

## A note on the genus *Trigonocera* Becker, 1902 with description of a new species (Insecta, Diptera, Dolichopodidae)

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OLEJNÍČEK J. 2004: A note on the genus *Trigonocera* Becker, 1902 with description of a new species (Insecta, Diptera, Dolichopodidae). *Acta Musei Moraviae, Scientiae biologicae* (Brno) **89**: 167–173. – *Trigonocera biseta* sp.nov. is described from Laos. The new species is clearly distinguishable from all other known species by having only two bristles on the 8th sternite, which are somewhat shorter and thicker than in other *Trigonocera* Becker, 1902 species. A further two species, *T. lucidiventris* Becker, 1922 and *T. specialis* Becker, 1922 are redescribed and recorded from Laos and Nepal for the first time.

**Key words.** Dolichopodidae, *Trigonocera*, new species, new records, Oriental region

### Introduction

The genus *Trigonocera* Becker, 1902 includes small Diaphorinae flies; the genus is closely related to *Melanostolus* Kowarz, 1884, *Diaphorus* Meigen, 1824 and the American *Achradocera* Becker, 1922. Males of *Trigonocera* are characterised above all by postpedicel of triangular shape with apical or almost apical arista and 4 strong bristles on the 8th abdominal sternite. Females of *Trigonocera* are hardly distinguishable from the above three genera as well as from females of *Chrysotus* Meigen, 1824. The genus was established by BECKER (1902). The type species (*Trigonocera rivosus* Becker, 1902) was described from the Palaearctic part of Egypt and is distributed in the subtropics of the Old World; a further 3 species have been described from the Oriental region (DYTE 1975). Becker's descriptions of new Oriental species (BECKER 1922) are too brief and not accompanied by illustrations, so a short redescription is added to these species.

### *Trigonocera lucidiventris* Becker, 1922 (Figs 1–4)

**Material examined.** 7♂, 1♀ in alcohol, 3♂ stuck on label: North Laos, Louang Phrabang Province, 5 km west of Ban Song Cha (20°33'–4' N, 102°14' E), 1200 m, 24.iv – 16.v.1999, Vít Kubán leg., Moravian Museum Brno coll., 1♂, 1♀ on label, the same data, Olejníček coll. Type material: 1♂, Formosa, Kosempo, V. 1912, Sauter, Becker collection, Museum für Naturkunde Berlin coll.

**Description.** Male: Body length 2.7–2.8 mm, wing length 2.3 mm.

Head. Frons matt brown-green, densely granular. Face of same colour as frons but paler, densely fine granular with silvery tinge, in its narrowest part as wide as postpedicel high at its base. Clypeus, palpi and proboscis yellow, palpi with short dark bristles. Antenna (Fig. 1) brown; postpedicel very shortly pubescent, 2.5× longer than at base high, on tip somewhat darker. Arista apical to subapical, about 1.5× longer than

postpedicel, 2-segmented, shortly pubescent. Occiput slightly concave, lower postocular cilia pale.

Thorax grey-green, densely dusted, the strip with acrostichals smooth, glossy. Acrostichals biseriate (6–10 pairs); 5 pairs of dorsocentrals, 4th pair situated quite near to middle of thorax; 2 long and 2 tiny scutellar bristles.

Legs including coxae yellow except for mid-coxa, which is of same colour as thorax, but somewhat paler. Fore-coxa with several black bristles on tip; tibia with two bristles of dorsal to posterodorsal position. Relative length of tibia: tarsomeres 1–5 = 31:20:10:7:6:4. Mid-coxa with one long, dark bristle near base and one shorter dark bristle near tip; several bristly hairs on fore-surface. Femur without true praepical bristle but with 1–2 somewhat longer ventral bristles near tip. Tibia with 2 anterodorsals and 1–2 shorter anteroventrals. Relative length of tibia: tarsomeres 1–5 = 40:20:8:7:6:4. Hind coxa with long dark bristle near base. Femur without true preapical bristle, but with 2 somewhat longer ventrals near tip. Tibia with 4 dorsals. Relative length of tibia: tarsomeres 1–5 = 50:12:13:9:6:4.

Wing hyaline with yellowish tinge, veins yellow-brown. Halter yellow, squamma yellow with brown bristles.

Abdomen of same colour as thorax, but somewhat paler (terga), sternites yellow. Tergite 1 wholly and terga 2 and 3 partly yellow, abdominal bristles black. Hypopygium – Figs 3–4.

Female: Similar to male. Postpedicel (Fig. 2) triangular with rounded tip, about as long as at base high, densely pubescent. Arista subapical. Dorsocentrals in regular row, 4th pair not situated near to middle of thorax as in male.

**Remark.** The type specimen I have available is unfortunately without head (as well as the second specimen deposited in the Becker collection in Berlin Museum – Dr. Wendt, pers. com.). Specimen is dry and somewhat darker than the alcohol material from Laos. The other characters are identical. The species was described and hitherto known only from Taiwan (BECKER 1922, 1924; DYTE 1975). The material from Laos is the first finding outside this island.

### *Trigonocera biseta* sp.nov.

(Figs 5–8)

**Material examined.** Holotype, male: North Laos, Louang Phrabang Province, 5 km west of Ban Song Cha (20°33'–4' N, 102°14' E), 1200 m., 24.iv – 16.v.1999, Vít KUBÁŇ leg., Moravian Museum Brno coll. Paratypes: 3♀ on label and 2♀ in alcohol, same data; 1♀ Olejníček coll; other paratypes deposited in Entomological Department, Moravian Museum Brno.

**Description.** Male: Body length 2.5 mm, wing length 1.9 mm.

Head. Frons metallic green, face narrow, brown, eyes touching each other on bottom of face. Palpi and proboscis yellow. Occiput brown-green, postoculars uniseriate, black. Antenna (Fig. 5) brown, scape bare, pedicel with a circlet of black bristles. Postpedicel triangular, 2× longer than at base high, densely pubescent. Arista dorsal to subapical, inserted in a dorsal excavation near the tip of postpedicel, nearly 2× longer than postpedicel, covered with short hairs.

Thorax metallic green densely dusted. Acrostichals in two rows, 6 pairs of dorsocentrals. Two long and 2 very tiny scutellar bristles. Pleura and coxa of same colour as thorax.

Legs. Coxae of same colour as pleura, fore-coxa with dense short bristly hairs, fore-femur and tibia without long bristles. Relative length of tibia: tarsomeres 1–5 = 20:11:4:3:3:2. Mid-coxa with 1 outer bristle and several tiny bristles. Mid-femur without praeapical bristle; tibia with 1 anterodorsal and 3 long apicals (1 ad, 1av, 1pv). Relative length of tibia: tarsomeres 1–5 = 23:13:5:4:3:3. Hind coxa with one long outer bristle near the base; femur with a row of 7 long ventrals in apical half. Hind tibia with a row of longer ventrals, 1 anterodorsal, 1 dorsal and 1 apicodorsal bristle. These tibial bristles only slightly longer than other bristles on hind tibia. Relative length of tibia: tarsomeres 1–5 = 29:9:6:4:3:3.

Abdomen somewhat paler than thorax with dark brown bristles. Hypopygium (Figs 7–8) small, globular, with 2 thick macrochetae.

Wing hyaline, squamma yellow with dark brown bristles.

Female: Similar to male. Face in its narrowest part somewhat narrower than height of postpedicel. Postpedicel (Fig. 6) short, of about half-length than at base high, densely pubescent. Arista subapical. Number of acrostichal bristles very variable (3–12, i. e. from 1 pair + 1 unpair bristle to 6 pairs).

**Distribution.** North Laos.

**Differential diagnosis.** The new species is well distinguishable from all known species of the genus by the presence of only 2 bristles on the 8th sternite, which are somewhat shorter and thicker than in other *Trigonocera* species.

### *Trigonocera specialis* Becker, 1922

(Figs 9–10)

**Material examined.** 1 ♂: Nepal; Chitwan National Park, Sanhara env., 27°35'N, 84°30'E, 166 m, 21–27.vii. 2000, Farkač leg., Olejníček coll.

**Description.** Male: Body length 2.3 mm, wing length 2.1 mm.

Head. Frons metallic blue-green, lustrous. Face only slightly narrower than frons (of about same width as postpedicel high at its base), parallel, metallic green with blue tinge, densely fine granular. Clypeus and proboscis yellow-white. Palpus yellowish-grey with short black hairs. Antenna (Fig. 9) black. Scape bare, pedicel with ring of short black hairs on its apical margin. Postpedicel triangular, prolonged, narrowing apically, densely covered by sensilla chaetica, 2.5× longer than high at its base. Arista apical, 2-segmented, relative length of postpedicel:arista = 5.5:6.5. Two long ocellar bristles, other bristles on head very short. Occipus slightly concave, of same colour as face. Lower postocular bristles pale.

Thorax and scutellum brown-green with fine grey pollen. Acrostichals in two rows (8 pairs) in anterior half of thorax; 5 pairs of dorsocentrals, fourth one somewhat near the middle of thorax and very tiny, about 1.5× longer than last pair of acrostichals. Scutellum with 2 long and 2 tiny marginal scutellars. Pleura and mid-coxa of same colour as thorax but somewhat paler. All thoracic and abdominal bristles black.

Legs yellow, excluding mid-coxa. Fore-coxa with dense short black bristles; femur with 3–4 somewhat longer posteroventral bristles apically. Tibia without long bristles. Pulvilli on fore-tarsus large. Relative length of fore-tibia: tarsomeres 1–5 = 26:15:7:6:4:4. Mid-coxa with 2 outer bristles. Femur without true praeapical bristle but with 1 somewhat longer anteroventral bristle apically, its length about equal to diameter of femur. Tibia with 2 anterodorsals, 2 posterodorsals and 1 shorter posteroventral bristle. Relative length of tibia: tarsomeres 1–5 = 30:16:10:6:4:4. Hind coxa with one longer bristle near its base and one tiny bristle at the tip. Femur without praeapical bristle but with one somewhat longer anteroventral near tip. Tibia with 2 anterodorsals and 4 posterodorsals. Relative length of tibia : tarsomeres 1–5 = 35:11:11:7:5:4.

Wing hyaline with black veins. Squamma yellow with black bristles, halter yellow.

Abdomen brown, slightly greyish dusted. First to third segments yellow, 4th and 5th with narrow yellow fore-strip. Hypopygium (Fig. 10) brown with 4 strong bristles.

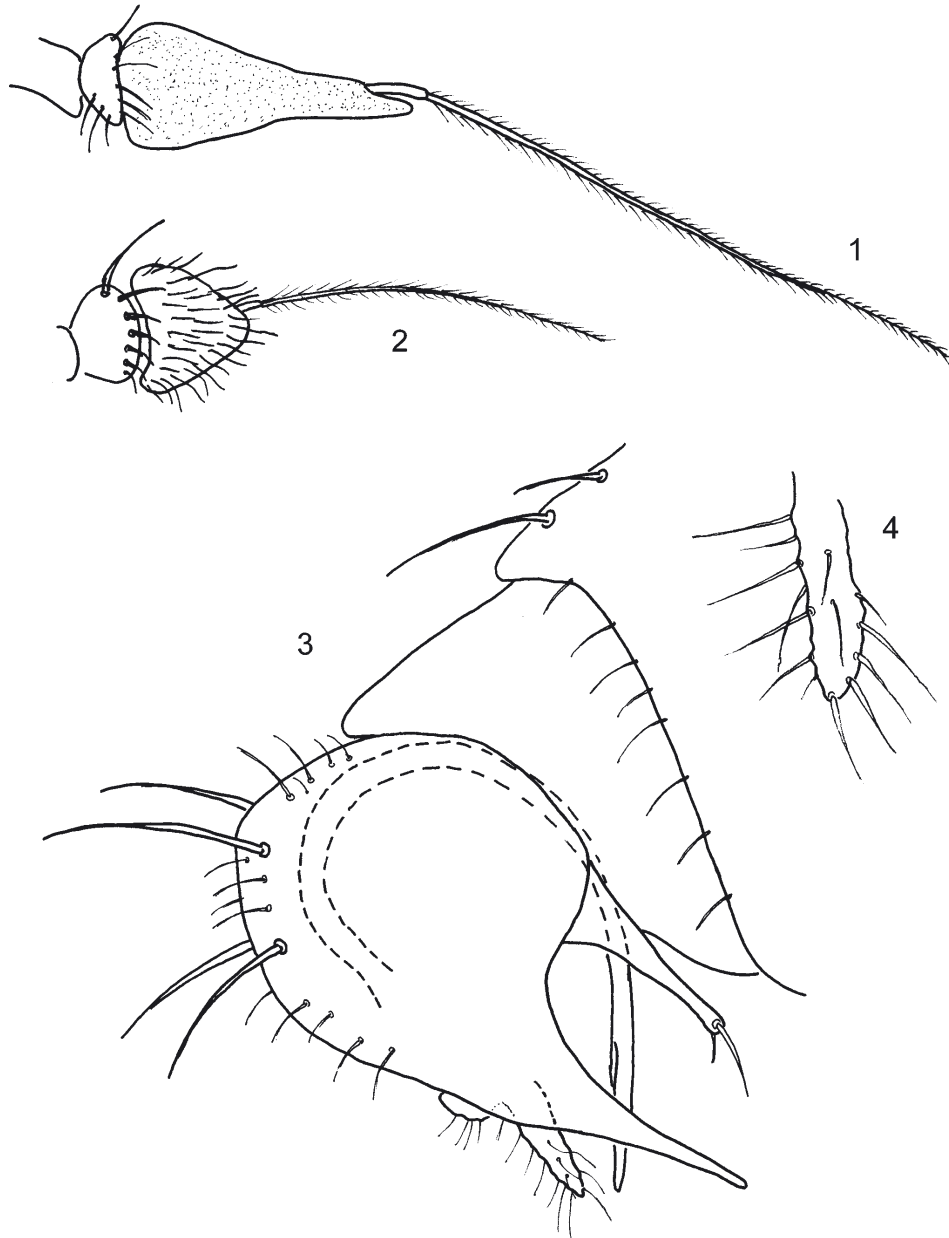
**Distribution.** The species (type material) was reported from West Bengal (environs of Calcutta) only (DYTE 1975).

#### Acknowledgements

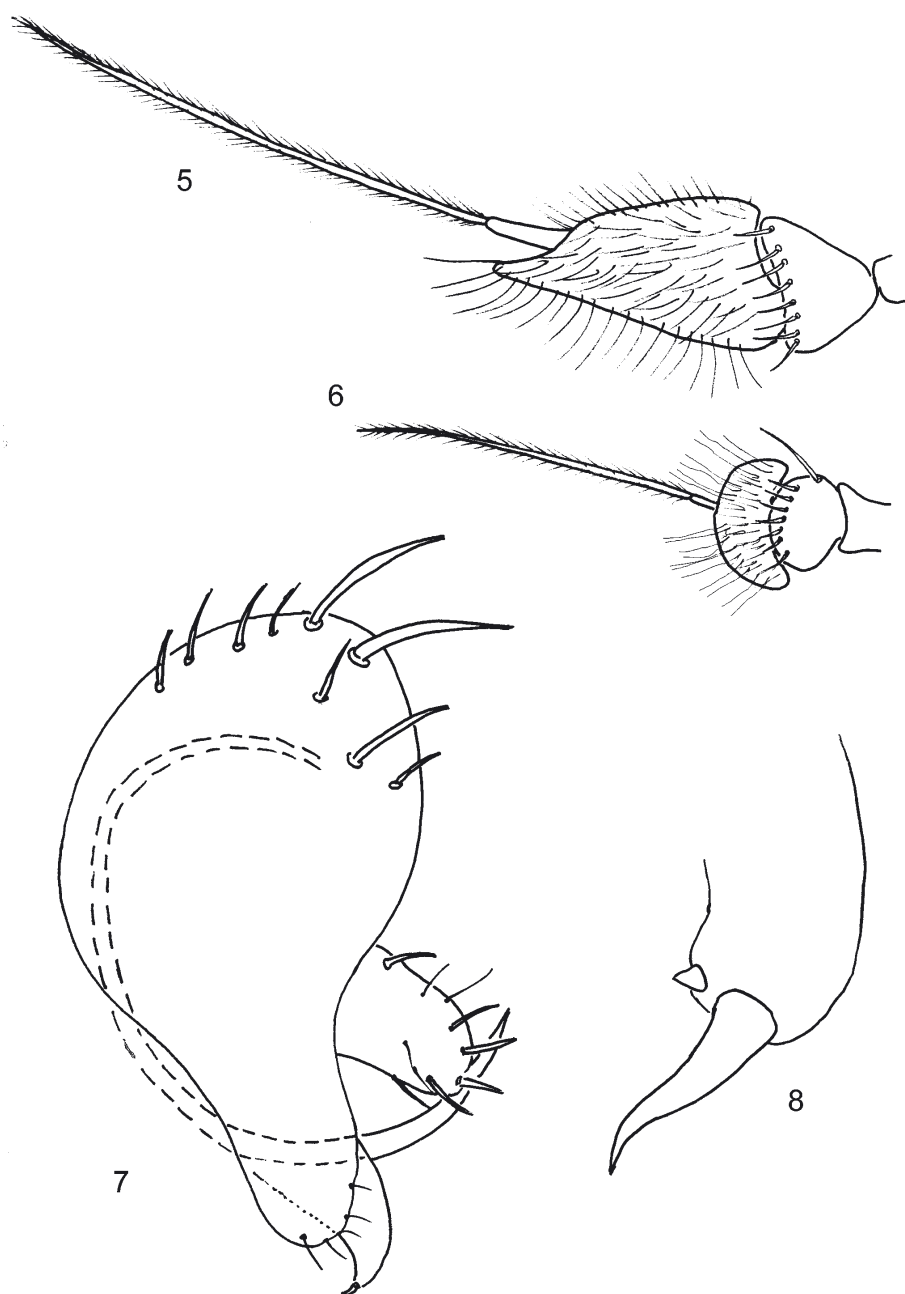
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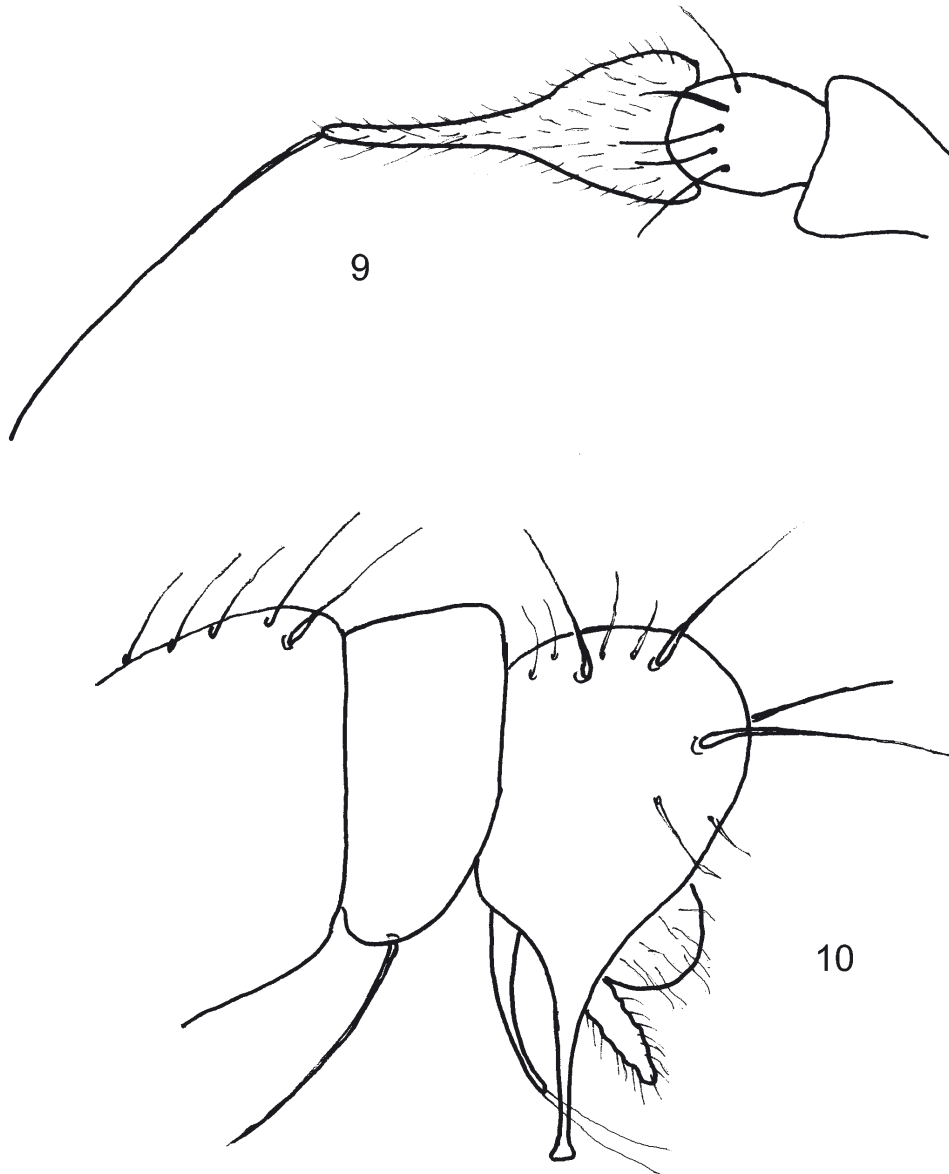
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**Figs 1–4.** *Trigonocera lucidiventris* Becker: 1 – antenna male, 2 – antenna female, 3 – hypopygium, 4– cercus.



**Figs 5–8.** *Trigonocera biseta* sp.nov.: 5 – antenna male, 6 – antenna female, 7 – hypopygium, 8 – tip of gonostylus.



**Figs 9–10.** *Trigonocera specialis* Becker: 9 – antenna male, 10 – hypopygium.