

TAXONOMY AND DISTRIBUTION OF THE FLEA BEETLE *ALTICA IVLIEVI* L. MEDVEDEV, 1968 (COLEOPTERA: CHRYSOMELIDAE: GALERUCINAE: ALTICINI)

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Summary. The lectotype of *Haltica ivlievi* L. Medvedev, 1968 is designated and hitherto unknown female is described and illustrated. A new data on the distribution, new host plant, and predator shield bug *Zicrona caerulea* (Linnaeus, 1758) of this species are given.

Key words: flea beetles, taxonomy, lectotype designation, Russian Far East.

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Резюме. Обозначен лектотип *Haltica ivlievi* L. Medvedev, 1968 и описана ранее неизвестная самка. Приведены новые данные о распространении, новом кормовом растении и клопе хищнике *Zicrona caerulea* (Linnaeus, 1758) этого вида на Дальнем Востоке России.

INTRODUCTION

The collection of Chrysomelidae in the Federal Scientific Center of the East Asia Terrestrial Biodiversity (FSCV) numbers more than ten thousands pinned specimens. Some new species were described based on this collection (Ivliev *et al.*, 1968; Korotyaev & Medvedev, 1980). Often such descriptions were based on one sex or single specimens, sometimes without designation of the holotype. This paper considers the taxonomy of *Altica ivlievi* L. Medvedev, 1968. The holotype of this species was not designated. Herein the lectotype of *H. ivlievi* is designating, as well as description of a previously unknown female and new distribution data are given.

Terminology of female morphology follows Konstantinov (1987); terminology of male genitalia follows Warchałowski (2010). Photographs were taken with the stereomicroscope Olympus SZX16 and digital camera Olympus DP74 and stacked using Helicon Focus software. The final illustrations were post-processed for contrast and brightness using Adobe Photoshop® software.

TAXONOMY

Genus *Altica* Geoffroy, 1762

Type species: *Chrysomela oleracea* Linnaeus, 1758, by subsequent designation of Latreille, 1810.

REMARKS. According to Opinion 1754 of the ICZN (1994) the author of the genus *Altica* is Geoffrey, and the date is 1762. It is a widespread genus of the tribe Alticini Newman, 1835. The genus includes more than 300 species in the World, and about 80 species in the Palearctic (Konstantinov & Vanderberg, 1996; Döberl, 2010), 13 species in the Russian Far East (Korotyaev & Medvedev, 1980; Medvedev, 1992; Lopatin *et al.*, 2004; Mikhailov & Chashchina, 2009; Warchałowski, 2010; Makarov, 2023).

***Altica ivlievi* (L. Medvedev, 1968)**

Figs 1–11

Haltica ivlievi L. Medvedev, 1968: 85, ♂, ♀. Lectotype – male, here designated [FSCV].

Altica ivlievi: Matis *et al.*, 1980: 71; Medvedev, 1992: 587; Lopatin *et al.*, 2004: 183; Döberl, 2010: 494; Warchałowski, 2010: 742; Sergeev, 2020: 80–88.

TYPE MATERIAL EXAMINED. Lectotype of *Haltica ivlievi* (designated here): ♂ – **Russia**: Magadan Region, 266 km of road Palatka-Ust'-Omchuk, near Matrosovo, forest with burch and larch, 19.VII 1962, L. Ivliev [FSCV]. Paralectotypes of *H. ivlievi*: 2 ♂, 1 ♀ with the same label [FSCV].

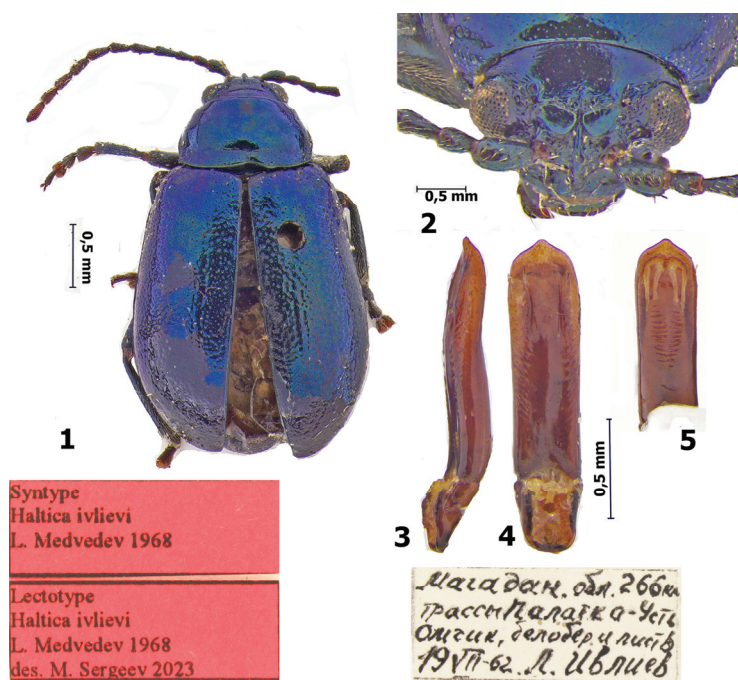
OTHER MATERIAL EXAMINED. **Russia**: Magadan Region: the same label with the same date as holotype, 3♂, 2♀, A.I. Kurentsov [FSCV] (probably the specimens collected by Kurentsov are also belong to the type species, but in the original description only Ivliev cited as collector). Primorsky Krai: Sikhote-Alin Reserve: 12 km SW from Tazhnoye, upper section of the Serokamenka River, 45.5389°N, 135.9850°E, 09.VI 2017, 1♂, M. Sergeev (FSCV); 32 km NE Melnichnoe, upper reaches of the Kolumbe River, floodplain of the Jupiter Stream, 45.5765°N, 135.8928°E, 13.VI 2017, 2♂, M. Sergeev (FSCV); 25 km NW from Terney, Serebryanka River valley, glade near cordon Ust-Serebryannyi, 45.1389°N, 136.3807°E, 18.IV 2018, 2♂, 33♀, same locality, 11.V 2018, 1♂, 26♀, M. Sergeev (FSCV); 20 km SW from Tazhnoye, upper reaches of the Kolumbe River, Kaplanovskiy saltmarsh, 45.3324°N, 136.1365°E, 17-22.V 2018, 9♂, 8♀, M. Sergeev (FSCV). Amur Region: near Arkhara, 1.VIII 2022, 1♂, 2♀, M. Sergeev (FSCV); 7 km SE from Uril, floodplain Dyrovatka river, 6.VIII 2022, 1♂, 1♀, M. Sergeev (FSCV).

DIAGNOSIS. MALE. Frontal tubercles distinct, triangularly-rounded, contacted. Frontal carina narrow, sharp, high. Pronotum with small punctures, elytra with larger punctures and microsculpture. Aedeagus dorsally with transverse wrinkles formed triangle; ventrally with slightly convex medial part, with apical longitudinal ridge, apical part with short longitudinal furrow transform apically to short apical ridge; lateral furrow in basal two third wide, in third sharply limited, narrowed and deep, lateral part with sharp wrinkles transform to preapical longitudinal depression. Body length 3.9–4.2 mm.

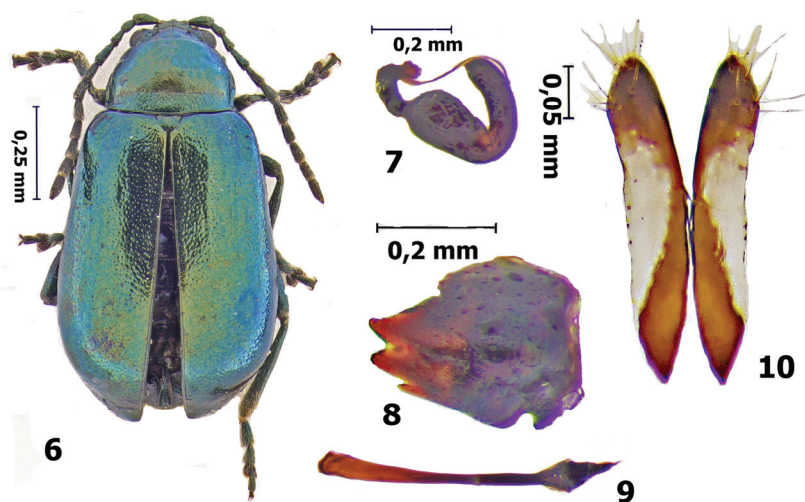
FEMALE (hitherto unknown). Mandible (Fig. 8) quadridentate, first tooth (*a*) clearly visible, fourth tooth (*d*) with distinct notch before them, fourth tooth obtuse located closer to cutting edge, proximal mandibular part strongly chitinized, mandibular condyle without tooth. Vaginal palpi (Fig. 10) not parallel, distally divergented, lateral border membranous, slightly curved, distal widening short, ratio St_2/St_1 2.33.

VARIABILITY. The coloration of the beetles and recently collected specimens is bluish-green, but in the old collected specimens the green is disappeared and coloration became blue-violet.

HOST PLANTS. *Betula cajanderi* Sukacz. (Medvedev & Roginskaya, 1988), *B. platyphylla* Sukacz. (Betulaceae) (new host plant) (Fig. 11).



Figs 1–5. *Altica ivlievi*, male, lectotype: 1 – imago, general view; 2 – head; 3–5, aedeagus.



Figs 6–10. *Altica ivlievi*, female: 6 – imago, general view; 7 – left mandible; 8 – spermatheca; 9 – styles; 10 – tignum. (Sikhote-Alin Reserve, 18.IV 2018).

ECOLOGY. The species lives in white birch forests, on burnt areas with birch and larch renewal (Magadan Region), as well as in valley broad-leaved forests (Primorsky Krai, Amur Region) (Dubeshko & Medvedev, 1989; original data). The specialized predator of *A. ivlievi* is the shield bug *Zicrona caerulea* (Linnaeus, 1758) (Hemiptera: Pentatomidae), as observed in Sikhote-Alin Reserve, 11.V 2018 (fig. 12).



Fig. 11. Feeding and copulating beetles of *Altica ivlievi* on the leaves of *Betula platyphylla* Sukacz. (Sikhote-Alin Reserve, 11.V 2018).



Fig. 12. *Zicrona caerulea* eating adult *Altica ivlievi* (Sikhote-Alin Reserve, 11.V 2018).

DISTRIBUTION. Russia: Magadan oblast (Ivliev *et al.*, 1968; Medvedev, 1992), Primorsky Krai (Sergeev, 2020), Amur Region (new record).

REMARKS. *Altica ivlievi* related with *A. engstroemi* Sahlberg, 1893 but differs by sharp frontal carina and by shape of frontal tubercles. *Altica engstroemi* develops on *Betula* (Medvedev & Roginskaya, 1988) and *Salix* (Matis, 1986) and occurs in Denmark, and Sweden, North and East of European part of Russia, South Ural, Northeast Kazakhstan, Eastern Siberia, Chukotka, and Kamchatka (Lopatin *et al.*, 2004; Warchalowski, 2010; Bieńkowski, & Orlova-Beńkovskaya, 2017). *Altica ivlievi* resemble *A. chamaenerii* (Lindberg, 1926) but differs by larger punctures of elytra (Figs. 1, 6), by sculpture of aedeagus ventrally (narrow and strong lateral preapical groove) (Figs 3-5). *Altica chamaenerii* develops on *Chamaenerion angustifolium* (L.) and *Salix* (Matis, 1986; Medvedev & Roginskaya, 1988) and distributed in North Europe and Mountains of Central Europe, Transcaucasia, Kyrgyzstan, Chukotka, Kamchatka (Matis, 1986; Medvedev, 1992; Lopatin *et al.*, 2004).

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