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Autor: Medvedev, Lev N.

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A revision of the fulvous species of the genus *Mimastra* Baly, 1865 from Vietnam (Chrysomelidae, Galerucinae)

by Lev Medvedev

Abstract. A key to fulvous species of the genus *Mimastra* Baly, 1865 from Vietnam is proposed. Six new species are described: *Mimastra fulvipes, M. fulviventris, M. korotyaevi, M. tamdaoana, M. similis, M. tarsalis* spp.nov. (all-from Vietnam). The following new synonyms are proposed: *M. uncitarsis* Laboissière, 1940 (= *M. chennelli* Baly, 1879); *M. soreli* Baly, 1878, *M. limbata* Baly, 1879, *M. guerrei* Laboissière, 1929 (= *M. cyanura* (Hope, 1831)).

Key words. Galerucinae – Mimastra – Vietnam – key – new species – new synonyms

Introduction

The many Oriental genera of *Galerucinae* include a large set of "fulvous" species (at least on the upperside of the body), which often appear homogeneous and are usually poorly studied in comparison with the "spotted" or "banded" species. Such a situation once held in such genera as *Aulacophora* Chevrolat, 1836, *Hoplasoma* Jacoby, 1884, *Haplosomoides* Duvivier, 1890, *Paridea* Baly, 1886 and still exists in *Mimastra* Baly, 1865, *Monolepta* Chevrolat, 1836, *Dercetina* Gressitt et Kimoto, 1963, *Arthrotus* Motschulsky, 1857 and others. The genus *Mimastra* is keyed for India (MAULIK 1936), China (OGLOBLIN 1936, GRESSITT & KIMOTO 1963, ZHANG *et al.* 2006) and Indochina (KIMOTO 1989) but identification of fulvous species is difficult in all of them and figures of diagnostic characters (especially aedeagi) are lacking.

In this work I revise the fulvous species of *Mimastra* from only Vietnam, since a very large body of material exists for this region. As a result of this, a key for this group is given, 6 species are described as new for science and 4 new synonyms are stated. Males differ mainly in the form of the aedeagus, females in the proportions of the basal antennal segments and the colour of the underside of the body.

Material

The following abbreviations are used for the places in which the new species are deposited:

NHMB	Naturhistorisches Museum, Basel, Switzerland
LM	The Lev Medvedev collection, Moscow, Russia

Taxonomy

A key to the Mimastra of Vietnam with entirely fulvous elytra

- 1(10) Underside entirely fulvous. Antennae longer than body, at least apical segments darkened.
- 2(9) Proportions of segments 2–4 approx. 1–2–3, segment 3 not more than twice as long as 2.
- 4(3) Tibiae and tarsi black or distinctly darker than femora.
- 6(5) Elytra without sharp ridge along lateral margin beyond centre.

- 10(1) Underside not entirely fulvous.
- 11(18) Metasternum and abdomen differ in colour.

- 13(12) Metasternum black, abdomen fulvous, sometimes darkened but not black. Femora fulvous without black stripe on upperside. Antennae longer than body, brown or piceous with fulvous basal segment.
- 14(17) Antennal segment 3 distinctly longer than 2, segments 2+3 about as long as 4. Legs fulvous, tibiae sometimes slightly darkened on dorsal side.

- 17(14) Antennal segments 2 and 3 subequal, segments 2+3 twice as short as segment 4 (segments 2-4 proportions 5-5-19). Femora fulvous, tibiae and tarsi piceous. Aedeagus slightly widened to apical quarter and then narrowed again, underside without distinct impressions, extreme apex curved downward in lateral view (Figs 8, 8a). Body length 6.8-7.5 mm.

 M. pectoralis Kimoto, 1989
- 18(11) Metasternum and abdomen black or piceous, sometimes with metallic lustre.
- 19(32) Segment 1 of anterior tarsus of male simple, narrow and elongate. Head and prothorax without black spots.
- 21(20) Abdomen black, sometimes with metallic lustre.

23(22) Underside black with apical abdominal sternite and pygidium fulvous.

- 25(24) Antennae longer than, or as long as, body. Aedeagus distinctive or, if cuneiform, then not with acute apex.
- 26(29) Antennal segment 3 not more than twice as long as segment 2. Proportions of antennal segments 2–4 approx. 1–2–3.

- 29(26) Antennal segment 3 about 2.5 times as long as segment 2. Segments 2–4 proportions 1–2.5–3.7.

- 32(19) Segment 1 of anterior tarsus strongly widened in male. Underside with feeble metallic lustre. Antennae a little shorter than body length, piceous or brown-piceous with basal segments fulvous. Legs fulvous with most of tibiae and tarsi blackish.
- 33(36) In male segment 1 of anterior tarsus very broad, not curved laterally; its upperside lustrous, concave and impunctate.
- 34(35) Segment 1 of anterior tarsus of male irregularly round or feebly elongate ovate, not more than 1.2 times as long as wide, its upperside feebly concave and not ridged at the sides (Fig. 18). Sculpture of underside asymmetrical, with deep oblique impression in basilateral area (Fig. 17). Antennal segments 2–4 proportions 6–9–19. Vertex with black spots: two on hind margin (mostly covered by prothorax) and one elongate in middle; prothorax with a few dark spots. Apex of elytra often bordered with dark metallic stripe. Aedeagus (Fig. 14) narrowed to apex,

Mimastra fulvipes sp.nov.

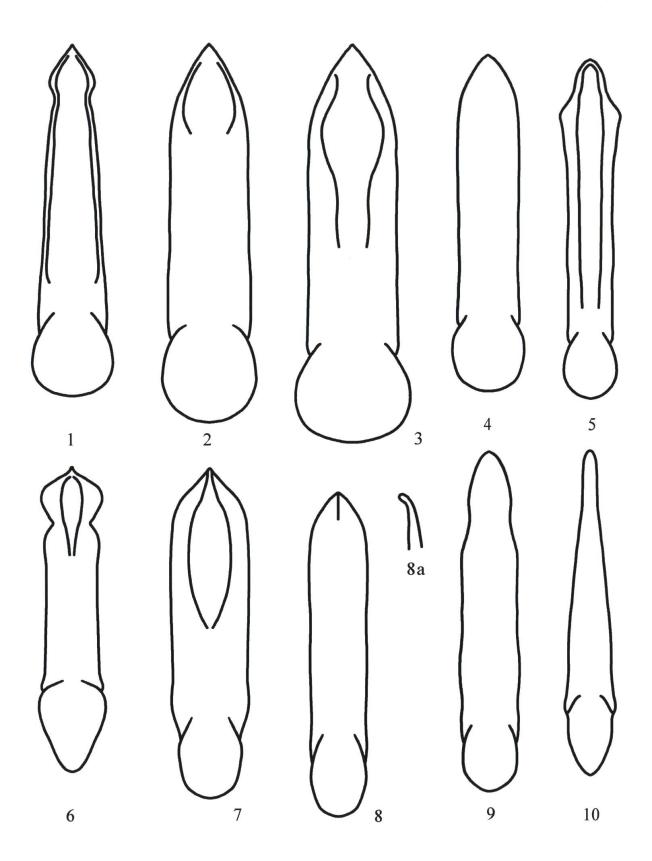
Material examined. Holotype (male): South Vietnam, Gialai-Contum prov., 40 km N Ankhe, Buon Loi, 10.VI.1980, leg. L. Medvedev (LM). Paratypes: same locality, VI–VII.1983, 9 ex. (LM, 3 ex. NHMB); – South Vietnam, Dongnai Prov, Mada, 24.VI.1991, 1 male (LM).

Description. Body entirely fulvous, only apical antennal segments slightly darkened.

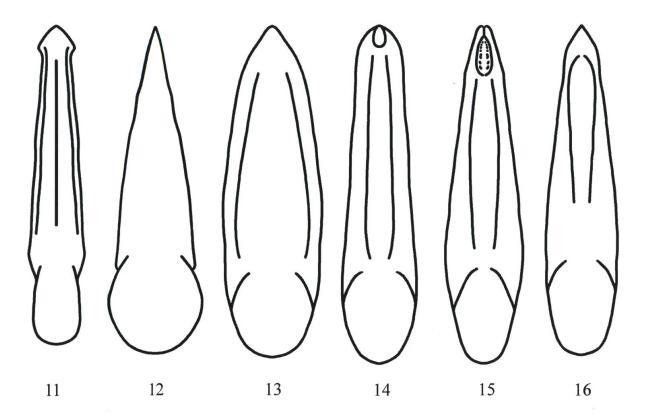
Body elongate, slightly widening towards the rear. Head impunctate, frontal tubercles triangular, convex, sharply delimited posteriorly. Antennae longer than body, proportions of segments: 18–7–16–22–22–23–23–23–21–22, preapical segments approx. 10 times as long as wide. Prothorax 1.35 times as wide as long, subrectangular, broadest at anterior margin and narrowed to base, with sides almost straight, surface lustrous and impunctate. Scutellum triangular. Elytra 1.8 times as long as wide, surface with dense, feeble punctures and fine microsculpture. Segment 1 of fore-tarsi simple in both sexes. Aedeagus feebly narrowed to apex, longitudinally concave in apical third of underside (Fig. 1).

Body length: 6.9–7.7 mm.

Differential diagnosis. Near *M. gracilicornis* Jacoby, 1899, differs in colour of legs, broader body and form of aedeagus.



Figs 1–10. Aedeagi, ventral view: 1 – *Mimastra fulvipes* sp.nov., 2 – *M. apicalis* Kimoto, 3 – *M. gracilicornis* Jacoby, 4 – *M. scutellata* Jacoby, 5 – *M. fulviventris* sp.nov., 6 – *M. gracilis* Baly, 7 – *M. korotyaevi* sp.nov., 8 – *M. pectoralis* Kimoto (8a – extreme apex in lateral view), 9 – *M. tamdaoana* sp.nov., 10 – *M. polita* Jacoby.



Figs 11–16. Aedeagi, ventral view: 11 – *M. kabakovi* sp.nov., 12 – *M. similis* sp.nov., 13 – *M. persimilis* Kimoto, 14 – *M. cyanura* (Hope), 15 – *M. tarsalis* sp.nov., 16 – *M. chennelli* Baly.

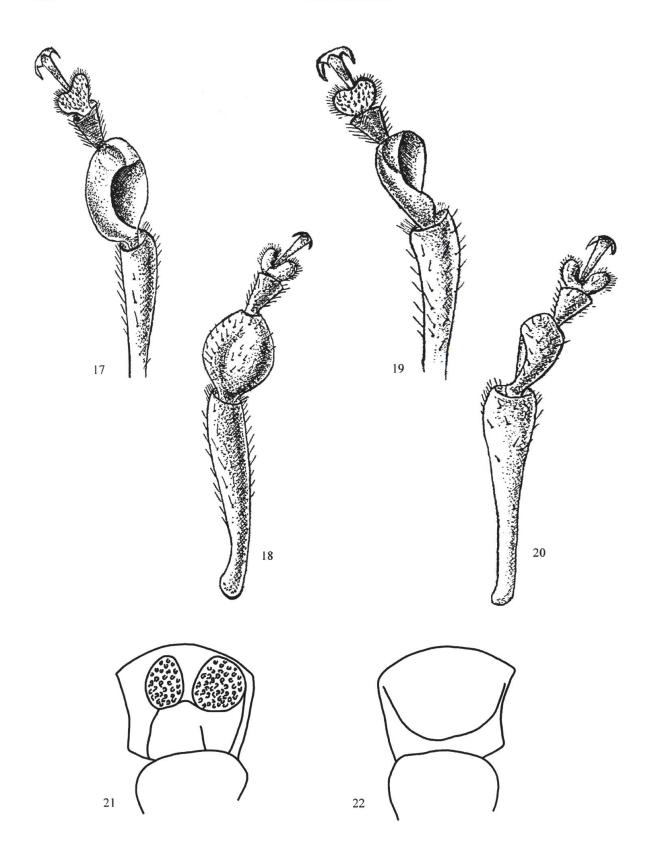
Mimastra fulviventris sp.nov.

Material examined. Holotype (male): Vietnam, Vinh Phu prov., Tam Dao, 24–31.V.1985, leg. L. Medvedev (LM). Paratypes: same locality and date, 7 ex. (LM, 2 ex. NHMB); – same locality, 11–13.V.1975, 6 ex. (LM, 1 ex. NHMB); 12–22.IV.1986, 1 ex. (LM).

Description. Fulvous, 3 or 4 apical antennal segments slightly darkened, underside with metasternum black or completely fulvous.

Body elongate, widened towards the rear. Head impunctate, frontal tubercles convex, short triangular, sharply delimited posteriorly. Antennae longer than body, proportions of segments: 14–7–20–20–20–20–20–20–20–18, preapical segments about 15 times as long as wide. Prothorax 1.7 times as wide as long, rectangular, feebly narrowed to base, with almost straight hind margins, surface lustrous and impunctate. Scutellum triangular with rounded apex. Elytra 1.6 times as long as wide, surface lustrous, densely and strongly punctate. Segment 1 of fore-tarsi simple in both sexes. Aedeagus long and thin, almost parallel-sided with finger-like apical process, underside longitudinally concave (Fig. 5).

Body length: 6.7–7.1 mm.



Figs 17–22. Anterior male tarsi from below and above (Figs 17–20 after LABOISSIČRE 1940): 17, 18 – *Mimastra cyanura* (Hope); 19, 20 – *M. chennelli* Baly; 21, 22 – Segment 1 of male anterior tarsus of *M. tarsalis* sp.nov. from below and above.

Differential diagnosis. Near *M. fulvipes* sp.nov., differs clearly in form of aedeagus and proportions of basal antennal segments, the main character for assessing females, especially specimens with entirely fulvous underside.

Mimastra korotyaevi sp.nov.

Material examined. Holotype (male): Vietnam, 100 km W Thanhoa, Langthanh, 400 m, 23.I.1989, leg. B. Korotyaev (LM). Paratypes: same locality, 1 female (NHMB); – North Vietnam, Kim Shon, 7–8.III.1962, leg. O. Kabakov, 1 female (LM); North Vietnam, mountains NW Qui Chau, 200–400 m, 7.III.1962, leg. O. Kabakov, 1 female (LM).

Description. Fulvous, antennae with darkened apical segments, metasternum black, abdomen mostly piceous with fulvous apex, sometimes almost fulvous.

Body moderately elongate, widened towards the rear. Frontal tubercles triangular, convex, sharply delimited posteriorly. Antennae longer than body, proportions of segments approx. 15–5–10–19–17–20–19–17–17, preapical segments about 7–8 times as long as wide. Prothorax 1.5 times as wide as long, very feebly narrowed to base, with side margins straight or feebly concave, surface lustrous and impunctate. Scutellum triangular. Elytra 1.7 times as long as wide, surface finely and densely punctate. Segment 1 of fore-tarsi simple in both sexes. Aedeagus almost parallel-sided, slightly narrowing to triangular apex, underside with shallow longitudinal impression in middle (Fig. 7).

Body length: 5.3-7.3 mm.

Etymology. The species is dedicated to its collector, Dr. B. Korotyaev.

Differential diagnosis. Near *M. flaviventris* sp.nov., differs in proportions of basal antennal segments and form of aedeagus.

Mimastra tamdaoana sp.nov.

Material examined. Holotype (male): Vietnam, Prov. Vinh-Phu, Tam Dao, 800–1200 m, forest, 12–22.IV.1986, leg. L. Medvedev et al. (LM). Paratypes: same locality and date, 1 male, 1 female (LM, NHMB); same locality, VI.1983, leg. L. Medvedev, 1 female (LM).

Description. Fulvous, head and prothorax lacking dark spots, antennae piceous with fulvous basal segments, elytra with apical margin very narrowly black, metasternum, abdomen and pygidium black with distinct metallic lustre, tibiae and apical margin of femora black.

Body narrow and elongate, almost parallel-sided. Head impunctate, frontal tubercles triangular, convex, sharply delimited posteriorly. Antennae longer than body (male) or as long as body (female); proportions of segments: 15–6–11–20–20–20–20–19–15–12–19, preapical segments about 6–8 times as long as wide. Prothorax 1.7 times as wide as long, almost rectangular, broadest in anterior third, surface lustrous and impunctate. Scutellum triangular with rounded apex, very finely strigose. Elytra 1.7–1.8 times as long as wide, surface with dense and moderately strong punctures. Segment 1 of fore-tarsi simple in both sexes. Aedeagus long and thin, narrowed to apex, extreme apex triangular, but curved upward, lending it a narrowly truncate appearance in ventral view, underside with unsclerotized central part (Fig. 9).

Body length: 7.5–8.2 mm.

Differential diagnosis. Differs from all species in simple anterior tarsi of male and in the metallic lustre of the underside.

Mimastra kabakovi sp.nov.

Material examined. Holotype (male): South Vietnam, Prov. Gialai-Contum, 50 km N Ankhe, Hanung, 14.VI.1980, tropical forest, leg. L. Medvedev (LM). Paratypes: same locality, 14–15.VI.1980, 1 male, 1 female (LM); — same locality, VI.1983, 3 males (LM); North Vietnam, mountains NW Dong Hoi, 300–800 m, 20–24.III.1963, leg. O. Kabakov, 4 males (LM, 1 ex. NHMB); — Vietnam, mountains NW Cui Chau, 200–400 m, 15.III.1961, leg. O. Kabakov, 1 male (LM), 1 female (NHMB); — Vietnam, mountains SW Bai Thuong, 300 m, 18–20.III.1961, leg. O. Kabakov, 2 males, 2 females (LM).

Description. Fulvous, apical antennal segments darkened, metasternum and abdomen black (apical sternite and pygidium may be fulvous).

Body elongate, slightly widened towards the rear. Head impunctate, frontal tubercles triangular, convex, well delimited posteriorly. Antennae longer than body, proportions of segments: 15–6–12–18–18–17–17–16–16–15–17, preapical segments about 7–8 times as long as wide. Prothorax 1.5 times as wide as long, subrectangular, very feebly narrowed to base, surface lustrous and impunctate. Scutellum triangular. Elytra 1.6–1.7 times as long as wide, surface with deep, dense punctures. Segment 1 of fore-tarsi simple in both sexes. Aedeagus thin and very long, about 7–9 times as long as wide before base, parallel-sided with triangular apex, underside longitudinally grooved along mid-line (Fig. 11).

Body length: 6.7-7.1 mm.

Etymology. The species is dedicated to its collector, Mr. O. Kabakov.

Differential diagnosis. Very near to *M. persimilis* Kimoto, 1989, differs in proportions of antennal segments and form of aedeagus.

Mimastra similis sp.nov.

Material examined. Holotype (male): Vietnam, Prov. Vinh-Phu, Tamdao, 800–1200 m, forest, 12–22.IV.1986, leg. L. Medvedev et al. (LM). Paratypes: same locality and date, 2 males, 1 female (LM, 1 ex. NHMB); – North Vietnam, mountains SW Bai Thuong, 20.III.1964, leg. O. Kabakov, 2 males (LM); – North Vietnam, Kim Shon, 7–8.III.1962, leg. O. Kabakov, 1 male (LM); – North Vietnam, Thanh Hoa, 9.I.1962, leg. O. Kabakov, 1 male (LM).

Description. Fulvous, antennae piceous with fulvous basal segments, metasternum and abdomen black, but apical sternite and pygidium fulvous.

Body narrow, elongate, slightly widened towards the rear. Head impunctate, frontal tubercles triangular, convex, well delimited posteriorly. Antennae longer than body, proportions of segments: 13–5–10–16–15–15–15–15–14–13–15, preapical segments about 7–8 times as long as wide. Prothorax 1.5–1.6 times as wide as long, broadest in anterior third and narrowed to base, surface lustrous and impunctate. Scutellum triangular. Elytra 1.7–1.8 times as long as wide, surface with dense, deep punctures. Segment 1 of fore-tarsi simple in both sexes. Aedeagus cuneiform with acute apex, about 5 times as long as wide before base, longitudinally concave on underside (Fig. 12).

Body length: 5.7-7.4 mm.

Differential diagnosis. Very near to *M. kabakovi* sp.nov., differs mostly in form of aedeagus.

Mimastra persimilis Kimoto, 1989

Remark. I was unable to examine a type of this species described from Dalat, but I have a good series from North Vietnam (Bai Thuong, Kon Kuong, Kim Kuong, River Kon) which are identical with the original description of *M. persimilis*. On the other hand, this species does not appear in my very extensive material from South Vietnam.

Mimastra cyanura (Hope, 1831)

Mimastra lunata (Kollar et Redtenbacher, 1848) Mimastra davidis (Fairmaire, 1878) Mimastra limbata Baly, 1879 syn.nov. Mimastra apicalis Baly, 1886 Mimastra soreli Baly, 1878 syn.nov. Mimastra latimanus Allard, 1889 Mimastra guerrei Laboissière, 1929 syn.nov.

Remark. All three new synonyms have a widened segment in the male (Figs 17, 18) and aedeagus (Fig. 14) exactly the same as in *M. cyanura* Hope. They differ only in the pattern on the elytra; *M. soreli* Baly, the most common in Vietnam, has entirely fulvous elytra. In general, the elytral pattern of *M. cyanura* is very variable, but this appears to be merely a colour aberration or apparent only in local populations.

Mimastra tarsalis sp.nov.

Material examined. Holotype (male): Vietnam, NW Tam Dao ridge, Shon-Duong, 200 m, 4.IV.1962, leg. O. Kabakov (LM).

Description. Fulvous, antennae piceous except 4 basal segments, 2 spots and longitudinal stripe on vertex and 4 poorly delimited spots on prothorax piceous, metasternum and abdomen black with feeble metallic gloss. Colour very possibly variable.

Morphologically identical with *M. cyanura* Hope, 1831, differs mainly in form and sculpture of the first segment of anterior tarsi in male. It is 1.4 times as wide as long, more or less trapeziform, upperside deeply concave, with lateral and basal margins strongly elevated and ridged (Fig. 22); underside in basal half deeply concave, impunctate and lustrous, apical half with round shallow impression on each side, with rough sculpture; these impressions are divided by a flat central part covered with very fine, dense punctures (Fig. 21). Proportion of antennal segments 2–4 proportions 6–12–24. Aedeagus – Fig. 15.

Body length: 9.9 mm.

Differential diagnosis. See key.

Mimastra chennelli Baly, 1879

Mimastra uncitarsis Laboissière, 1940 (syn.nov.)

Minastra unicitarsis: Gressitt & Kimoto (1963) (misspelling); Kimoto (1989) (misspelling).

Remark. Both species are entirely identical in form and sculpture of segment 1 of fore-tarsi of male (Figs 19, 20) as well as in form of aedeagus (Fig. 16). They differ only in colour of elytra: entirely fulvous in *M. chennelli* and having a metallic blue apical spot or elongate stripe in *M. uncitarsis*. These species have indubitably to be united. In Vietnam specimens with unspotted elytra are dominant; I have only one spotted specimen, collected together with the unspotted form.

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Author's address:

Prof. Lev N. Medvedev
Institute for Problems of Ecology and Evolution
Russian Academy of Sciences
Leninsky prospect 33
Moscow 119071
RUSSIA
E-mail:lev.n.medvedev@mail.ru