

A new species of the genus *Eusterinx* Förster, 1869 (Hymenoptera: Ichneumonidae: Orthocentrinae) from Malaysia

Новый вид рода *Eusterinx* Förster, 1869 (Hymenoptera: Ichneumonidae: Orthocentrinae) из Малайзии

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Ключевые слова: наездники-ихневмониды, *Eusterinx*, *Divinatrix*, Ориентальная область, описание, определительная таблица.

Abstract. The first Oriental species of the genus *Eusterinx* Förster, 1869, *E. (Divinatrix) leleji* sp.n., from north of Borneo Island is described and illustrated. A key to all five known species of subgenus *Divinatrix* Rossem, 1987 is provided.

Резюме. В роде *Eusterinx* Förster, 1869 описывается и иллюстрируется первый ориентальный вид *E. (Divinatrix) leleji* sp.n. с севера острова Борнео. Для всех известных 5 видов подрода *Divinatrix* Rossem, 1987 составлена определительная таблица.

Introduction

Orthocentrinae is a moderately large cosmopolitan subfamily with about 500 described species [Yu et al., 2012]. Most orthocentrines are known to be koinobiont endoparasitoids of primitive dipteran hosts, especially from the family Mycetophilidae.

Most part of orthocentrine species were described from the Holarctic Region. The territories outside the Holarctic are still very poorly studied and very few species were recorded here. The Australasian and the Oriental faunas of Orthocentrinae are almost unknown [Cameron, 1909; Morley, 1913; Uchida, 1932; Baltazar, 1964; Gauld, 1984]; the Eastern Palaearctic fauna is insufficiently studied too [Humala, 2007; Humala et al., 2016].

According to the World Catalogue of Ichneumonidae [Yu et al., 2012] the comparatively large orthocentrine genus *Eusterinx* Förster, 1869 contains 48 species belonging to six subgenera, although the exact borders between some subgenera seems to be uncertain.

All *Eusterinx* species are known from the Holarctic Region except for single species distributed also in Central and South America [Dasch, 1992]. Also the genus was reported for the Philippines [Baltazar, 1964]. Veijalainen et al. [2012] found 10 undescribed species of *Eusterinx* in the Neotropics, and I have seen several undescribed *Eusterinx* species from Mexico, Honduras, French Guiana and Korea. Until now *Eusterinx* was not found yet only in the Afrotropical Region.

Altogether four species of subgenus *Divinatrix* Rossem, 1987 are known [Humala, 2004; 2007; Yu et al., 2012]: the Holarctic *E. inaequalis* Rossem, 1981 and three species from the Eastern Palaearctic, *E. inaspicua* Rossem, 1988, *E. apophysa* Humala, 2004, and *E. kurilensis* Humala, 2004, described from the Russian Far East [Humala, 2004]. A key to all species of *Eusterinx* (*Divinatrix*) is provided here.

Materials and methods

The collection of S. Adebratt from Malaysia deposited at the Zoological Museum of Lund University, Sweden (further MZLU) was examined, where an undescribed species of *Eusterinx* was found. Morphological terminology mostly follows Gauld [1991] with minor changes. Photographs were taken with a DFC 290 digital camera attached to a Leica MZ9.5 stereomicroscope. The images were combined using Helicon Focus Pro software (ver. 5.3).

Taxonomic part

Eusterinx Förster, 1868

Eusterinx (Divinatrix) Rossem, 1987

Type species: *Eusterinx inaequalis* Rossem, 1982.

Diagnosis. The subgenus is characterized by the unique sculpture of the basal tergites, not found in other Orthocentrinae — the presence of distinct transverse grooves on several metasomal tergites (at least on tergites 2–4) and tyloids on male flagellomeres 6–7(9).

Eusterinx (Divinatrix) leleji sp.n.

Figs 1–6.

Diagnosis. This species differs from allied *E. (D.) inaequalis* Rossem and *E. (D.) apophysa* Humala in the unidentate blade-like mandibles, inflated spindle-like hind femora; slender flagellomeres; and abundant rufous coloration on the body. *Eusterinx leleji* sp.n. differs from *E. (D.) inaspicua* also in the presence of an areolet on fore wing and dorsal portion of the occipital carina.

Type material. Holotype: ♀, Malaysia, N. Borneo, Sabah, Sipitang, Mendolong, T6/R, [N 4.93°, E 115.76°, exact locality uncertain], 31.III.1989, leg. S. Adebratt (MZLU).

Description. Female. Body length 4.9 mm; fore wing length 3.6 mm (Fig. 1).

Head width 1.2 times its height; face width at level of antennal sockets 1.1 times its height, 0.35 times head width, subpolished and closely punctate; frons, vertex and occiput polished; occipital carina present dorsally; eyes large, convex, without setae, inner orbits strongly convergent ventrally (Fig. 2); clypeus width 2.0 times its height, touching eyes, apical margin of clypeus truncate; anterior tentorial pits close to each other; malar space reduced, 0.45 times as long as basal width of mandible; mandibles unidentate (lower tooth completely reduced); strongly tapered and flattened, blade-like, twisted inwards (Fig. 3). Antenna long, with 19 slender flagellomeres, all flagellomeres longer than wide; flagellomere 1 about 8.5 times as long as wide, flagellomere 2 7.3 times as long as wide. Ocelli moderate size, ocular-ocellar line 1.4 times as long as maximum diameter of lateral ocellus; postocellar line 0.3 times as long as maximum diameter of lateral ocellus (Fig. 4); temple very short.

Mesosoma 1.5 times as long as high, polished; epomia well developed; notauli deep, extending to middle of mesoscutum (Fig. 4); epicnemial carina complete, ending at upper corner of mesopleuron; sternaulus short but distinct; short portion of posterior transverse carina of mesosternum present medially; propodeum with complete carination and dense whitish pubescence, apophyses not developed, areola well defined (Fig. 5). Mesopleuron polished, metapleuron coriaceous with rough longitudinal wrinkles in lower part. Fore wing with small petiolate areolet; vein 2 m-cu with two bullae; cu-a distad of vein M; hind wing with cu-a slightly reclivous, not intercepted, distal abscissa of Cu1 absent. Hind coxa punctate; hind femur spindle-like, 3.3 times as long as high (Fig. 6); hind basitarsus 0.35 times as long as hind tibia, spurs short and slender, claws simple, hind claws enlarged.

Metasoma. First metasomal segment arched, 2.6 times as long as wide posteriorly, postpetiole striate, with dorsal carinae; sternite and tergite fused, glymma absent, spiracle situated at 0.6, apex of first sternite at 0.7 of segment; second tergite 1.1 times as long as wide posteriorly. Tergites 2 to 4 with rough longitudinal striae and deep transverse groove (Fig. 5), sculpture same before and after groove, remaining tergites almost not punctate; epipleurae of tergites 2-4 separated by a crease. Ovipositor strongly tapered in apical third, slightly upcurved, as long as hind coxa.

Colour. Reddish-brown. Frons, vertex, occiput and temple fuscous; tergites mostly brown with apical margins of tergites 2-4 reddish brown; antenna, palps, fore and mid coxae and trochanters yellowish; clypeus, mandibles, tegula, propleuron, most part of pronotum, lower mesopleuron, mesosternum and rest of legs yellowish except hind coxa fuscous up dorsolaterally and base of hind femur. Wings hyaline, veins and pterostigma light brown.

Male. Unknown.

Distribution. Malaysia (Sabah).

Biology. Host unknown. The species is known from the holotype only, which was collected in tropical rainforest at an altitude of 650–750 m a. s. l.

Etymology. I am pleased to name this species in honour of Professor Arkadiy Stepanovich Lelej, well-known Russian hymenopterist and expert for Mutillidae.

KEY TO THE WORLD SPECIES OF SUBGENUS *DIVINATRIX*

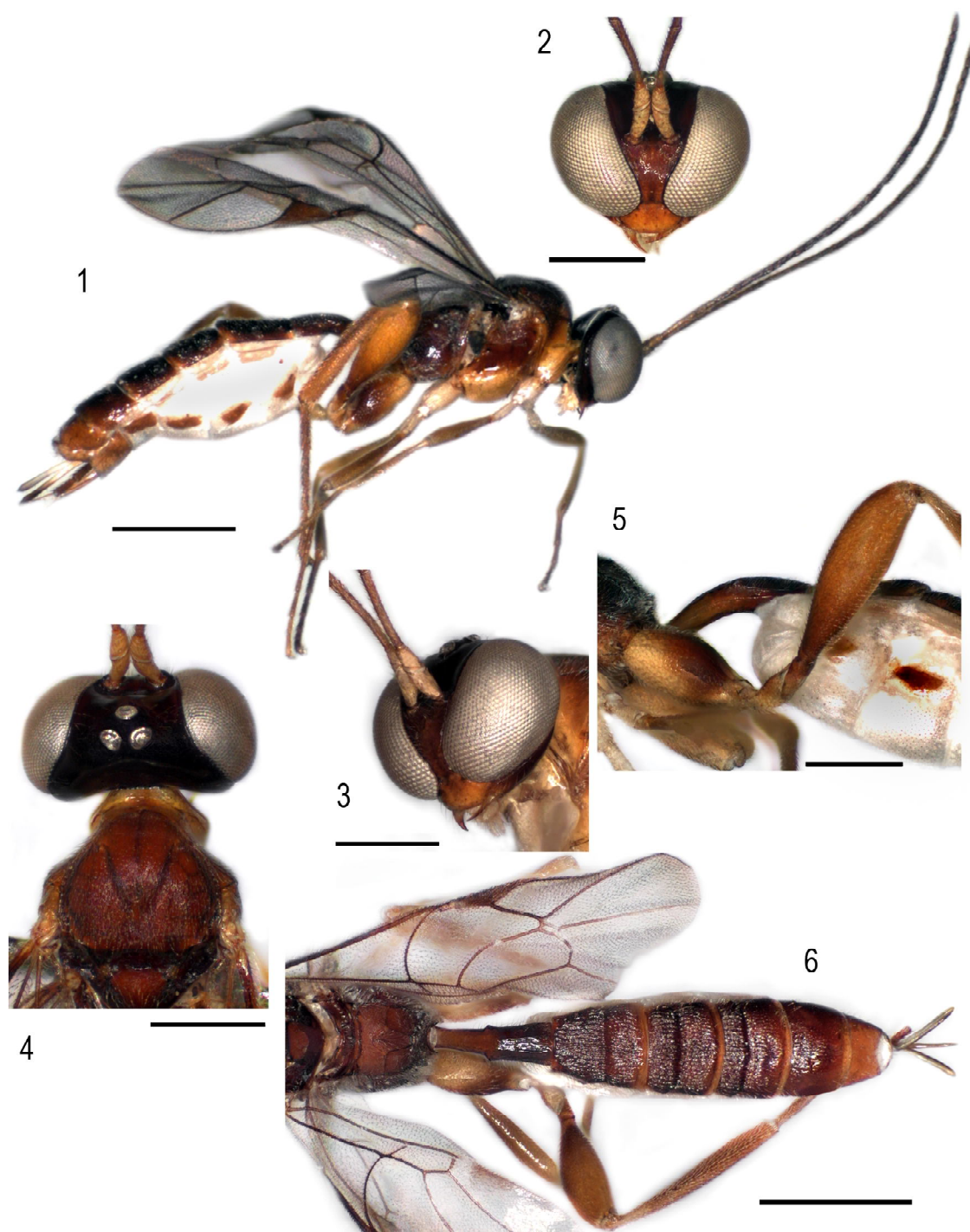
1. Fore wing without areolet (vein *3rs-m* absent) (Eastern Palaearctic) *E. (D.) inaspicua* Rossem
- Fore wing with areolet closed 2
2. Mandibles unidentate; hind femur spindle-like, 3.3 times as long as high (Fig. 6); flagellomere 1 longer, about 8.5 times as long as wide; body reddish-brown, head dorsally fuscous; fore wing 3.6 mm (Malaysia) *E. (D.) leleji* sp.n.
- Mandibles bidentate; hind femur not spindle-like, 5.5–6.6 times as long as high; flagellomere 1 shorter, 5.0–6.0 times as long as wide; body mostly fuscous; fore wing 2.5–3.3 mm 3
3. First metasomal tergite 2.2 times as long as wide posteriorly; longitudinal sculpture on apical parts of tergites 2–4 weakly developed, differs from strong longitudinal sculpture of proximal parts; tergite 4 with superficial transverse furrow; flagellomere 1 about 5.0 times as long as wide apically; male tyloids on flagellomeres 6–8(9). –Hind femur 5.9–6.0 times as long as wide, hind coxae yellowish brown (Holarctic) *E. (D.) inaequalis* Rossem
- First metasomal segment tergite 2.9–3.2 times as long as wide posteriorly; longitudinal sculpture on apical parts of tergites 2–4 well developed, the same as in distal parts; tergite 4 with deep transverse furrow; flagellomere 1 about 6.0 times as long as wide apically; male tyloids on flagellomeres 6–7 4
4. Propodeum with apophyses; hind femur 5.5 times as long as high; metasomal tergite 1 3.2 times as long as wide posteriorly; postpetiole with dorsal carinae (Eastern Palaearctic) *E. (D.) apophysa* Humala
- Propodeum lacking apophyses; hind femur 6.6 times as long as high; metasomal tergite 1 2.9 times as long as wide posteriorly, postpetiole without dorsal carinae (Eastern Palaearctic) *E. (D.) kurilensis* Humala

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Figs 1–6. *Eusterinx (Divinatrix) leleji* sp.n., holotype, female: 1 — habitus, lateral view; 2 — head, anterior view; 3 — head and base of antenna, anterolateral view; 4 — head and mesoscutum, dorsal view; 5 — hind femur and base of metasoma, lateral view; 6 — propodeum and metasoma, dorsal view. Scale bar: 1, 6 = 1.0 mm; 2–5 = 0.5 mm.

Рис. 1–6. *Eusterinx (Divinatrix) leleji* sp.n., голотип, самка: 1 — общий вид сбоку; 2 — голова спереди; 3 — голова и основание антенн спереди и сбоку; 4 — голова и мезоскутум сверху; 5 — заднее бедро и основание метасомы сбоку; 6 — проподеум и метасома сверху. Масштабная линейка: 1, 6 = 1,0 мм; 2–5 = 0,5 мм.

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