



HOKKAIDO UNIVERSITY

Title	An interesting new species of the genus <i>Psen</i> captured in Japan with the erection of a new subgenus (Hym. : Sphec. : Pemphredoninae)
Author(s)	Tsuneki Katsuji
Citation	<i>Insecta matsumurana</i> , 27(1), 12-15
Issue Date	1964-08
Doc URL	https://hdl.handle.net/2115/9714
Type	departmental bulletin paper
File Information	27(1)_p12-15.pdf



AN INTERESTING NEW SPECIES OF
THE GENUS *PSEN* CAPTURED IN JAPAN WITH
THE ERECTION OF A NEW SUBGENUS
(HYM.: SPHEC.: PEMPHREDONINAE)

By KATSUJI TSUNEKI
Biological Laboratory, Fukui University

Recently Mr. Y. Haneda, Ohno, Fukui Pref., brought to me specimens of an undescribed species belonging apparently to the genus *Psen* which he captured this summer at the Konsei-Pass (about 2100 m high), Nikko, for identification. It is a very interesting species having well-developed genal processes, and according to the literature it is considered close to the members of the Hawaiian genus *Nesomimesa* Parkins of which I have had some doubt as to its taxonomic rank. However, the available informations concerning *Nesomimesa* were too inadequate to attempt a detailed comparison with the specimens in question, so I have asked help of Dr. C. M. Yoshimoto, Honolulu. He kindly sent me a specimen of *Nesomimesa antennata* Sm. so as to make my study possible. The direct comparison has made it clear at once that, despite the apparent resemblance, the specimens from Nikko fall beyond the category of *Nesomimesa* which is quite distinct in many characters from *Psen* s. l. and that they are to be allocated within the latter genus.

Before proceeding further I wish to express my thanks to Dr. C. M. Yoshimoto.

The position of the species described below in the genus *Psen* s. l.

It lies slightly more distantly apart from either of the subgenera of *Psen* than does *Mimesa* from *Psen* s. str. It has, however, also some characters in common with each of the subgenera and is considered to be comparatively closer to *Mimesa*. In order to receive the species, however, a new subgenus must be erected.

Odontopsen, subgenus nov.

In the characters of wing venation, interantennal process, hypo-epimeral sculpture, abdominal petiole, pygidial area and general body size the new genus is similar to *Mimumesa*, in the structure of the antenna (and hypo-epimeral sculpture) similar to *Psen* s. str., and in the characteristic structure of mesosternum similar to *Mimesa* (or the genus *Psenulus*). However, well-developed processes at the ends of the occipital carina beneath head, broad face (♀), comparatively long mandibles and very weak sculpture of propodeum except area cordata are characteristic of the subgenus. The male genital organ also characteristic, with the parameres incrassate at the apex.

[Insecta Matsumurana, Vol. 27, No. 1, July, 1964]

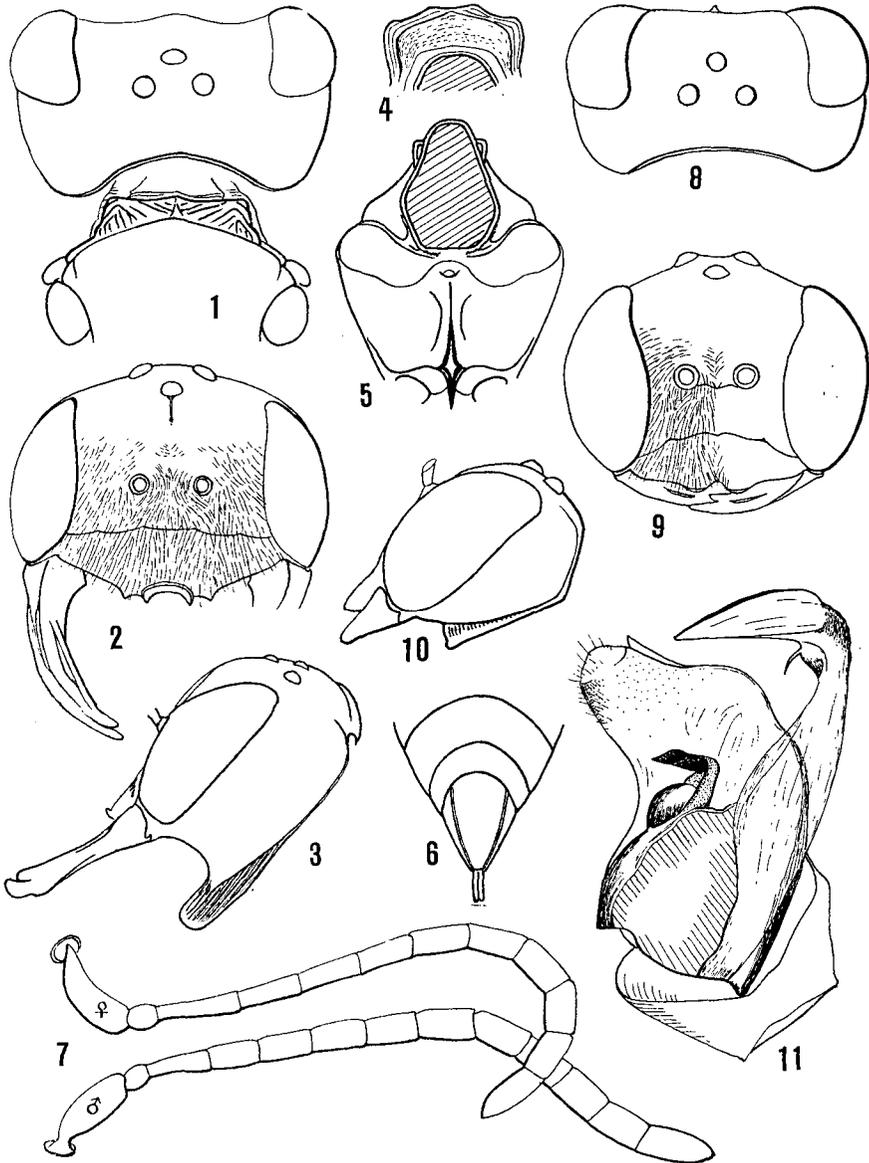
Type: *Psen hanedai* Tsuneki (sp. nov.).

Psen (Odontopsen) hanedai, sp. nov.

This species is characteristic in the structure of the clypeus and pronotum and the feeble sculpture on the propodeum may also be specific.

♀. Length 7.5 mm. Fore wing 6.0 mm. Black. Palpi and antennae beneath from joint 3 apically ferruginous, antennae above from joint 4 apically dark brown, apically progressively paler with ultimate two joints nearly completely ferruginous; tibial spurs and front and mid tarsi except basitarsi above ferruginous; hind tarsi slightly brownish; wing veins black. Lower front and clypeus covered with appressed silvery pubescence, not so dense as in *Nesomimesa*, pubescence on dorsal aspect of head and thorax and on tarsi beneath slightly yellowish; hairs at the fringe of labrum including 2 long ones slightly brownish yellow.

Head from above with occipital margin deeply roundly emarginate (Fig. 1), OOD: POD=11:8 (postocellus 5 in diameter); head seen in front (Fig. 2) with inner orbits markedly divergent below, eye narrower than half the width of front at antennal base; oculo-antennal distance \doteq interantennal distance (9:10, socket 5 in diameter), interantennal tubercle very feeble, median frontal carina defined only on upper 3rd; clypeus broad, connected with eyes with a comparatively wide border line, surface generally flattened, anterior margin medianly broadly produced, bluntly quadridentate (Fig. 2), with medial sinus wider than the lateral, dental portion incrassate and at the medial sinus turning into a transversely emarginate anterior surface, with the upper border markedly raised into a carina; mandible as given in Fig. 2, comparatively longer than in other species of the genus. Head in profile (Fig. 3) with occipital carina produced at the end into a broad process, apically rounded and coarsely striated except the glossy apical region; temple broader than eye (ratio 19:14), with posterior margin parallel to outer orbit. Antenna (Fig. 7) with basal 2 joints glossy, apically slightly thicker, relative length of joints 3-6: 12, 9, 9, 8; joint 3 about 3.7 times as long as broad at apex. Pronotum: Fig. 1, the same seen in front (with head removed): Fig. 4; on mesonotum prescutal and median scutal sutures distinct, the latter longer, reaching $\frac{2}{5}$ of the segment, parapsidal sutures also distinct, gently bisinuate, extending posteriorly to apex of the segment; scutellum and postscutellum raised, without median impressed line, the furrows in front of both the areas deep and distinctly outlined but without crenulae. Propodeum with area cordata transversely broadened triangle in form, impressed except the extreme base and well-defined by the close longitudinal striae, shift of the dorsal aspect to posterior inclination rather indistinct, the length up to the apex of area cordata less than half the length of the remaining area (posterior inclination), the latter with a large deep rounded impression bearing a longitudinal roughly notched groove at the bottom; mesopleuron markedly convex, epicnemial carinae feebler ventrally, mesosternum without acetabular carina (s. Lith, 1959) and precoxal suture, but with distinct interepicnemial area (Fig. 5), medio-apical processes as given in Fig. 5, general feature of this area similar to that of *Mimesa* or of the genus *Psenulus*. Petiole of abdomen approximately as long as 1st tergite in the longest view, but shorter than hind femur, posteriorly slightly broader,



Psen (Odontopsen) hanedai, sp. nov. (Figs. 1-6, ♀; Figs. 8-11, ♂).
 Fig. 1, head and pronotum seen from above. Fig. 2, head seen
 in front. Fig. 3, head seen in profile. Fig. 4, pronotum seen in
 front with a decapitated specimen. Fig. 5, mesosternum seen
 from beneath with the head removed. Fig. 6, pygidial area. Fig.
 7, antennae. Figs. 8, 9, 10, head. Fig. 11, genitalia.

nearly 4 times as long as wide at apex, medianly and laterally above distinctly carinate as in *Mimumesa*, lateral carinae duplicate on anterior portion; pygidial area (Fig. 6) elongate triangle, with lateral margins gently rounded and carinated. In fore wing length order of abscissae of radial nervure: $4=3$ (or $4>3$) $>1>2$, with relative length more or less varied. Legs normal, hind femur with a row of short whitish spines on the outer edge which becomes confusing with similar coloured hairs.

Vertex sparsely, upper front more closely and finely punctured, intervals microscopically coriaceous; pronotum with anterior inclination finely transversely, dorsal aspect with lateral regions coarsely obliquely, sides transversely very strongly and coarsely striated; mesonotum sparsely finely punctured (intervals 2-5 times as broad as points), with microsculpture between, on posterior margin punctures much closer, on antero-lateral regions longitudinally shortly striate; scutellum and postscutellum glossy, with very sparse fine punctures, only on posterior margins somewhat close; on propodeum area cordata longitudinally finely and closely striate, slightly incrassate posterior bordering regions of the area and sides of longitudinal impression of posterior inclination smooth but not polished, rest of the segment longitudinally (on the sides becoming obliquely) feebly finely and closely striate, except anterior portion of the sides, the striae turning strong and coarse everywhere towards the lower extremities. Mesopleuron with sparse very fine hair pits, with intervallic microsculpture feebler than on mesonotum. Petiole and 1st tergite of abdomen smooth and polished, remaining segments practically impunctate, but not polished. Pygidial area closely punctured and covered with comparatively stiff fuscous hairs.

♂. Length 6.0 mm. Fore wing 4.6 mm. Black. Palpi, tibial spurs and front and mid tarsi ferruginous; antennae wholly black, hind tarsi dark brown, with each joint apically paler. General characters as in ♀, but considerably different on head. Head seen from above (Fig. 8) OOD:POD:OCD=8:7:7, occipital margin not so deeply emarginate as in ♀; seen in front (Fig. 9) with inner orbits subparallel, only gently roundly divergent downward and more markedly so upward, eye more than half as broad as frons at base of antennae; clypeus as in Fig. 9, mandible similar in character to ♀; antennae, simple, without carina nor tubercle on any joint, apically slightly thicker, joint 3 very slightly longer than 4 (7:6), 4-12 equal in length, ultimate joint slightly longer and with apex pointed; joint 3 2.5 times as long as broad at apex. Head seen in profile: Fig. 10, occipital carina higher and broader below and produced at the end, but not so striking as in ♀; temple slightly convergent below, much less than as broad as eye toward middle. Characters of thorax and abdomen as in ♀, but the feeble striae on posterior and lateral aspects of propodeum much weaker, sometimes more narrowly restricted to the posterior half on the sides. Genitalia: Fig. 11 (left side half), paramere robust and incrassate into a nearly spherical end on top, with an elongate plate-like appendage along the upper side, saggita sickle-shaped and provided with a spine at base beneath the sickle-blade.

Holotype: ♀, the Konsei-Pass, Nikko, 16. VII. 1963, Y. Haneda leg., in the author's collection.

Paratypes: 7 ♀♀ 4 ♂♂, collected with the holotype (4 ♀♀ 2 ♂♂ in the author's coll., others in the coll. of Haneda).