // 1957.IX.5. [h] / [in Chinese, w, p] // China Yunnan / Xishuangbanna 850m / 5.IX.1957 S. Y. Wang / IZAS CHINA [w, p] // ALLOTYPE [greenish grey label, p] // F Yunomela / rufa [partly in Chinese, h] / [in Chinese, w, p]" (in IZCAS); 1 paratype (male), labelled: "[in Chinese, w, p] // 1959.V.5 [h] / [in Chinese, w, p] // China Yunnan / Xishuangbanna 650m / 5.V.1959 F. J. Pu / IZAS CHINA [w, p] // PARATYPE [yellow label, p]" (in IZCAS).

ADDITIONAL MATERIAL EXAMINED

LAOS: Hua Phan prov., Ban Saluei, Phu Phan Mt. env., 20°13′N 103°59′E, 6.-18.v.2004, J Bezděk leg. (1/0 in JBCB); same data, F. & L. Kantner leg. (0/1 in FKCC); Phongsali prov., Phongsali env., 1300-1500 m, 1.-15.v.2004, Lao collec-

tor leg. (0/1 in JBCB); Bolikhamsai prov., Ban Nape env., 18°20′N 105°08′E, 7.-16.v.2004, E. Jendek & O. Šauša leg. (2/0 in FKCC); same data, 1.-18.v. 2001, C. L. Peša leg. (1/0 in JBCB); MYANMAR: Nanthi vill., 50 km E of Putao, 950 m, 11.-16.v.1998, S. Murzin leg. (1/0 in JBCB).

Aedeagus as in Fig. 4. Spetmatheca as in Fig. 11. Male antenna as in Fig. 9. Hind wing as in Fig. 12.

DISTRIBUTION

China (Yunnan). First records for Laos and Myanmar.

DIAGNOSIS

CHEN (1964) described this species based on 4 specimens (two males, two females) from Chinese province Yunnan. *Sikkimia rufa* is very similar to *S. kabakovi*. Both species can be distinguished by the structures of aedeagus (Figs 2, 4). Antennomere 10 in male of *S. rufa* is distinctly produced apically (not so produced in *S. kabakovi*). The concave area on ventral side of antennomere 10 is partly angular whilst it is rounded in *S. kabakovi* (Figs 7, 9). Last two antennomeres in female are slightly but distinctly dilated (Fig. 6).

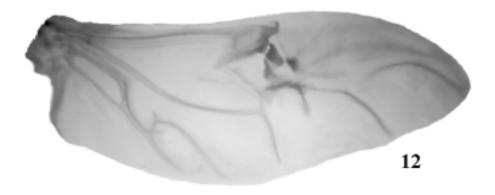
Sikkimia tamra Maulik, 1936

Sikkimia tamra Maulik, 1936: 523 (Type locality: Nilgiri Hills); Wilcox 1973: 608.

No material examined.

DISTRIBUTION

Southern India (Nilgiri hills).



12. Hind wing of Sikkimia rufa

COMMENTS

Maulik (1936) described it based on 4 specimens from Nilgiri hills and mentioned doubtful position of both *S. tamra* and *S. metallica* in the genus *Sikkimia*. The metallic blue-green colour and absence of short longitudinal furrows on posterior margin of pronotum allow us to agree with Maulik's opinion. Examination of the type series should clear its generic position.

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