

**A REVIEW OF THE EAST ASIAN SPECIES OF *ORIENTILLA*
 (HYMENOPTERA, MUTILLIDAE)**

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Abstract.—A key to the four East Asian species of *Orientilla* is given. *Orientilla krombeini* n. sp. is described from Vietnam. *Mutilla desponsa* Smith is a new synonym of *O. variegata* (Smith).

Key Words: Mutillid wasps, *Orientilla*, East Asia, new species

Since the description of *Orientilla* (Lelej, 1979) I have studied additional material from China and Vietnam and have discovered hitherto unknown males of this genus and a new species.

The abbreviations used in the key and description are as follows: A2, A3, A4, A5—length of antennal segments 2, 3, 4, 5.

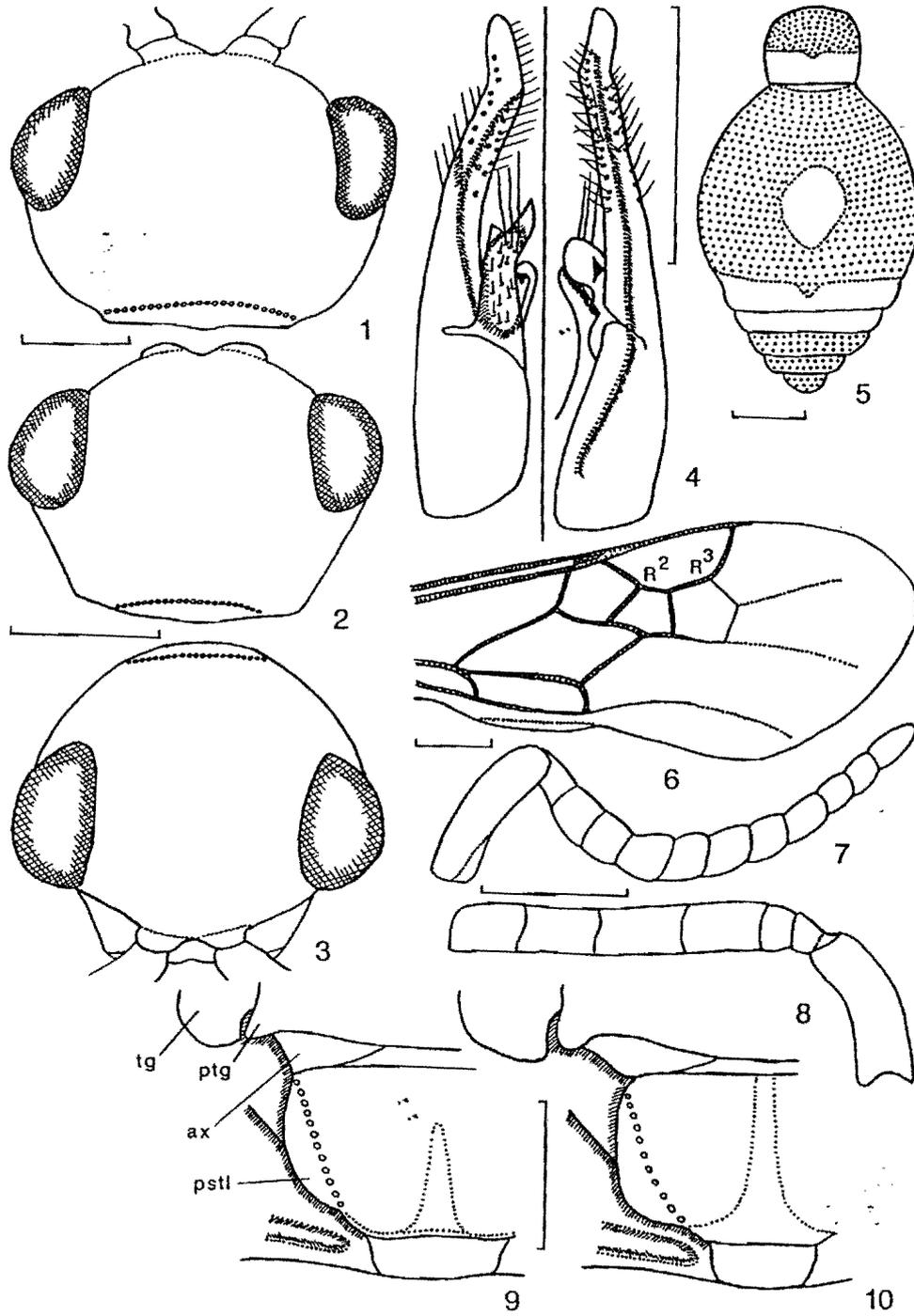
Genus *Orientilla* Lelej

Orientilla Lelej, 1979: 1066. Type species: *Orientilla vietnamica* Lelej, 1979, original designation.

Discussion.—The males of *Orientilla* are similar to those of *Stenomutilla* but differ from them in having well developed parascutellar carinae (as in males of *Odontomutilla*, but absent in *Stenomutilla*), whitish or yellowish leg spurs (black in *Stenomutilla*) and genital gonostyli with short inner setae (long setae in *Stenomutilla*). Females of *Orientilla* may or may not have a pale central spot on gastral tergum 2 and differ from those of *Stenomutilla* in having short, flattened flagellomeres (in *Orientilla* A3 is 1.0–1.1 its maximal width and $0.9 \times A4$, in *Stenomutilla* flagellomeres not flattened and A3 is 2.2–2.3 its maximal width and $1.2 \times A4$).

KEY TO EAST ASIAN SPECIES

1. Males 2
- Females 4
2. A4 is $2.2-3.0 \times A3$ slightly longer than A5 (Fig. 8). Third abscissa of forewing R is $1.1-2.0 \times$ second abscissa of R (Fig. 6) 3
- A4 is $2.0 \times A3$ slightly shorter than A5. Third abscissa of forewing is $3-5 \times$ second abscissa of R 4. *O. tausignata* (Chen)
3. Felt line of gastral sternum 2 long, $0.7-1.1 \times$ the distance between felt line and pale fascia of this sternum. Scutellum with median longitudinal furrow reaching the foremargin of scutellum and rectangular parascutellar carina almost reaching the scutellum posteriorly (Fig. 10) 3. *O. variegata* (Smith)
- Felt line of gastral sternum 2 short, $0.4-0.5 \times$ the distance between felt line and pale fascia of this sternum. Scutellum with median longitudinal furrow not reaching the foremargin of scutellum and rounded parascutellar carina not reaching the scutellum posteriorly (Fig. 9) 2. *O. krombeini* n. sp.
4. Gastral tergum 2 without central pale spot 4. *O. tausignata* (Chen)
- Gastral tergum 2 with central pale spot 5
5. Head red. Legs chestnut, antenna brownish-red below 1. *O. vietnamica* Lelej
- Head black. Legs and antenna variable 6
6. Felt line of gastral sternum 2 short, $0.4-0.6 \times$ the distance between felt line and pale fascia of this sternum. Head behind eyes strongly narrowed (Fig. 2). Antenna brownish-red below, legs black or brown with brownish-red hind femur 2. *O. krombeini* n. sp.



Figs. 1-10. *Orientilla variegata* (Smith) from Vietnam (1, 10) and *O. krombeini* Lelej from Vietnam (2-9). 1-3, female head, dorsal (1, 2) and anterior (3) aspect; 4, male genitalia, ventral aspect at left, dorsal at right; 5, female gaster; 6, male forewing; 7, 8 female (7) and male (8) antenna; 9, 10, part of male thoracic dorsum. ax = axilla, pstl = parascutellar carina, ptg = parategular ridge, R², R³ = second and third abscissa of R tg = tegula. Scale line = 1 mm.

— Felt line of gastral sternum 2 long, 1.2–1.3× the distance between felt line and pale fascia of this sternum. Head behind eyes less narrowed (Fig. 1). Antenna and legs black . . .
 3. *O. variegata* (Smith)

1. *Orientilla vietnamica* Lelej

Orientilla vietnamica Lelej, 1979: 1066 (holotype female: "Nha Trang, S. An-nam, V/IX-1933, K. Davydoff" [Vietnam, Prov. Phukhanh]; examined [ZIS]).

The species is known only from the holotype. Length 8.0 mm.

2. *Orientilla krombeini* Lelej,

NEW SPECIES

Figs. 2–9

Female.—Length 7.5–8.0 mm. Black, thorax red; mandible brownish-red, chestnut-brown apically; head ventrally between hypostomal carina and occipital carina brownish-red or red; antenna brownish-red below; legs black or brown with brownish-red femur; palpi brown to pale brown. Clypeus and base of mandible with dense, erect, yellowish setae; gena with mixture of sparse, subappressed and erect, pale setae. Frons and vertex with mixture of short, sparse, subappressed setae and long, erect, black setae. Thoracic dorsum with sparse, short, subappressed, yellowish-golden setae mixed with long, erect, black setae. Legs with subappressed and erect yellowish setae; tibiae with a few black, extremely long setae. Pale gastral design as in Fig. 5. Gastral sterna 2–4 posteriorly with yellowish fascia. Thorax laterally, propodeal hindface, gastral sternum 2 and gastral tergum 2 laterally with sparse, erect, yellowish setae which are longer on mesopleural carina.

Head behind eyes strongly narrowed (Fig. 2), occipital carina well developed. Clypeus with preapical, transverse, rounded ridge. Antenna weakly flattened, flagellomeres as in Fig. 7. Mandible with two weak, inner, preapical teeth. Head above with dense, large punctures, those on vertex and upper frons often confluent, forming longitudinal ridges.

Pronotum with developed humeral angles. Thoracic dorsum with dense, reticulate punctures, behind mesopleural tubercles confluent and forming longitudinal ridges. Mid and hind tibiae with one external, preapical spine.

Gastral sternum 1 with well developed median carina. Gastral sternum 2 with more or less flattened central disk and short, lateral, felt lines which are 0.4–0.6× the distance between felt line and pale fascia of this sternum. Gastral tergum 2 with very deep, dense, longitudinal grooves; laterally with dense, elongated punctures.

Male.—Length 11.0–12.0 mm. Black, thorax (except sternum and propleura) red; forewings strongly infumated, more pale basally and more dark apically; mandible brownish-red preapically, palpi brown, leg spurs yellowish. Clypeus, mandible, gena, scape, thorax laterally, metanotum, scutellum posteriorly, propodeum, propleura, legs, gastral segments 1–2 with subappressed and erect yellowish setae which are denser on legs. Frons and vertex with sparse, subappressed, short, yellowish setae mixed with longer, erect, black ones. Pronotal dorsum, scutum, scutellum (except hind narrow part) and tegula with sparse, subappressed, short setae and erect, long, black ones. Gastral terga 1–2 posteriorly and tergum 3 with yellowish band, that on tergum 3 slightly longer than that of tergum 2 and slightly shorter than that of tergum 1. Gastral sterna 2–3 with yellowish fascia. The rest of gaster with black setation.

Head with well developed occipital carina, head length (from middle of clypeal margin to midpoint of vertex is 0.81–0.84 × greatest width. Distance between eye notches is 0.6 × head width, ocello-ocular distance is 1.8–2.0 × hind ocellar distance, distance between hind ocellus and posterior margin of head is 2.2–2.4 × hind ocellar distance, A3 is 0.9–0.95 × A2, A4 is equal A5, A4 is 2.2–2.3 × A3. Frons and vertex with dense, large, confluent punctures.

Scutellum with median, longitudinal furrow not reaching foremargin. Rounded par-

ascutellar carina not reaching hindmargin of scutellum; parategular ridge well developed (Fig. 9). Propodeal hindface with weak longitudinal furrow that reaches dorsum. Forewing venation—Fig. 6, third abscissa of R is 1.4–1.5× second abscissa of R.

Gastral sternum 1 roof-like, with weak, longitudinal carina basally. Felt lines of gastral sternum short, 0.4–0.5 × the distance between felt line and pale fascia of this sternum. Genitalia dorsally and ventrally—Fig. 4. Punctures of gastral terga 1–2 dense, large, sparser on disk of tergum 2.

Discussion.—Females of *O. krombeini* resemble *O. vietnamica* in having the same head shape and felt line length but differ from the latter (except black head) by narrower pale band on gastral tergum 1 (more than two-thirds of dorsum in *vietnamica*). The female of *O. krombeini* is similar to that of *O. variegata* in having the same body color, but differs in the head shape (Fig. 2 vs. Fig. 1) and the short felt lines of gastral sternum 2 (see key). Males of *O. krombeini* and *O. variegata* have similar forewing venation, and their diagnostic characters are given in the key above.

Range.—Known only from Quangnam-Danang Province, Vietnam.

Type material.—Holotype female, Vietnam, Quangnam-Danang, Culao Cham [Island, 40 km SE of Danang], III-29-1987, V. Kuznetsov [IBPV]. Paratypes, female and 2 males, same data as holotype (1 male in IBPV, 1 male and 1 female in ZIS).

Etymology.—This species is affectionately dedicated to Karl Krombein, famous expert in mutillid, chrysidid and bethylid wasps.

3. *Orientilla variegata* (Smith)

Mutilla variegata Smith, 1855: 39 (female, "North China").

Stenomutilla variegata, Mickel, 1933: 323, female.—Chen, 1957: 220, female (China).

Orientilla variegata, Lelej, 1979: 1067, female.

Mutilla desponsa Smith, 1855: 38 (male, "North China"). New Synonymy.

Stenomutilla desponsa, Mickel, 1933: 324, male (China, Hainan) (synonymized *Stenomutilla chinensis* Zavattari).—Chen, 1957: 220, male (China).

?*Stenomutilla chinensis* Zavattari, 1922: 192 (male, "Sud-China, Pingshiang, leg. Kreyenberg" [China, Guangxi Zhuang]).

Length.—Female 11.0–15.0 mm, male 10.6–15.5 mm.

Discussion.—The holotypes of *O. variegata*, and *O. desponsa*, were examined by Mickel (1933), and Chen (1957) suggested that these were the opposite sexes of the same species. Females of *O. variegata* and males of *O. desponsa* were collected together in Guangdong province (China) and in North Vietnam, and I consider them conspecific. In his description of *Stenomutilla chinensis*, Zavattari (1922) says that A4 is twice longer than A3, a character that is more typical of *O. tausignata* (Chen) (2.4–3.0× in *variegata*). Quite possibly *S. chinensis* Zavattari is a senior synonym of *S. tausignata* Chen (1957) and not a synonym of *S. variegata* (Smith, 1855). Unfortunately, I have been unable to study the syntypes of *S. chinensis* which were examined by Mickel (1933). Specimens identified by Bingham (1897) as *variegata* (female thorax black) probably represent a different species (thorax red in East Asian species including *variegata*).

Range.—China (Jiangsu, Anhui, Hunan, Zhejiang, Fujian, Guangxi Zhuang, Hainan, Taiwan), Vietnam (Prov. Ha Son Binh), Myanmar (= Burma).

Material examined (8 females, 12 males).—Vietnam, prov. Ha Son Binh: 1 female, 1 male, Da Bac, Tuly, shrubs, X-17-1990, S. Belokobylskij [IBPV]; 1 male, the same place, X-16/23-1990, A. Gorochov [ZIS]; 1 male, Ky Son, Cao Phong, X-27-1990, S. Belokobylskij [ZIS]. China, prov. Guangdong: 1 female, IX-27-1952 [GEI]; 1 male, IX-28-1952 [GEI]; 1 male, VIII-9-1956 [GEI]; 1 male VII-1958 [GEI], 1 fe-

male, Ding Hu Shan, VII-14/19-1979 [SCAU]; 1 male, Ding Hu Shan, X-22/27-1979 [SCAU]; 1 female, Ding Hu Shan, X-24/29-1984 [SCAU]; 1 female, Guangzhou, VI-11-1964 [SCAU]; 1 male, Bo Luo, VI-2-1965 [SCAU]. Taiwan: 1 female, 1 male, T. Kano [NSMT]; 1 female, Tainan, S. Takano [NSMT]; 2 males, Hokuto, Taihoku, VII-1-1929, IX-23-1929, K. Sato [NSMT]; 1 male, Nantou, Nanshan, VI-30-1965, S. Ito [NSMT]; 1 female, Nantou, Hsien, VIII-21-1978, W. Suzuki [NSMT].

4. *Orientilla tausignata* (Chen),
NEW COMBINATION

Stenomutilla tausignata Chen, 1957: 221 (female, holotype—China, Fujian, Kienyang (Liutun), VIII-15/16-1945, K.S. Lin, not examined).

Female.—Length 11.5–14.5 mm. Clypeus with *I*-like elevated lobe and weak transverse ridge. A3 is 1.1–1.2 × A2 and equal A4. Thoracic dorsum with dense punctures and sparse, subappressed, pale setae. Pale band of gastral tergum 2 approximately 2.0× shorter than that of tergum 3. Body black, thorax red.

Male.—Length 10.5–14.0 mm. Scutellum rounded posteriorly with visible longitudinal furrow medially. Gastral tergum 2 with dense, elongated punctures. Body black, thorax except sternum red. Scutum and scutellum with sparse, black setae. Pale band of gastral tergum 2 is 0.5× that of tergum 3.

Range.—China (Anhui, Hunan, Zhejiang, Fujian, Jiangxi, Guangdong).

Material examined (1 female, 5 males).—China, prov. Guangdong: 1 female, IX-19-1964 [GEI]; 1 male, VIII-15-1974 [GEI]; 1

male, VI-27/29-1974 [GEI]; 3 males, Lian Xian, VI-23/28-1965 [SCAU].

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