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A new genus and two new species of Mymaridae (Hymenoptera: Chalcidoidea) from Chile

Новый род и два новых вида наездников семейства Mymaridae (Hymenoptera: Chalcidoidea) из Чили

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КЛЮЧЕВЫЕ СЛОВА: Chalcidoidea, Mymaridae, *Vladimir* gen.n., таксономия, Чили.

ABSTRACT. A new fairyfly (Hymenoptera: Mymaridae) genus, *Vladimir* **gen.n.**, and two new species, *V. alexandrovich* **sp.n.** (the type species) and *V. vasilievich* **sp.n.,** are described and illustrated from Chile. This new Neotropical genus is compared with *Anagroidea* Girault, 1915, the Holarctic genera *Caraphractus* Walker, 1846 and *Eustochus* Haliday, 1833, and also with the fossil genus *Eoeustochus* Huber, 2011.

РЕЗЮМЕ. Новый род мимарид (Hymenoptera: Mymaridae), *Vladimir* **gen.n.**, и два новых вида, *V. alexandrovich* **sp.n.** (типовой вид) и *V. vasilievich* **sp.n.,** описаны и проиллюстрированы из Чили. Этот новый неотропический род сравнивается с *Anagroidea* Girault, 1915, с голарктическими родами *Caraphractus* Walker, 1846 и *Eustochus* Haliday, 1833, а также с ископаемым родом *Eoeustochus* Huber, 2011.

Introduction

Yoshimoto [1990] reviewed and keyed the genera of Mymaridae (Hymenoptera: Chalcidoidea) in the New World; Luft Albarracin et al. [2009] keyed the genera in Argentina. Here I describe a new, very distinctive fairyfly (mymarid) genus from Chile as well as its two new species.

The following acronyms are used to designate depositories of specimens: UCDC — R.M. Bohart Museum of Entomology, University of California, Davis, California, USA; UCRC — Entomology Research Museum, University of California, Riverside, California, USA.

Terms used for morphological features are those of Gibson [1997]. All measurements were taken from slide-mounted specimens, unless stated otherwise, and are given in micrometers (μm), as length or, for the wings, as length:width. Abbreviations used in the text are: F — funicle segment(s) of the female antenna; mps — multiporous plate sensillum or sensilla on the antennal flagellar segments (= longitudinal sensillum or sensilla or sensory ridge(s) of authors).

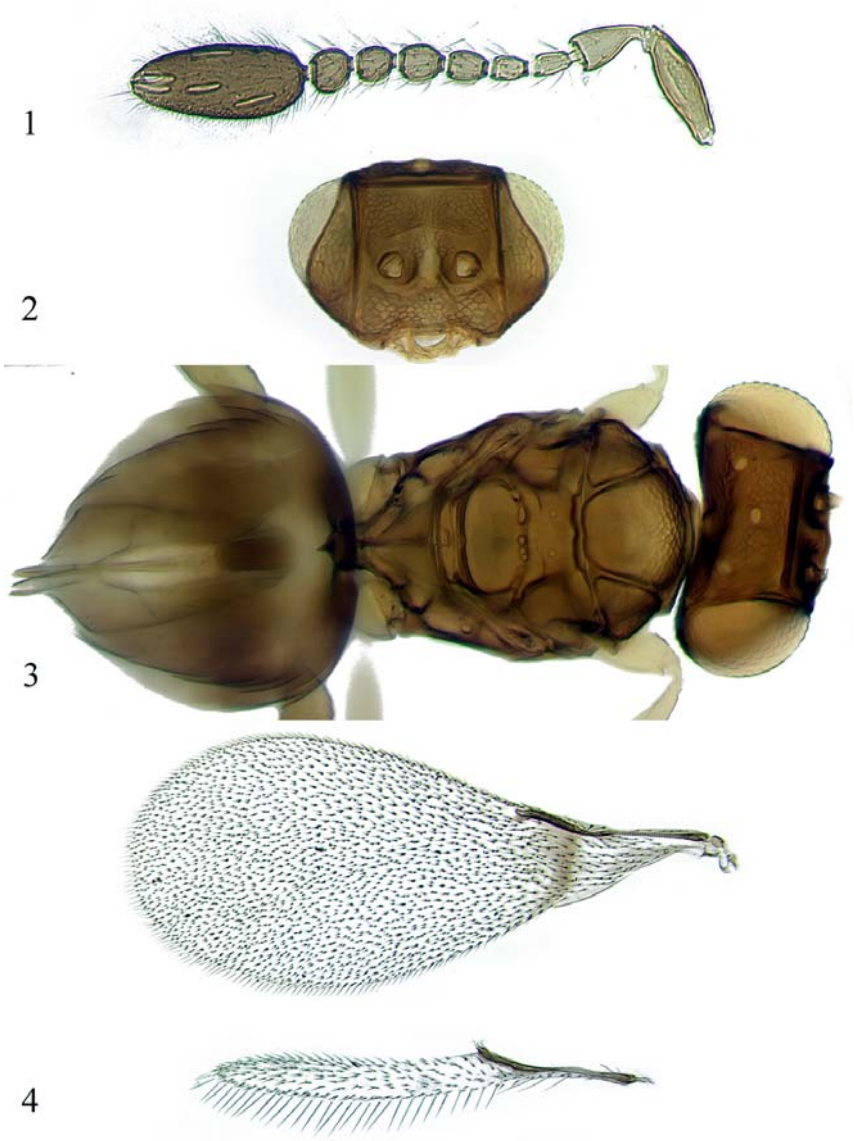
Genus *Vladimir* Triapitsyn, **gen.n.**
Figs 1–9.

TYPE SPECIES: *Vladimir alexandrovich* Triapitsyn, **sp.n.**

DESCRIPTION. Female. Body length 760–892 μm (point-mounted, critical point-dried specimens); head, mesosoma and metasoma dark.

Head (Figs 2, 6) a little wider than mesosoma, wider than high in frontal view, with reticulate sculpture. Toruli at about lower eye margin, torular depressions present. Ocelli in an obtuse triangle; stemmaticum absent. Mandibles large, tridentate, crossing each other medially. Antenna (Figs 1, 5) with a very short radicle fused with scape; pedicel longer than any funicle segment; funicle 6-segmented; clava large, entire, with 7 short, relatively thick mps.

Mesosoma (Figs 3, 7) about as long as or a little shorter than metasoma. Pronotum and mesoscutum with reticulate sculpture, remainder of mesosoma smooth except frenum of scutellum with faint, inconspicuous, mesh-like sculpture. Midlobe of mesoscutum with a pair of weak adnotaular setae. Axillae poorly differentiated. Frenal foveae on scutellum very large. Dorsellum of metanotum not very narrow. Propodeum with a well-developed, median longitudinal carina; propodeal spiracle small, round. Fore wing (Figs 4, 9) wide, with marginal setae very short; venation extending to 0.32–0.34x length of wing, hypochaeta small; disc with a slight brownish tinge throughout, more conspicuously so behind venation, with a distinct brown fascia extending from marginal vein to hind margin (likely demarcating the archaic basal vein), and densely setose throughout including behind venation. Hind wing (Figs 4, 9) much shorter than fore wing, with membrane extending (Fig. 4) or not extending (Fig. 9) to its base;



Figs 1–4. *Vladimir alexandrovich* sp.n., ♀: 1 — antenna (holotype); 2 — head (frontal view, paratype); 3 — body (holotype); 4 — wings (holotype).

Рис. 1–4. *Vladimir alexandrovich* sp.n., ♀: 1 — усик (голотип); 2 — голова (вид спереди, паратип); 3 — тело (голотип); 4 — крылья (голотип).

disc with a slight brownish tinge and densely setose throughout. Legs lighter colored than body; tarsi 4-segmented.

Metasoma (Figs 3, 8) with petiole small, almost quadrate, inconspicuous in dry-mounted specimens. Gaster more (in *V. vasilievich* **sp.n.**) or less (in *V. alexandrovich* **sp.n.**) projecting forward underneath mesosoma (better observed in dry-mounted specimens).

Male. Unknown.

Diagnosis. From *Anagroidea* Girault, 1915, *Vladimir* **gen.n.** differs by the mandibles crossing each other medially (Figs 2, 6) and the fore wing disc (Figs 4, 9) densely setose throughout, without any bare areas (in the former genus the mandibles are directed ventrally away from the head and not crossing each other medially, and the fore wing disc has distinct bare areas [Triapitsyn, Berezovskiy, 2002]); from the Holarctic genus *Caraphractus* Walker, 1846, it differs in having the toruli at about the lower eye margin (Figs 2, 6), the propodeum with a well-developed and complete median carina (Figs 3, 7), and by much shorter marginal setae on the fore wing (in *Caraphractus*, the toruli are at upper eye margin and next to the transverse trabecula, the propodeum has two complete submedian keels, and the marginal setae on the fore wing are much longer [Triapitsyn, 2012]); from another Holarctic genus, *Eustochus* Haliday, 1833, it differs in having an entire clava of the female antenna (Figs 1, 5) and a short petiole (in *Eustochus*, the clava of the female antenna is 2- or 3-segmented and the petiole is long

and narrow [Huber, Baquero, 2007]); and from the fossil genus *Eoeustochus* Huber, 2011, *Vladimir* differs in having an entire clava of the female antenna and very short marginal setae on the fore wing (the clava of the female antenna is 3-segmented, and the marginal setae on the fore wing are relatively much longer in *Eoeustochus* [Huber, Greenwalt, 2011]).

Etymology. The generic name is a noun in apposition; the genus is named after my father, Vladimir Alexandrovich Trjapitzin (Владимир Александрович Тряпицын).

Hosts. Unknown.

Key to females of *Vladimir* **gen.n.**

1. F3 with 1 mps; membrane of hind wing extending to wing's base (Fig. 4); ovipositor shorter, 1.0–1.1x as long as metatibia ..... *V. alexandrovich*, **sp.n.**
–. F3 without mps; membrane of hind wing not extending to wing's base (Fig. 9); ovipositor longer, 1.8x as long as metatibia ..... *V. vasilievich*, **sp.n.**

Vladimir alexandrovich Triapitsyn, **sp.n.**
Figs 1–4.

Type material. Holotype ♀ [UCDC] on slide: Chile, X Región, Isla Lemuy, Puerto Haro, 20.ii.1996, T. Cekalovic (under moss and lichens). The holotype is in good condition, complete, dissected under 3 coverslips. Paratypes: Chile: IX Región, Parque Nacional Nahuelbuta, 37°49′30″S 72°58′24″W, 1168 m, 10–24.ii.2005, J.M. Heraty et al. (UCR ATol. C05-001, meadow and *Nothofagus*, Malaise trap) [1 ♀ on slide, UCRC]. X Región: Isla Lemuy, Puerto Haro, 20.ii.1996, T. Cekalovic (under moss and lichens) [1 ♀ on slide, UCDC, and 4 ♀♀ on points, UCDC (2), UCRC (2)]. Parque Nacional Puyehue, Anticura Sector, 6.6 km E of Chilean Customs, 40.68°S 72.07°W, 700 m, 18–20.i.2007, B. Brown, V. Berezovskiy, E. Zumbado (Malaise trap) [2 ♀♀ on slides, UCRC].

Description. Female. Body length 760–892 µm (point-mounted, critical point-dried paratypes) or 842–1015 µm (slide-mounted holotype and paratypes). Head dark brown to black, mesosoma and metasoma brown; antenna brown, legs light brown to brown.

Head (Fig. 2). Antenna (Fig. 1) with scape 3.3–3.7x as long as wide, almost smooth; pedicel much longer than F1; F2 and F5 the shortest, F4 the longest, and F6 the broadest among funicle segments; mps on F3 (1), F4 (2), F5 (1), and F6 (2); clava 2.3–2.4x as long as wide, slightly shorter than or about as long as combined length of F3–F6.

Mesosoma (Fig. 3) about as long as metasoma. Scutellar placoid sensilla not very close to anterior margin of scutellum. Fore wing (Fig. 4) 2.1–2.3x as long as wide; longest marginal seta about 0.08x maximum wing width. Hind wing (Fig. 4) 10.8–11.4x as long as wide, with membrane extending to its base; longest marginal seta 1.1–1.2x maximum wing width.

Metasoma (Fig. 3). Ovipositor usually occupying about 0.8 length of gaster but occasionally its entire length, at most barely exserted beyond gastral apex; ovipositor length: metatibia length ratio 1.0–1.1:1.

Measurements (µm) of the holotype. Body 842; head 148; mesosoma 351; petiole 30; gaster 345; ovipositor 294. Antenna: scape 106; pedicel 61; F1 32; F2 30; F3 33; F4 35; F5 30; F6 33; clava 145. Fore wing 1025:443; longest marginal seta 36. Hind wing 658:58; longest marginal seta 70.

Male. Unknown.

Diagnosis. In addition to the distinguishing characters mentioned in the key, female of *V. alexandrovich* **sp.n.** differs from that of *V. vasilievich* **sp.n.** in having a notably lighter (brown) mesosoma and metasoma, which are dark brown in the latter species; also the scutellar placoid sensilla are relatively closer to the anterior margin of scutellum in *V. vasilievich* **sp.n.** than in *V. alexandrovich* **sp.n**.

Etymology. The specific name is a noun in apposition; the species is named after my father who introduced me to the world of chalcidoid wasps.

Hosts. Unknown.

Vladimir vasilievich Triapitsyn, **sp.n.**
Figs 5–9.

Type material. Holotype ♀ [UCRC] on slide: Chile, IX Región, Parque Nacional Nahuelbuta, 37°49′42″S 73°00′39″W, 1138 m, 8–9.ii.2005, J.M. Heraty et al. (UCR ATol. C05-002, meadow and along stream, yellow pan traps, UCRC ENT 265630). The holotype is in excellent condition, complete, dissected under 4 coverslips. Paratype: Chile, VIII Región, Hualqui, Periquillo, 13.x.1995, T. Cekalovic [1 ♀ on point, UCDC].

Description. Female. Body length 890 µm (point-mounted, critical point-dried paratype). Head black, mesosoma and metasoma dark brown; antenna brown (clava darker than other antennal segments), legs light brown to brown.

Head (Fig. 6). Antenna (Fig. 5) with scape 3.3–3.4x as long as wide, almost smooth; pedicel much longer than F1; F1 and F3 the shortest, F4 the longest, and F6 the broadest among funicle segments; mps on F4 (2), F5 (1), and F6 (2); clava 2.4x as long as wide, slightly shorter than combined length of F3–F6.

Mesosoma (Fig. 7) a little shorter than metasoma. Scutellar placoid sensilla close to anterior margin of scutellum. Fore wing (Fig. 9) 2.3x as long as wide; longest marginal seta about 0.08x maximum wing width. Hind wing (Fig. 9) 10.6x as long as wide, with membrane not extending to its base; longest marginal seta 1.1x maximum wing width.

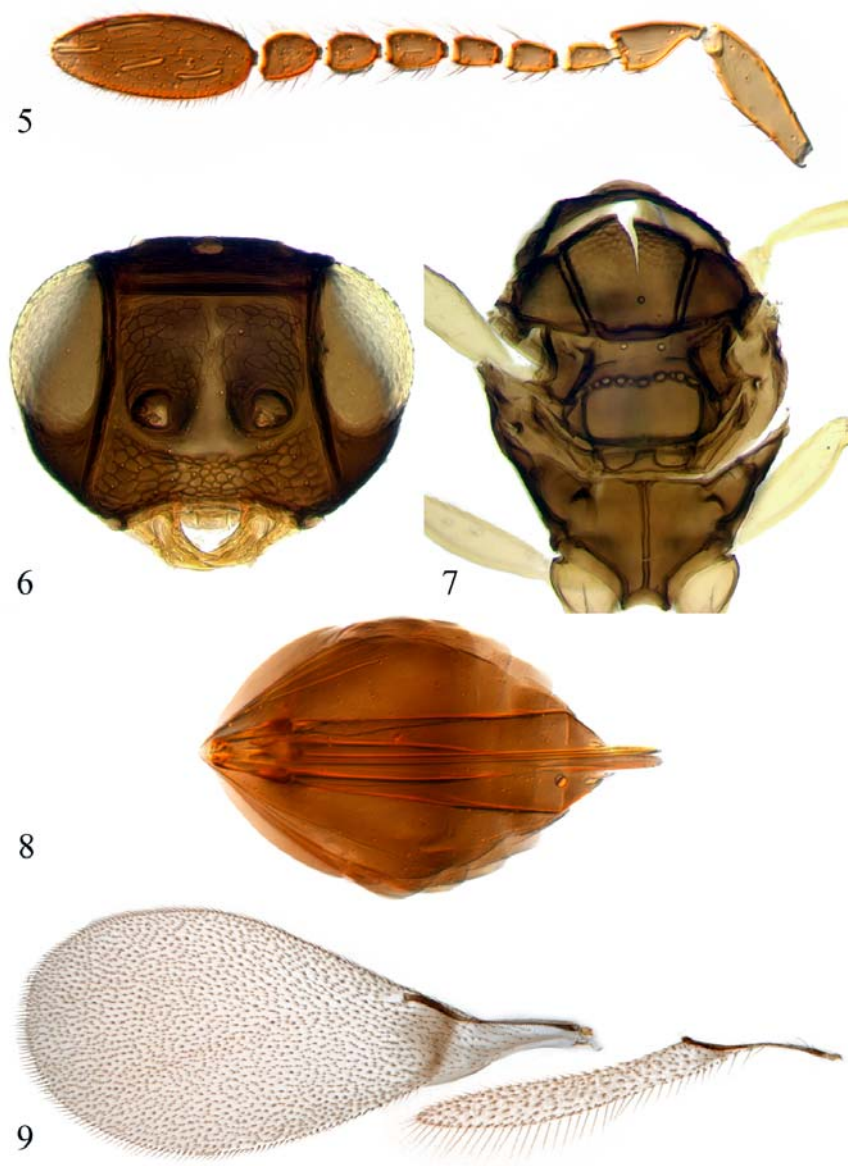
Ovipositor occupying entire length of gaster (Fig. 8), exserted beyond gastral apex by 0.12–0.13x own length; ovipositor length: metatibia length ratio 1.8:1.

Measurements (µm) of the holotype. Mesosoma 449; gaster 486; ovipositor 541. Antenna: scape 112; pedicel 61; F1 30; F2 33; F3 30; F4 41; F5 35; F6 39; clava 139. Fore wing 1060:468; longest marginal seta 36. Hind wing 713:67; longest marginal seta 73.

Male. Unknown.

Diagnosis. See the key and the diagnosis of *V. alexandrovich* **sp.n.**

Etymology. The specific name is a noun in apposition; the species is named after Vladimir Vasilievich Berezovskiy (Владимир Васильевич Березовский), my long-time colleague and friend.



Figs 5–9. *Vladimir vasilievich* sp.n., ♀ holotype: 5 — antenna; 6 — head (frontal view); 7 — mesosoma; 8 — gaster; 9 — wings.
Рис. 5–9. *Vladimir vasilievich* sp.n., голотип ♀: 5 — усик; 6 — голова (вид спереди); 7 — мезосома; 8 — брюшко; 9 — крылья.

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