

Xestoleptura nigroflava, a new genus of longhorn beetle for Europe (Coleoptera: Cerambycidae: Lepturinae)

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Abstract. The type specimen of *Grammoptera nigroflava* Fuss, 1852 described from the Carpathian Mountains of Rumania was studied together with one recently collected male specimen. Important diagnostic characters are described and illustrated. Based on the shape of the aedeagus, the species is transferred to the Holarctic genus *Xestoleptura* Casey, 1913. It is closely related to the Siberian species *X. rufiventris* (Gebler, 1830), from which it is distinguished by the elytral sculpture, the shape of the pygidium as well as the shape of the parameres.

Taxonomy, redescription, Coleoptera, Cerambycidae, Lepturinae, *Xestoleptura nigroflava*, Rumania, Palaearctic region

Although the taxonomy of European cerambycid beetles has been largely clarified by recent authors, some problems remain. In 1852, Fuss described an enigmatic species named *Grammoptera nigroflava* from the "Siebenbürgens" (= an area of the southern Carpathians in Rumania) based on one female specimen (Fuss 1852). Since then, no other specimen has been collected and this species has been neglected or considered as a synonym of other species. The study of one recently collected male specimen and of the holotype allowed us to clarify this problem and transfer this species to the Holarctic genus *Xestoleptura* Casey, 1913.

The distributional centre of the genus *Xestoleptura* is in North America (Moné & Giesbert 1994, Miroshnikov 1998), where it is represented by six species. Three species are now known to occur in the Palaearctic region: *X. baeckmanni* (Plavilstshikov, 1936) is known only from two females collected in a small area in the Russian Far East (Primorskii krai). The relatively common *X. rufiventris* (Gebler, 1830) is distributed from the Sayan Mts and the Altay Mts to the southern Baikal Region and Northern Mongolia (Cherepanov 1979). The European species *X. nigroflava* occurs in a small area in the Southern Carpathians.

Exact label data are cited for the type specimen. A forward slash (/) separates different lines and a double slash (//) different labels of data. Authors' remarks are found in square brackets.

The material is deposited in the following institutional and private collections:

HNHM Természettudományi Múzeum [Hungarian Natural History Museum], Budapest (Ottó Merkl);
SKCL private collection of Stanislav Kadlec, Litvínov, Czech Republic.

***Xestoleptura nigroflava* (Fuss, 1852) comb. nov.**

(Figs 1-3)

Grammoptera nigroflava Fuss, 1852: 75.

Type locality: "bei dem Passe Dusch in der südlichen Gebirgskette" [Rumania, Lotru Mts.].

Leptura (Anoploclera) nigroflava: Ganglbauer 1882: 707 (key); Seidlitz 1891: 839 (key); Heyden, Reitter & Weise 1906: 506 (catalogue); Petri 1912: 240 (catalogue); Winkler 1929: 1157 (catalogue); Plavilstshikov 1936: 333 (as synonym of *Leptura (Anoploclera) rufiventris* (Gebler, 1830)); Panin & Savulescu 1961: 143 (note); Kaszab 1971: 81-82 (in synonymy); Althoff & Danilevsky 1997: 44, 47 (in synonymy).

Leptura (Anoplodura[sic !]) *nigroflava*: Knechtel & Panin 1944: 182 (note).

Anoploclera nigroflava: Pesarini & Sabbadini 1994: 18 (as synonym of *Anoploclera rufiventris* (Gebler, 1830) sensu Plavilstshikov (1936)).

Leptura nigroflava: Bense 1995: 455 (note).

Type material. **Holotype** ♀ (HNHM), labelled: Fuss. / 4888 [white label, original Fuss' handwriting] // Szebeni hegys. [hégység] / Dusi hágó [white label, Kaszab's handwriting] // rufiventris Gebl. [white label, Kaszab's handwriting] / det. Kaszab [printed] // Monotypus [white label with red frame, printed] 1852. / *Grammoptera / nigroflava / K. Fuss.* [Kaszab's handwriting] // *Xestoleptura / nigroflava / (Fuss, 1852) / det. S. Kadlec 2000* [white label, printed].

Remark. Holotype well preserved, forelegs lack left tarsus and right onychium, middle legs lack left onychium and right tarsomeres 2-5, hind legs lack left onychium. Greyish pubescence present only on body sides (originally probably covering whole surface).

Additional material examined. 1 ♂ (SKCL), Rumania, Lotru Mts, 23.vii.1999, J. Skuhrovec leg., S. Kadlec det. 2000.

Redescription of the holotype. Oblong, lepturoid type. Head and first antennomere black. Antennomeres 2 – 11 brown, apically darkened. Mouth appendages tawny, apically paler. Thorax black, legs with black femora, tibiae and tarsi brown, apically darkened. Elytra orange to brown, narrow basal margin, suture and pattern on the disc black (elytral pattern as in Figs 1 and 2). Abdominal ventrites black to brown.

Measurements. Body length 14.2 mm; maximum width of elytra 4.4 mm.

Head. Short, broad, with a deep groove between temples and shallow fold on vertex. Temples short, broadly rounded, with several setae. Punctuation dense and coarse.

Antennae reaching elytral midlength. Antennomeres only slightly enlarged apically. Relative lengths of antennomeres 1-11: 3.6 / 1.0 / 3.1 / 2.9 / 3.8 / 3.1 / 2.7 / 2.5 / 2.3 / 2.2 / 3.1.

Thorax. Pronotum 1.1 times as wide as long, slightly broadened from the anterior margin towards the obtuse lateral tubercle in basal third of length, and broadened again before base to acute hind angles. Disc of pronotum feebly convex, with apical and basal incisions, surface densely, coarsely punctate. Scutellum oblong.

Elytra. Almost parallel, 2.2 times as long as wide, widest across humeri, slightly broadened in 0.67 of their length. Surface smooth, sparsely punctate. Transverse corrugation indicated only in basal third, microsculpture very fine (elytra slightly shiny). Apices truncated, inner angle obtuse, outer one rounded.

Legs. Slender, femora slightly broadened towards base, tibiae flat. Hind legs with tarsomere 1 longer than tarsomeres 2 and 3 combined, entire tarsus longer than tibia.

Ventral surface finely punctate. Ventrite 5 quadrangular, apically truncate, with fine transverse impression, ventrite 6 (pygidium) quadrangular with very slightly concave apex.

Variability. Male. Habitus and coloration as in Fig. 2. Body pubescence consisting of pale brown microtrichiae, long and erect on pronotum. Abdominal sternites ferruginous.

Measurements. Body length 12.0 mm; maximum width of elytra 3.6 mm.

Head. Antennae nearly reaching elytral apices. Relative lengths of antennomeres 1-11: 3.8 / 1.0 / 3.4 / 3.5 / 4.5 / 4.0 / 3.9 / 3.8 / 3.7 / 3.8 / 5.4.

Elytra. Evenly narrowing towards apex. Apex with a distinct sutural denticle, lateral denticle only indicated, apical truncation slightly concave.

Aedeagus. Shape of parameres as in Fig. 3.

Bionomy. The development of *Xestoleptura nigroflava* is unknown. The only male was collected on plants at a mountain meadow near a coniferous forest at an altitude of ca 1600 m. It corresponds well with the original description: "... in eine Höhe von etwas über 5000' auf einem Syngenesisten im August 1850" [= ... at the altitude of slightly more than 1500 m, on a Syngenesisten plant in August 1850].

Cherepanov (1979) fully described the development of the closely related *X. rufiventris*. In Siberia, it develops in dead wood, mostly in *Pinus sibirica* and *Abies sibirica*. Adults occur in July and August and they only rarely visit flowers. We expect that *X. nigroflava* is a relict species of the climax mountain coniferous forests.

Distribution. According to Fuss (1852), the holotype was collected "bei dem Passe Dusch in der südlicher Gebirgskette" [= near the pass "Dusch" in the southern mountain range]. It corresponds well with the northeastern part of the Lotru Mts (nowadays Muntii Lotrului). The label attached to the type specimen (most probably written by Kaszab) also refers to the Lotru Mts ("Szebeni hegys." = Sibinu Mts, also Lotru Mts; "Dusi hágó" = Dusch Pass). We thus assume that the type locality is in the Lotru Mts between the village of Riu Sadului and the Prejba Mt. The second specimen was captured also in the Lotru Mts, 10 km north of the village Voinea. The distance between both localities is about 20 km.

Only two specimens of *X. nigroflava* are currently known from the Lotru Mts. Seidlitz (1891) cited another record from "Transsylvania", but without any further details. We expect the species to occur also in other mountains of the Rumanian Southern Carpathians.

Differential diagnosis. The species is most closely related to *X. rufiventris* (Gebler, 1830); see Table 1 to distinguish these two species.

Tab. 1. Characters separating *Xestoleptura nigroflava* (Fuss) from *X. rufiventris* (Gebler).

Character	<i>Xestoleptura nigroflava</i> (Fuss)	<i>Xestoleptura rufiventris</i> (Gebler)
	Character state	
male body pubescence	pale brown, long on pronotum	whitish or greyish, shorter on pronotum
elytra	shiny, sparsely punctate with large punctures, transverse corrugation only indicated	dull, densely punctate, surface transversely corrugated, with distinct microsculpture
apex of elytra	truncate with inner angle obtuse in female and with short spine on suture in male	truncate with inner angle obtuse in both sexes
punctuation of ventral side	sparse	dense
shape of female pygidium	quadrangular, apically very slightly concave	apically with triangular incision
male protarsus	tarsomere 2 distinctly triangular	tarsomere 2 almost parallel
length of metatibia	equal to metatarsus	shorter than metatarsus
shape of parameres	as in Fig. 3	as in Fig. 4

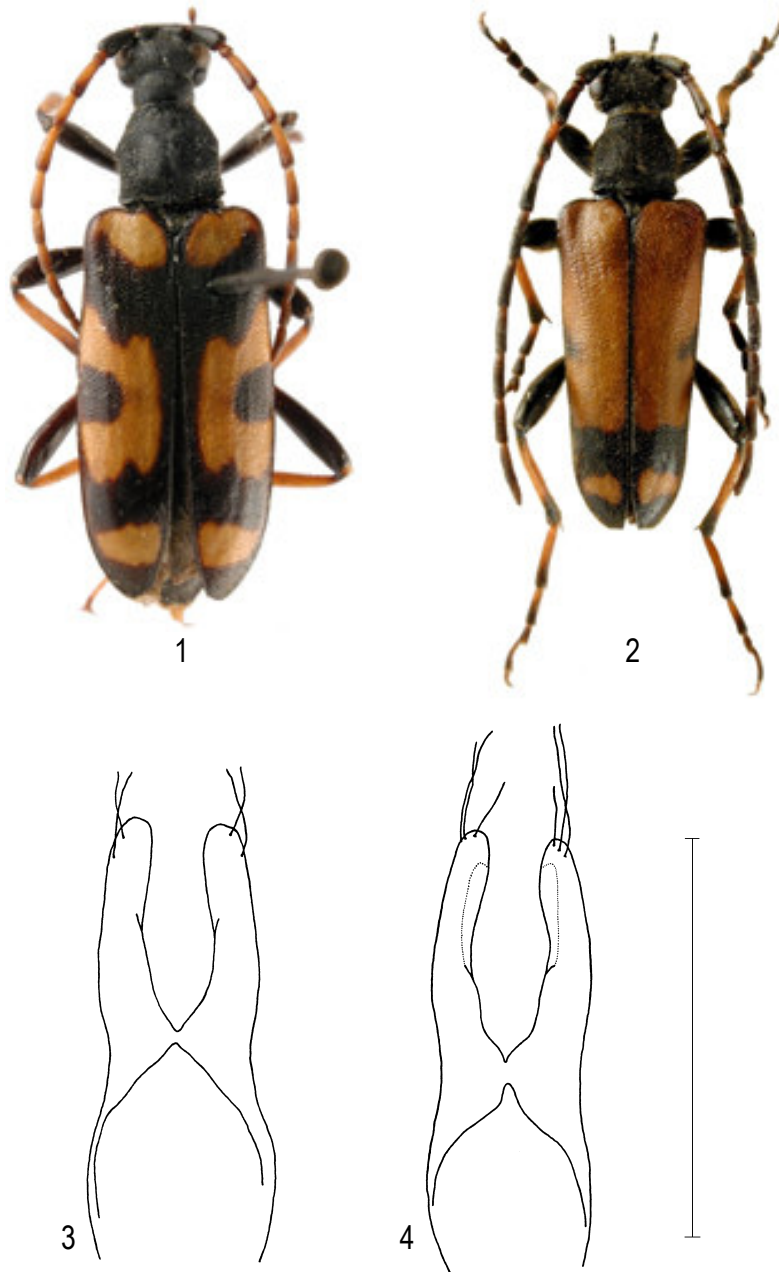
Discussion

Xestoleptura nigroflava is very closely related to the Siberian species *X. rufiventris*. The original description is adequate, but Fuss (1852) probably did not know *X. rufiventris* and therefore did not provide a differential diagnosis. Many subsequent authors regarded the description as based on an incorrect locality or suggested a synonymy with already known species such as *Evodinus borealis* (Gyllenhal, 1827), *Brachyta variabilis* (Gebler, 1817) or *Brachyta borni* (Ganglbauer, 1903). Plavilstshikov (1936), based on the original description and habitus drawing by Fuss (1852), synonymised *X. nigroflava* with *X. rufiventris*. This opinion was accepted by several other authors and even recent authors (e.g. Pesarini & Sabbadini 1994, Bense 1995, Althoff & Danilevsky 1997) viewed an autochthonous occurrence in Rumania of a species similar to *X. rufiventris* as quite improbable.

The distinctive habitus, coloration of the body, elytral pattern and shape of the parameres of *X. nigroflava* enable us to confirm the specific status of the beetle and transfer it to the genus *Xestoleptura* sensu Miroshnikov (1998). The genus is therefore reported as new for the European fauna, and the relict and very rare *X. nigroflava* is the only representative of that genus in Europe.

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Figs 1-4. 1-3: *Xestoleptura nigroflava* (Fuss). 1 – female (holotype); 2 – male; 3 – parameres in dorsal view. 4 – *X. rufiventris* (Gebler), parameres in dorsal view. Scale bar = 1 mm.

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