

On the Taxonomy and Distribution of the Leaf-beetle *Macrolea japana* Jacoby, 1885 (Coleoptera, Chrysomelidae)

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Abstract—The species rank of *Macrolea japana* (Jacoby, 1885) is confirmed based on examination of the holotype. The main characters distinguishing this species from *M. mutica* are as following: the 4th antennomere is as long as the 3rd segment and somewhat longer than the 2nd segment; the pronotum is smooth, shining, with 3 black longitudinal stripes on the bottoms of 3 longitudinal impressions; the femora and tibiae black apically; the 1st metatarsomere is as long as the 2nd and the 3rd tarsomeres combined and is almost twice as long as the 2nd tarsomere; the claws bear no triangular projection near the bases; the aedeagus forms a shorter apical projection. *Macrolea japana* is found in Russia (Primorskii Territory) for the first time.

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Macrolea japana was described from a single specimen collected in Japan (Honshu Island: Bukenji, a suburb of Yokohama, a pond) (Jacoby, 1885). Later, the species was found in Honshu, Kyushu, and Okinawa islands and in eastern China (Jiangsu Province) (Chûjô, 1934; Hayashi and Shiyake, 2004). The species was described in the genus *Haemonia* Dejean, 1821, the name of which is a junior objective synonym of *Macrolea* Samouelle, 1819 (Askevold, 1990). Kimoto (1986) and Medvedev (1992) considered this taxon a subspecies *M. mutica japana*. Examination of the holotype of *M. japana* and its comparison with specimens of *M. mutica* collected from various localities have revealed a number of characters allowing me to consider *M. japana* a distinct species. I have also examined a male from Primorskii Territory, similar to the holotype of *M. japana* in all the characters.

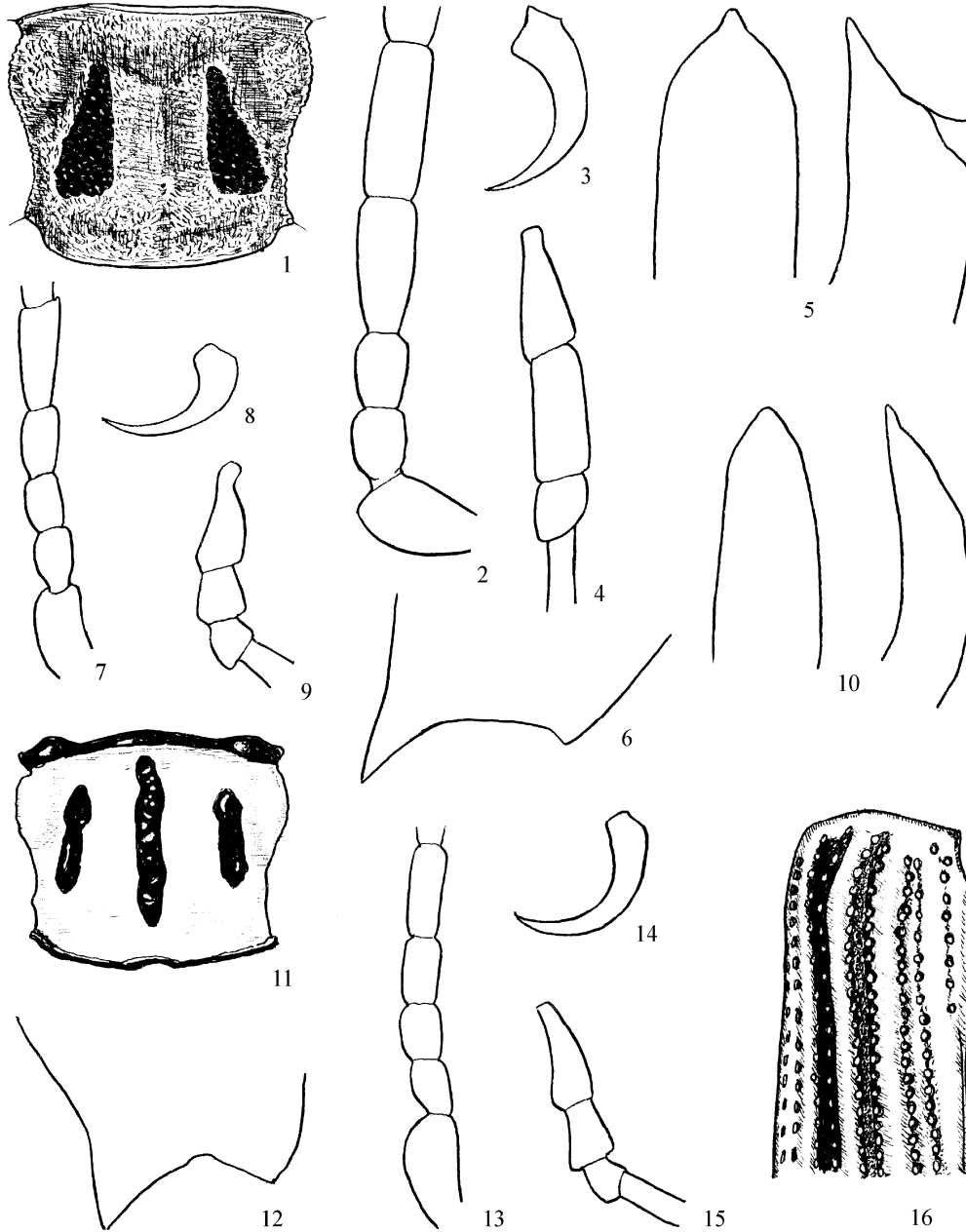
As the original description of *M. japana* is rather detailed, I only list the characters distinguishing this species from *M. mutica*. The variation range of the *M. japana* body length is given according to Hayashi (2004).

A Key for Discrimination of *Macrolea japana* and *M. mutica*

1 (2). Antennae reaching level of hind coxae; 4th segment as long as 2nd one. Pronotum rufous, with black anterior margin and 3 longitudinal stripes filling 3 longitudinal depressions. Surface of pronotum shining, smooth, rugose-punctate only in longitudinal depressions. Inter-

vals between elytral striae convex, smooth. Legs rufous, with apices of femora, tibiae, and 1st–4th tarsal segments black. 1st segment of hind tarsus as long as two succeeding segments combined, nearly twice as long as 2nd segment. Claws with weak projection at base. Aedeagus as in Fig. 10 (examined in male from Primorskii Territory). Body length 3.7–4.2 mm in males, 4.5–4.6 mm in females. Russia (Primorskii Terr.), Japan (Honshu, Kyushu, and Okinawa islands), China (Jiangsu Prov.). In Primorskii Terr., cocoons were found on roots of *Brasenia schreberii*
..... *Macrolea japana* (Jacoby, 1885).

2 (1). Antennae projecting far beyond hind coxae; 4th segment twice as long as 2nd. Pronotum rufous, usually with 2 lateral longitudinal black spots occasionally occupying most part of surface and with short longitudinal black stroke or puncture occasionally lying between these spots in basal half; pronotum and elytra occasionally entirely black. Surface of pronotum matte, finely rugose, medially bearing wide shallow longitudinal depression with narrow longitudinal carinula at bottom. Elytral intervals flat or weakly convex, irregularly wrinkled. Femora and tibiae always rufous; tarsi entirely rufous or partly (1st–3rd segments and apex of 4th segment, or only apex of 4th segment) darkened. 1st segment of hind tarsus shorter than, or as long as 2nd segment.



Figs. 1–16. *Macroplea* Samouelle: (1–6) *M. mutica*, male (Primorskii Terr.) [(1) pronotum, (2) 1st–5th antennal segments, (3) claw, (4) 1st–3rd segments of hind tarsus, (5) aedeagus, ventral and lateral view; (6) apex of left elytron]; (7–10) *M. japana* [(7–10) male (Primorskii Terr.): (7) 1st–5th antennal segments, (8) claw, (9) 1st–3rd segments of hind tarsus, (10) aedeagus, ventral and lateral view; (11–16) holotype (Honshu Island) [(11) pronotum, (12) apex of left elytron, (13) 1st–5th antennal segments, (14) claw, (15) 1–3rd segments of hind tarsus, (16) base of left elytron].

Claws with large triangular projection at base. Aedeagus as in Fig. 5. Body length 4.5–6 mm. Western Europe (mainly the coasts of the Northern and Baltic seas), Belarus, Ukraine (the Crimea), the taiga and semi-desert zones of the European part of Russia (the coast of the White and Caspian seas), the Southern Urals, Transbaikalia, Primorskii Terr., Uzbekistan, Kirghizia, Mongolia. On *Potamogeton*, *Ruppia*, *Zostera*,

Zannichellia
 *Macroplea mutica* (Fabricius, 1792).

Notes. According to the original description of *M. japana*, the elytral striae are equally distant from one another (Jacoby, 1885) but actually they are distinctly approximate in pairs in both the holotype (Fig. 16) and the male from Primorskii Terr. According to the key, the characters indicated by Medvedev (1992)

for *M. mutica japana* from Primorskii Terr. (the pronotum is considerably narrowed toward the base, mostly bears 2 or 3 longitudinal black spots, the body length is 4.5–6.0 mm) actually refers to *M. mutica*. Thus, in the present publication, *M. japana* is recorded for the territory of Russia for the first time. The sympatric distribution of *M. mutica* (Figs. 1–6) and *M. japana* (Figs. 7–10) in Primorskii Territory, along with clear morphological distinctions between these forms, confirms the species rank of *M. japana*.

Material. *Macroplea japana*. Holotype: Japan, Bukenji, 21.IV.1880 (Lewis) (BMNH). Russia. Primorskii Terr., Khasanskii District, 1.5 km N of Khasan Vill., Lake Doritsine, on the roots of *Brasenia schreberii* in a loose peat soil, 1997 (S.Yu. Kuptsov), 1 cocoon with an adult male, 3 cocoons with pupae (AB).

Macroplea mutica. Great Britain. 1 ♀ (ZIN). France. Strasbourg, 1 ♂ (ZIN). Belgium. Ostende, 1 ♂ (ZIN). Germany. 2 ♀ (ZIN). Denmark. Copenhagen: 1 ♂, 2 ♀ (ZIN). Poland. Gdansk, 1 ♀ (ZIN). Finland. 1 ♀ (ZIN). Ukraine. Crimea: Lake Donuzlav, 22.VI.1981 (S. Mosyakin), 1 ♂ (AB). Russia. Karelia: Loukhskaa Distr., Chernaya River, estuary, 11.VII.1990 (M. Orlova, A. Bieńkowski), 1 ♂ (AB). Arkhangelsk Prov.: Dvina Bay, Mudyugskii Island, 16.V.1897 (Keller), 1 ♀ (ZIN). Transbaikalian Territory: Ulza River valley, 27.V.1925 (Vinogradov), 1 ♂ (ZIN). Primorskii Terr.: Tumen-ula River, 23.VII.1913 (Cherskii), 1 ♀ (ZIN); Khasan Vill., 6.VIII.1970 (G. Lafer), 1 ♀ (LM); 3.VIII.1974 (A. Lelej), 1 ♂ (LM). Azerbaijan. Kizil-Aleksii, 4–5.VI.1915 (Knipovich), 1 ♂ (ZIN).

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