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**A new species of the genus *Mimastra* Baly, 1865
(Coleoptera: Chrysomelidae: Galerucinae)
with cross-like elytral pattern from Vietnam**

**Новый вид рода *Mimastra* Baly, 1865
(Coleoptera: Chrysomelidae: Galerucinae)
с крестообразным рисунком на надкрыльях из Вьетнама**

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Key words: Coleoptera, Chrysomelidae, Galerucinae, *Mimastra*, new species, Vietnam.

Ключевые слова: Coleoptera, Chrysomelidae, Galerucinae, *Mimastra*, новый вид, Вьетнам.

Abstract. One new species, *Mimastra levmedvedevi* sp. n. from the group of species with cross-like elytral pattern, is described from Vietnam. *Mimastra levmedvedevi* sp. n. is most similar to *M. arcuata* from which differs by details of coloration and by the apex of aedeagus with rather narrow, not emarginate tip on the apex. The figures of general view and aedeagus are given for the new and close species.

Резюме. Описан новый вид из Вьетнама, *Mimastra levmedvedevi* sp. n. из группы видов с крестообразным рисунком на надкрыльях. *Mimastra levmedvedevi* sp. n. наиболее близок к *M. arcuata*, от которого отличается деталями окраски и формой эдеагуса с довольно узким, не выемчатым кончиком на вершине. Даны изображения внешнего вида и эдеагусов нового и близких к нему видов.

The genus *Mimastra* Baly, 1865 is distributed in the Oriental and Eastern Palearctic regions. The first key to Oriental *Mimastra* species was given by Allard [1890]. Keys to Oriental *Mimastra* species were cited in fundamental works on leaf beetles [Maulik, 1936; Gressitt, Kimoto, 1963; Kimoto, 1989; Kimoto, Takizawa, 1997]. A key to the species of this genus from Peninsular Malaysia was given by Mohamedsaid [1992]. Besides Oriental *Mimastra* have been an object of some relatively recent reviews [Zhang et al., 2006; Bezděk, 2009, 2010, 2011; Medvedev, 2009; Bezděk, Lee, 2011]. However when studying the material collected by A. Prosvirov in North Vietnam in 2013 a new species of this genus has been found. Then two more specimens have been found in the collection of L. Medvedev. Here we describe this new species and give figures of general view and aedeagus for it and close species.

Material and methods

All measurements were made using an ocular grid mounted on MBS-20 stereomicroscope. Photographs of the

habitus were taken with a Canon EOS 500D digital camera with combined Canon EF 70–200 mm f/4.0L IS USM and inverted Helios 50 mm objectives. Photographs of aedeagi and some spermatheca were made with a Canon EOS 500D digital camera with combined Canon EF 70–200 mm f/4.0L IS USM and inverted EFS 18–55 mm f/3.5–5.6 objectives. Images at different focal planes were combined using Helicon Focus 4.60.3 Pro software.

Exact label data are given for the all material. A slash (/) separates different lines.

Next abbreviations are used for depository places of types:

LM – L. Medvedev's collection (Moscow, Russia);

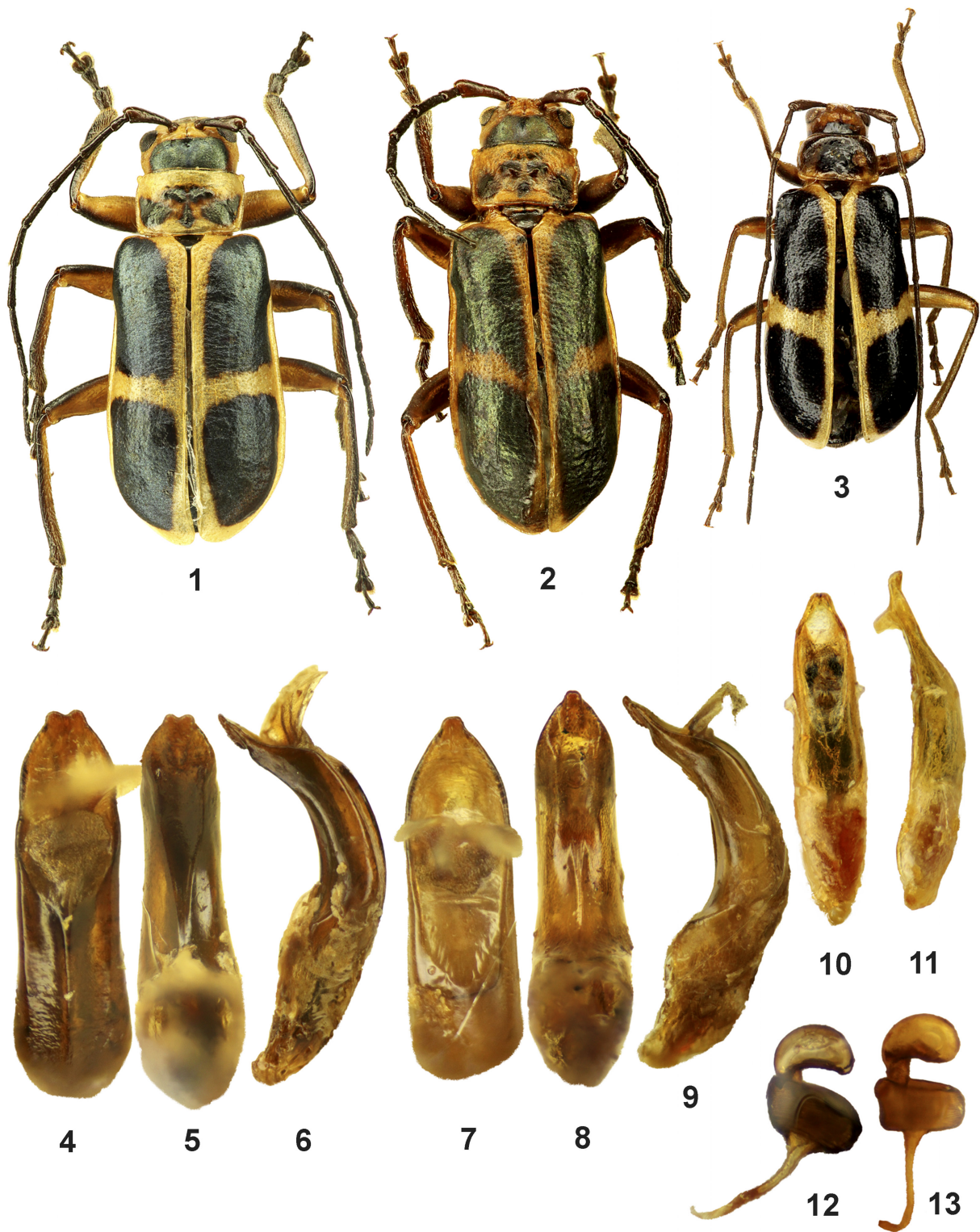
PR – P. Romantsov's collection (Saint Petersburg, Russia).

Mimastra levmedvedevi sp. n.
(Figs 1, 7–9, 12)

Material. Holotype, ♂ (PR): "N Vietnam, Lai Chau Prov., / nat. park Hoang Lien Son / N 22.34754° E 103.78049°, / 1922 m., 21.IV.2013 / Prosvirov A. leg". Paratypes: 1♂, "N Vietnam, Lai Chau Prov., / nat. park Hoang Lien Son / N 22.33768° E 103.77922°, / 2068 m., 19.IV.2013 / Prosvirov A. leg" (PR); 1♀, 1♂, "VIETNAM, Lao Cai Prov., / 5 km W of Cat Cat, 2050 m, / 22°18.337' N, 103°49.291' E", "15. III. 1998 / N 17, at light / L. Peregovits & T. Vasarhelyi" (LM).

Description. Head yellowish-brown with apices of mandibles, anterior part of labrum and clypeus darkened. Vertex black-green. Antennae black with dark brown 1st antennomere. Pronotum yellowish-brown with 5 black spots. Three of them (1 longitudinal and 2 transverse) smaller, drop-shaped, touch each other and form a common group in the middle. The other two spots larger, lateral, one on each side in posterior half of pronotum. Elytra black-green, all margins of elytra (including suture), epipleurae and one transverse stripe situated in the posterior half of each elytron yellowish-brown. Scutellum black. Femora and tibiae brown with upper side black. Tarsi black. Underside yellowish-brown with abdomen, meta- and part of mesosternum black-green. General view – Fig. 1.

Body oblong, flattened, slightly broadened posteriorly, 2.4 times as long as wide. Head smooth, impunctate. The anterior part of head covered with very fine microsculpture,



Figs 1–13. Species of the genus *Mimastra*, general view and details of structure.

1 – *M. levmedvedevi* sp. n., holotype; 2 – *M. arcuata*, male (Nepal); 3 – *M. pygidialis*, male (Vietnam); 4–6 – *M. arcuata*, aedeagus: 4 – dorsal view; 5 – ventral view; 6 – lateral view; 7–9 – *M. levmedvedevi* sp. n., aedeagus: 7 – dorsal view, 8 – ventral view, 9 – lateral view; 10–11 – *M. pygidialis*, aedeagus: 10 – dorsal view, 11 – lateral view; 12 – *M. levmedvedevi* sp. n., spermatheca; 13 – *M. arcuata* (India), spermatheca.

Рис. 1–13. Виды рода *Mimastra*, общий вид и детали строения.

1 – *M. levmedvedevi* sp. n., голотип; 2 – *M. arcuata*, самец (Непал); 3 – *M. pygidialis*, самец (Вьетнам); 4–6 – *M. arcuata*, эдеагус: 4 – вид сверху; 5 – вид снизу; 6 – вид сбоку; 7–9 – *M. levmedvedevi* sp. n., эдеагус: 7 – вид сверху, 8 – вид снизу, 9 – вид сбоку; 10–11 – *M. pygidialis*, эдеагус: 10 – вид сверху, 11 – вид сбоку; 12 – *M. levmedvedevi* sp. n., сперматека; 13 – *M. arcuata* (Индия), сперматека.

vertex shagreened. Frontal tubercles triangular, slightly convex, close together but separated from each other by distinct furrow. Antennae slightly shorter body length, proportions of segments are as 40 : 14 : 31 : 36 : 36 : 30 : 32 : 30 : 25 : 23 : 30 (1 = 0.25 mm), all segments shining with sparse thin hairs. Antennae are placed close to each other, interantennal space 3 times shorter than the distance between the eyes. Prothorax 1.66 times as wide as long, much narrower (about 1.4 times) at base than elytra. Anterior margin slightly concave, posterior margin almost straight, lateral margins almost straight, divergent anteriorly. Anterior angles acute, rounded, slightly produced anteriorly, with one long seta on each angle, posterior angles almost rectangular. Disc of pronotum impunctate, with uneven surface, with shallow one transverse and one longitudinal impressions, all margins bordered. The surface with fine microsculpture. Anterior coxal cavities open posteriorly. Scutellum triangular, with rounded apex, impunctate but covered with fine microsculpture. Elytra 1.7 times as long as wide, broadened near apex, its surface shagreened with some very small punctures. Humeral calli well developed. Epipleura broadened at base, gradually narrower posteriorly and disappearing in the apical third. Legs slender with strong femora (especially anterior ones). Fore tarsi with the 1st segment wide, elongated (2 times as long as wide), 1.35 times wider than 2nd and equal to the width of 3rd segment. 1st segment of fore 0.75 times, middle 0.85 times and hind tarsi as long as 2 following tarsomeres combined. Claws appendiculate. Underside finely punctate and covered with thin hairs. Abdomen with 5 distinctly visible sternites, high margins of 3rd and 4th sternites straight or very slightly concave, without any triangular projections posteriorly, the last sternite with the longitudinal impression in the middle. Pygidium convex with wide rounded apex. Aedeagus (Figs 7–9) with wide longitudinal impression on ventral side, curved in lateral view, its apex with rather narrow, not emarginate tip, length of aedeagus 2.5 mm. Length of body 8.4 mm.

Paratypes: males. The coloration and the shape of aedeagus as in holotype. Length of body 8.2–9 mm.

Female. Very similar to the males but has elytra more broadly rounded in the posterior third, antennae a little shorter than in males, reach just apical slopes of elytra and pygidium with emarginate on the apex. Length of body 8 mm. Spermatheca – Fig. 12.

Differential diagnosis. *Mimastra levmedvedevi* **sp. n.** belongs to the species group with cross-like elytral pattern. This group includes 4 more species: *M. arcuata* Baly, 1865 (from Nepal, India, China and Myanmar), *M. procerula* Zhang, Yang, Cui et Li, 2006 (from China), *M. quadripartita* Baly, 1879 (from India and China) and *M. pygidialis* Laboissière, 1929 (from Vietnam). Two of them, *M. quadripartita* and *M. pygidialis* (Figs 3, 10, 11), are smaller in size (usually less than 7 mm) and have antennae longer than the body. Two other, *M. arcuata* (Fig. 2) and *M. procerula*, are longer (7.5–10 mm) and have antennae shorter than the body like *M. levmedvedevi* **sp. n.** *Mimastra procerula* can be distinguished from all species of this group by the original shape of aedeagus which tapered to apex, then broadened apically and by having a triangular projection in 3rd and 4th ventrites in male. Of all species

of this group *M. levmedvedevi* **sp. n.** is most similar to *M. arcuata* from which differs by details of coloration and by the apex of aedeagus with rather narrow, not emarginate tip on the apex (Figs 7–9). *Mimastra arcuata* has aedeagus with wide, emarginate tip on the apex (Figs 4–6). Differences in coloration are following: *M. levmedvedevi* **sp. n.** has elytra with postmedian yellow transverse stripe straight and rather wide, unlike *M. arcuata* which has this strip narrower and curved. Spermathecae of these species also differ (Figs 12, 13).

Etymology. The name of the new species is dedicated to Lev Medvedev (Russia, Moscow), a well known specialist on Chrysomelidae.

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References

- Allard E. 1890. Troisième note sur les galéruces. *Bulletin ou Comptes-rendus des Séances de la Société Entomologique de Belgique*: 80–94.
- Bezděk J. 2009. Revisional study on the genus *Mimastra* (Coleoptera: Chrysomelidae: Galerucinae). Part 1: Species with unmodified protarsomeres in male. *Acta Entomologica Musei Nationalis Pragae*. 49(2): 819–840.
- Bezděk J. 2010. Revisional study on the Genus *Mimastra* (Coleoptera: Chrysomelidae: Galerucinae). Part 2. *Annales Zoologici*. 60(1): 35–46.
- Bezděk J. 2011. Revisional study on the genus *Mimastra* (Coleoptera: Chrysomelidae: Galerucinae). Part 3: *Mimastra oblonga* and *M. tarsalis* species groups. *Zootaxa*. 2766: 30–56.
- Bezděk, J., Lee Chi-Feng. 2011. Revisional study on the genus *Mimastra* (Coleoptera: Chrysomelidae: Galerucinae). Part 4. *Annales Zoologici*. 61(4): 709–729.
- Gressitt J., Kimoto S. 1963. The Chrysomelidae (Coleopt.) of China and Korea, Part 2. *Pacific Insects Monograph*. 1B: 301–1026.
- Kimoto S. 1989. Chrysomelidae (Coleoptera) of Thailand, Cambodia, Laos and Vietnam. IV. Galerucinae. *Esakia*. 27: 1–241.
- Kimoto S., Takizawa H. 1997. Leaf beetles (Chrysomelidae) of Taiwan. Tokyo: Tokai University Press. xvii + 581 p.
- Maulik S. 1936. The fauna of British India including Ceylon and Burma. Coleoptera, Chrysomelidae (Galerucinae). London: Taylor and Francis. XV + 648 p.
- Medvedev L.N. 2009. A revision of the fulvous species of the genus *Mimastra* Baly, 1865 from Vietnam (Chrysomelidae, Galerucinae). *Entomologica Basiliensis et Collectionis Frey*. 31: 255–266.
- Mohamedsaid M.S. 1992. The genus *Mimastra* Baly from Peninsular Malaysia (Coleoptera, Chrysomelidae, Galerucinae). *Malayan Nature Journal*. 46: 115–118.
- Zhang L.-J., Yang X.-K., Cui J.-Z., Li W.-Z. 2006. A key to the genus *Mimastra* Baly (Coleoptera: Chrysomelidae: Galerucinae) from China, with the description of a new species. *Entomological News*. 117(2): 203–210.

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