

## Two new species of the genus *Diaparsis* Förster from southern China (Hymenoptera: Ichneumonidae: Tersilochinae)

A.I. Khalaim

Khalaim, A.I. 2008. Two new species of the genus *Diaparsis* Förster from southern China (Hymenoptera: Ichneumonidae: Tersilochinae). *Zoosystematica Rossica*, **17**(1): 89-92.

*Diaparsis isfirae* sp. n. and *D. saeva* sp. n. are described from southern China.

A.I. Khalaim, Zoological Institute, Russian Academy of Sciences, Universitetskaya nab. 1, St. Petersburg 199034, Russia & División de Estudios de Postgrado e Investigación, UAM Agronomía y Ciencias, Universidad Autónoma de Tamaulipas, Cd. Victoria 87149, México. E-mail: hymenopt@zin.ru

*Diaparsis* Förster is a moderately large cosmopolitan genus with the most of non-Palaeartic species undescribed (Yu et al., 2005; personal data). Palaeartic species of this genus were revised by the author (Khalaim, 2002, 2005). Three species, *D. caudata* Morley, *D. nikami* Kanhekar and *D. sanctijohanni* Rao & Kurian, were described from India (Morley, 1913; Kanhekar, 1988; Rao & Kurian, 1951), and one species, *D. minquanensis* Sheng & Wu, was described from China (Sheng et al., 1999). Two more species, *Diaparsis isfirae* sp. n. and *D. saeva* sp. n., are described from southern China in this paper.

Type material of the two new species are deposited at the collection of Biologiezentrum in Linz, Austria.

### ***Diaparsis isfirae* sp. n.** (Figs 1-4)

*Holotype*. ♀, South China, Yunnan province, Lugu lake, Luo Shui, 27°45'N, 100°45'E, 1-19.VII.1992, leg. S. Becvar.

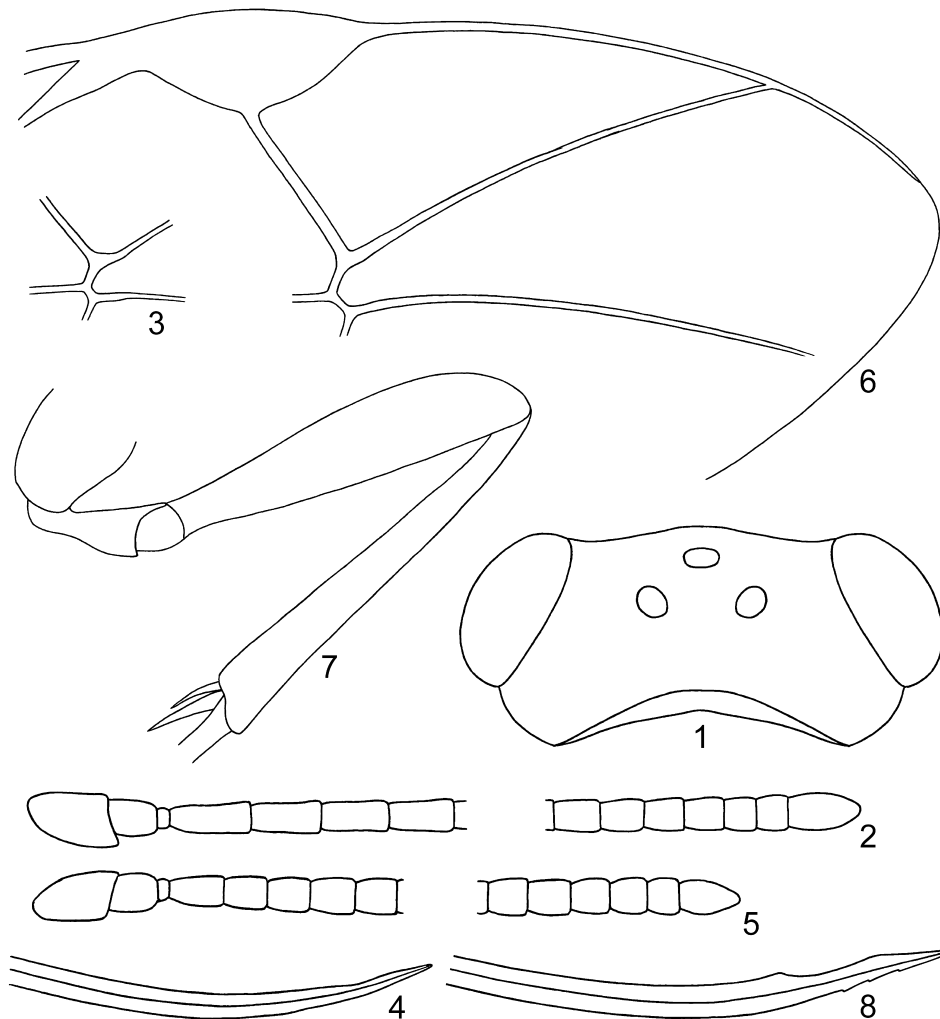
*Diagnosis*. The new species differs from all known Oriental species by a complex of propodeum without basal keel, nor furrow, the 32-segmented flagellum of antenna, and the long ovipositor. Moreover *D. isfirae* sp. n. is characterised by the flagellum of antenna slender, the head and mesosoma mostly evenly and densely punctate, and by the sternaulus long, not impressed, with numerous transverse wrinkles.

*Description*. Female. Body length 5.0 mm. Head roundly narrowed behind eyes in dorsal view (Fig. 1), temple half as long as eye width (Fig. 1). Flagellum of antenna slender, very slightly clavate apically, with 32 segments; basal (except the first segment) and middle flagellomeres about twice as

long as wide, two subapical flagellomeres transverse (Fig. 2). Mandible tapered apically, densely punctate in basal 0.6, upper tooth distinctly longer than lower tooth. Malar space about as long as basal width of mandible. Occipital carina not raised in its lower part. Clypeus broad, distinctly and rather densely punctate on very finely granulate surface in its upper half, smooth and impunctate in lower half. Face and frons very densely punctate, granulate. Vertex with rather dense indistinct punctures, matt. Temple with distinct and moderately dense punctures, smooth and shining.

Mesosoma length 1.85 mm, width 0.9 mm. Mesoscutum finely granulate, evenly and densely punctate. Notaulus short, with rugae. Prepectal carina reaching anterior margin of mesopleuron near its middle. Sternaulus rather long, reaching almost whole length of mesopleuron, S-curved, almost not impressed, with numerous transverse wrinkles. Mesopleuron and mesosternum densely punctate, smooth and shining between punctures. Propodeum without basal keel, nor furrow, with some weak longitudinal wrinkles in this area. Basal part of propodeum half as long as apical area. Spiracle separate from pleural carina by about one diameter of spiracle. Dorsolateral area densely punctate and finely granulate, moreover longitudinally striate laterally. Apical area rounded anteriorly, mostly densely punctate, matt, with longitudinal carinae strongly divergent anteriorly, strong posteriorly and vestigial anteriorly; lateral portions rather short.

Fore wing length about 4.0 mm. First section of radial vein almost straight, 1.6 times as long as pterostigma wide; second section slightly arched. Metacarp not reaching apex of fore wing. Abscissa of radial vein adjoining to 2-*rsm* thickened



**Figs 1-8.** *Diaparsis*, females (holotypes). **1-4.** *D. isfiriae* sp. n.: **1**, head, dorsal view; **2**, base and apex of antenna, lateral view; **3**, venation of fore wing; **4**, apex of ovipositor, lateral view. **5-8.** *D. saeva* sp. n.: **5**, base and apex of antenna, lateral view; **6**, antero-distal part of fore wing; **7**, femur and tibia of hind leg, lateral view; **8**, apex of ovipositor, lateral view.

(Fig. 3). *2-rsm* vein somewhat longer than the vein between *2-rsm* and *2-mcu*. *2-mcu* vein postfurcal, unpigmented in its anterior part.

Legs moderately slender. Hind femur length 1.07 mm, tibia 1.37 mm. Hind femur 4.2 times as long as broad. Tarsal claws not pectinate.

First tergite length 1.2 mm, posterior width 0.27 mm; tergite slender, roundish in transverse section in the middle, mostly smooth, petiole finely striate postero-laterally. Glymma vestigial, surface here slightly impressed. Thyridia long, over 3 times longer than wide, deep, evenly narrowed posteriorly. Second tergite 0.57 mm long, almost twice as long as anteriorly broad. Oviposi-

tor long, weakly and evenly upcurved, with very weak dorsal subapical depression, without teeth (Fig. 4); sheath 3.7 mm long, about 3 times as long as first tergite.

Body black. Palpi, mandible (except for teeth), lower half of clypeus, tegula and legs brownish yellow (basal 0.6 of hind coxa strongly darkened). Pterostigma dark brown. Metasoma behind first segment mostly yellow-brown; second tergite antero-dorsally narrowly, and following tergites dorsally and dorso-laterally widely blackish.

Male unknown.

*Etymology.* This species is named in honour of Yulia Kudryavtseva (nickname Isfir).

***Diaparsis saeva* sp. n.**  
(Figs 5-8)

*Holotype*. ♀, South China, Yunnan, 35 km N Lijiang, 27°13'N, 100°19'E, 8-9.VII.1992, leg. S. Becvar.

*Diagnosis*. The new species resembles the Indian *D. caudata* Morley, but distinct in having a propodeum with strong basal keel, fore wing with postnervulus intercepted below the middle, and irregularly rugulose dorsolateral areas, and a more narrow head in dorsal view. Moreover it is characterised by the short black antenna with flagellomeres about as long as wide, the strong notaulus, the small coxae, the hind femur slender basally, with internal surface polished and impunctate, and the long ovipositor. *D. saeva* sp. n. is very distinctive species in the genus and is easily recognized by the structure of mesoscutum, mesopleuron and propodeum.

*Description*. Female. Body length 6.8 mm. Head moderately roundly narrowed behind eyes in dorsal view, temple 0.65 times as long as eye width. Antenna somewhat exceeding 3.0 mm, with 25-segmented flagellum; basal and middle flagellomeres slightly elongate, subapical flagellomeres transverse (Fig. 5). Mandible tapered apically, distinctly punctate (except for teeth), upper tooth distinctly longer than lower tooth. Malar space about as long as basal width of mandible. Hypostomal carina present, but weak. Occipital carina slightly raised in its lower part. Clypeus broad, indistinctly separate from face, distinctly punctate (punctures coarser and rarer in a lower part), smooth and shining between punctures, its lower 1/3 strongly bent backward, with a shallow median notch. Face and frons very densely punctate; face smooth in its lower part and matt in its upper part, frons finely granulate, matt. Vertex with sharp and dense punctures, smooth and shining. Temple with fine sharp and moderately dense punctures, smooth and shining.

Mesosoma length 2.2 mm, width 1.2 mm. Pronotum coarsely and transversely rugulose laterally, densely punctate near posterior corner. Mesoscutum finely granulate and very densely punctate, bordered with rough crenulate groove antero-laterally (between notaulus and tegula) and with strong raised carina postero-laterally (between tegula and scutellum). Notaulus sharp anteriorly, with V-shaped strong carina near its base, and in the form of weak wide depression almost reaching hind end of mesoscutum. Scutellum, in profile, convex; densely punctate centrally, punctate-rugulose anteriorly, with long and rather strong wrinkles reaching from postero-lateral margin towards apex. Prepectal carina strong, raised, reaching anterior margin of mesopleuron near its middle, with longitudinal wrinkles stretched towards sternaulus. Sternaulus

as wide depressed oblique area in anterior part of mesopleuron, with coarse transverse rugae. Mesopleuron coarsely and more or less densely punctate centrally, smooth and shining between punctures, very densely punctate in its lower posterior part (punctures joining), with strong and sharp longitudinal ridge in its upper part (somewhat below tegula), and with longitudinal transversely rugose depression below this ridge, with moderately wide prominence reaching along the anterior margin of mesopleuron from upper end of prepectal carina and joining with anterior end of the transverse subtegular ridge (resembles *Stethantyx* Townes). Mesosternum densely punctate, smooth between punctures. Lower metapleuron rugulose, rather densely pubescent. Propodeum with strong raised basal keel, transverse carina, and a pair of longitudinal carinae dividing apical area into three portions, and weakly divergent anteriorly. Basal keel 0.44 times as long as central portion of apical area. Spiracle separate from pleural carina by about 1.8 diameters of spiracle. Dorsolateral area irregularly rugulose. Apical area with lateral portions transversely rugulose, and with central portion round anteriorly, mostly densely punctate, punctate-rugulose peripherally; lateral portion 0.65 times as long as central portion.

Fore wing length about 5.0 mm. First section of radial vein almost straight, 1.6 times as long as pterostigma wide (Fig. 6); second section weakly and evenly arched. Metacarp almost reaching apex of fore wing which is roundly pointed (Fig. 6). 2-*rsm* vein and abscissa of radial vein adjoining to 2-*rsm* hardly thickened (Fig. 6); 2-*rsm* moderately long, somewhat longer than the vein between 2-*rsm* and 2-*mcu* (Fig. 6). 2-*mcu* vein postfurcal, narrowly unpigmented in its anterior part. Nervulus strongly postfurcal, distad of basal vein 0.85 times of its own length. Nervellus of hind wing vertical.

Legs moderately slender. Coxae small. Hind femur length 1.24 mm, tibia 1.45 mm. Hind femur 4.5 times as long as broad, more slender basally than apically (Fig. 7), with internal surface polished and impunctate. Tarsal claws moderately thin, not pectinate.

First tergite length 1.8 mm, posterior width 0.37 mm; tergite very slender, roundish in transverse section in the middle, entirely smooth, with vestige of dorsolateral carina. Glymma medium-sized, deep, oval, not joined by a furrow to ventral part of postpetiole. Thyridia extremely long, almost half as long as second tergite, pointed posteriorly. Second tergite 0.86 mm long, almost twice as long as anteriorly broad. Ovipositor long, weakly and more or less evenly upcurved, with two roundish dorsal subapical teeth, and distinctly denticulate ventrally (Fig. 8); sheath 4.0 mm long, about 2.3 times as long as first tergite.

Body black. Palpi brown. Mandible apically, tegula, pterostigma, most of veins, all coxae, trochanters and femora dark brown to black (fore and mid femora brownish apically). All tibiae and tarsi brownish; middle and hind tibiae more or less infuscate basally. Metasoma behind first segment reddish brown; second tergite blackish antero-dorsally.

Male unknown.

*Etymology*. From Latin *saeva* (fierce, furious).

#### Acknowledgements

I am very grateful to Dr. Martin Schwarz (Linz, Austria) for his help with loan of studied material. This work is supported by the Russian Foundation for Basic Research (no. 07-04-00454) and the Presidium of the Russian Academy of Sciences Program "Origin and evolution of Biosphere, Subprogram II".

#### References

- Kanhekar, L.J.** 1988 On a new species of *Diaparsis* Foerster (Hymenoptera: Ichneumonidae: Tersilochinae) from India. *Journal of the Bombay Natural History Society*, **85**(2): 379-383.
- Khalaim, A.I.** 2002. A review of the subgenera *Nanodiaparsis*, *Ischnobatis* and *Lanugoparsis* subgen. n., genus *Diaparsis* Förster (Hymenoptera, Ichneumonidae) with descriptions of new species. *Entomol. Obozr.*, **81**(2): 386-393. (In Russian).
- Khalaim, A.I.** 2005. A review of the subgenera *Diaparsis* s. str. and *Pectinoparsis* subgen. n. of the genus *Diaparsis* Förster (Hymenoptera, Ichneumonidae, Tersilochinae). *Entomol. Obozr.*, **84**(2): 407-426. (In Russian).
- Morley, C.** 1913. The fauna of British India including Ceylon and Burma. Hymenoptera, Vol. 3. Ichneumonidae. London. 3(1): 1-531.
- Rao, S.N. & Kurian, C.** 1950. Descriptions of eleven new and records of fifteen known species of Ichneumonoidea (Hymenoptera Parasitica) from India – Part II. *Indian Journal of Entomology*, **13**, 65-78.
- Sheng, M., Wu, L., Wu, J. & He, Z.** 1999. A new species of the genus *Diaparsis* (Hymenoptera: Ichneumonidae) parasitizing *Lema decempunctata* with a new record from China. *Scientia Silvae Sinicae*, **35**(1): 66-68.
- Yu, D.S., van Achterberg, K. & Horstmann, K.** 2005. World Ichneumonoidea 2004. Taxonomy, Biology, Morphology and Distribution. CD/DVD. Taxapad, Vancouver, Canada. www.taxapad.com

Received 20 February 2008, accepted 10 June 2008.