

Notes on palaeartic *Psenini* (Hymenoptera, Sphecidae)

by

J. P. VAN LITH
Rotterdam

1. *Psen* (*Mimumesa*) *wuestneii* Faester, 1951

In 1964 Prof. Alois KOFLER, Linz, collected in East Tyrol three males of a species belonging to the genus *Psen* Latreille subgenus *Mimumesa* Malloch. Prof. J. DE BEAUMONT, Auvernier, drew my attention to these males which seemed to represent a new species. They had characteristic, extremely long, mandibles (Fig. 6). Just as in the three females from Vienna, in the WÜSTNEI collection of the University Zoological Museum at Copenhagen, described by FAESTER (1951) as *Psen* (*Mimumesa*) *wuestneii*, the epicnemial areas were strongly receding backwards. Consequently the mesosternum was relatively shorter than in any other representative of the subgenus *Mimumesa*. We decided to leave the matter in abeyance until more material, preferably a female of this form, from East Tyrol, would be available.

Recently a fresh female specimen of *Psen wuestneii*, collected in Romania, was sent to me for identification by Mr. P. M. F. VERHOEFF, Utrecht. This offered the opportunity to compare this fresh female and a paratype from Vienna with one of the males from Tyrol, kindly donated to me by Prof. KOFLER.

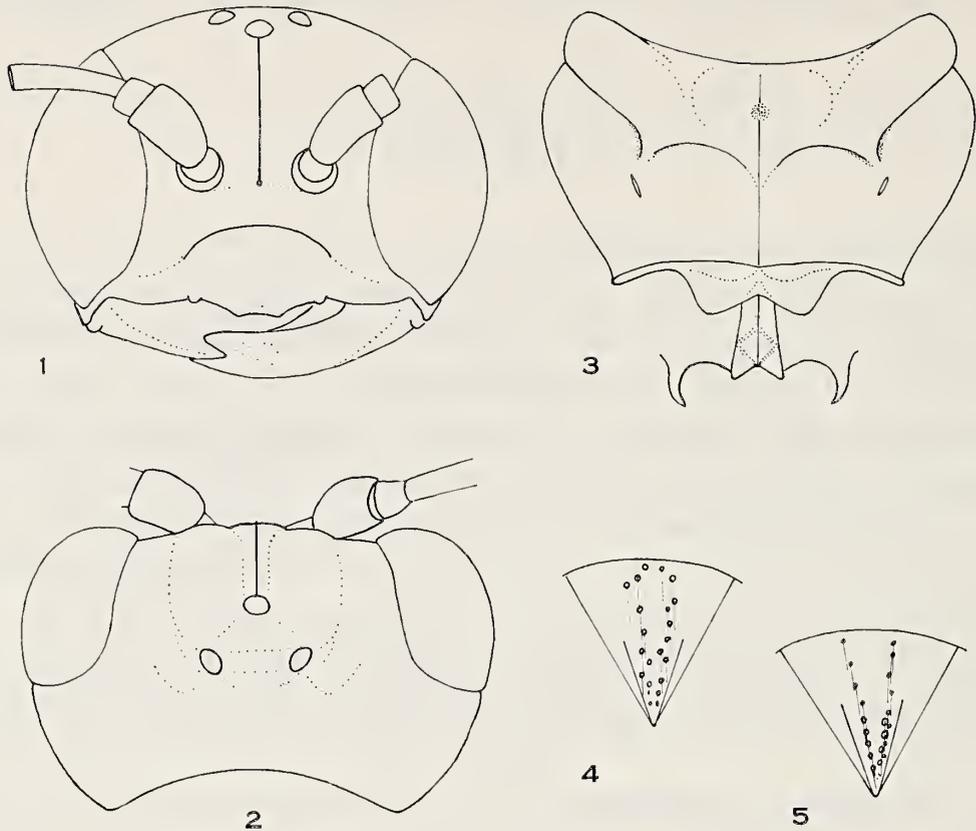
The male is somewhat larger than the two females with which I could compare and the dorsal carina of the petiole is more distinct. In view, however, of the similarity in the structure of the clypeal margin, the epicnemial areas and the mesosternum, and also because of the sculpture of the dorsal side of the pronotum, I am convinced now that they must be conspecific.

This opinion is supported by that little we know in regard to their bionomics. The females, at least one of them, have been reared from *Phragmites* stems. This is evident from the label and a piece of *Phragmites* containing the remains of at least two cocoons which were pinned under one of the paratypes. The males, as Prof. KOFLER informed me, were captured in an area which was overgrown with *Phragmites*. In the meantime the *Phragmites* has disappeared in this area and no other specimens having been collected there, little hope is left that this locality will provide more information or that the two sexes will be found there flying simultaneously.

A redescription of the female, based on the abovementioned paratype from Vienna and on the female from Romania, as well as the first description of the male, are given below.

F e m a l e. — Black; palpi yellowish-brown, last antennal segment brownish below; foreside of fore tibiae, fore tarsi, pronotal tubercles and tegulae dark brown. Tibial spurs of mid and hind legs whitish. Veins of wings brown.

Anterior margin of clypeus very slightly emarginate medianly, on either side of the protruding median part a shining black tubercle (Fig. 1). Disk of clypeus convex, densely punctate, dull. Frons much convex, densely and finely punctate, a fine median carina, ending between antennae in a small smooth tubercle. No

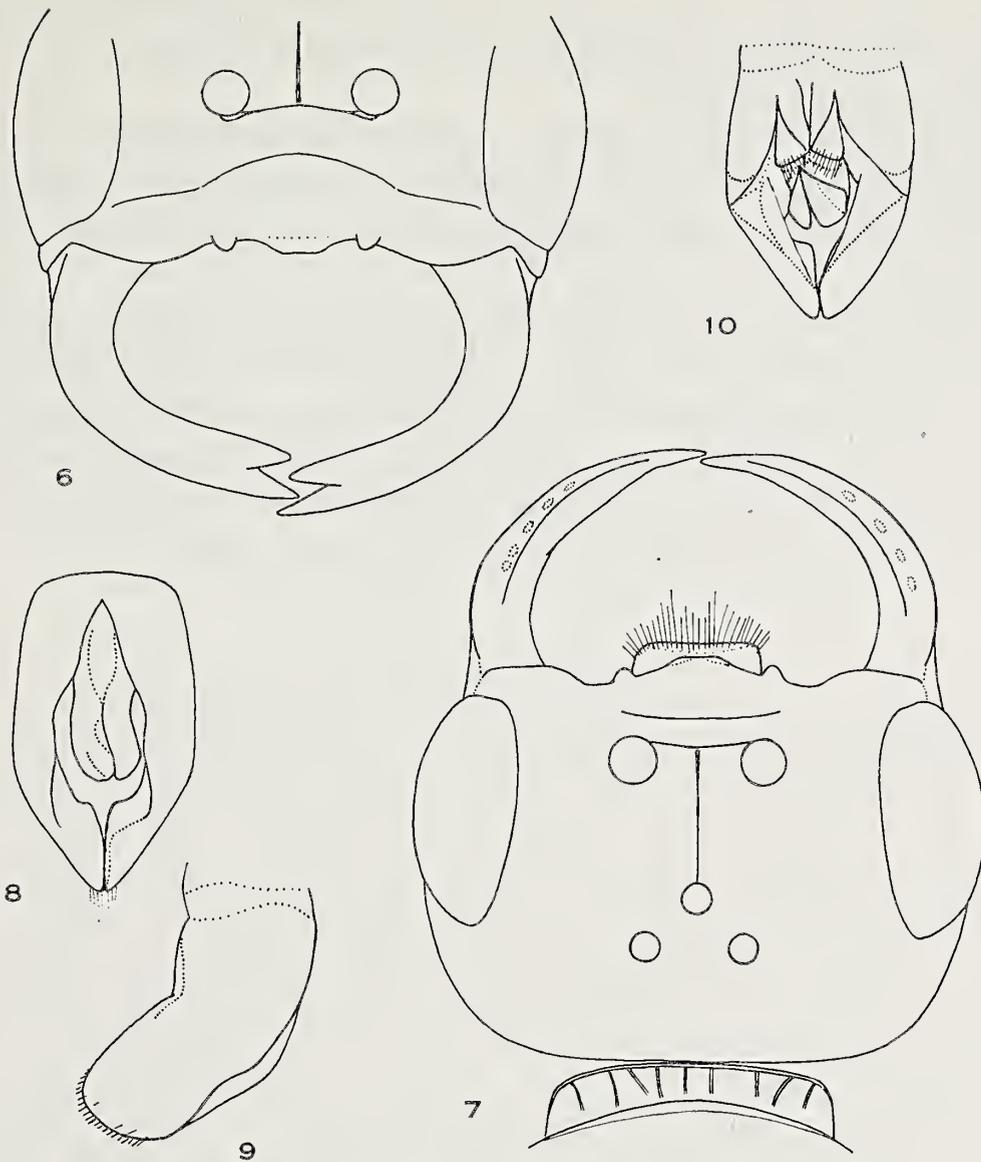


Figs. 1—5. *Psen (Mimumesa) wuestneii* Faester ♀; 1, head in frontal, 2, head in dorsal view, 3, ventral side of thorax, 4 and 5 pygidial area. Figs. 1—4, paratype from Vienna, fig. 5, female from Romania.

transverse carina below antennae. Vertex finely alutaceous, finely and sparsely punctate. Tempora broad (Fig. 2). Occipital carina normally ending in hypostomal carina but in the male not quite distinctly. Scape of antennae thick. Third antennal segment nearly four times as long as broad at apex. Pronotum dorsally with high anterior sharp carina and irregular short longitudinal carinae. Scutum shining, sparsely and finely punctate, posterior margin with fine, short, longitudinal rugae. Prescutal sutures indistinct. Parapsidal sutures deep. Outer fovea of anterior suture of scutellum very large. Scutellum extremely finely punctate, lateral depressions with a few longitudinal carinae. Metanotum also with few punctures. Enclosed area of propodeum triangular, with usual oblique carinae. Back of propodeum dull, with mostly transverse rugae. Anterior plate of mesepisternum indistinct, small, indicated only by the coarser sculpture. Epicnemial areas below much receding backwards (Fig. 3) and ending in a somewhat elevated area which gradually passes into the mesosternum. Metasternum angularly emarginate (Fig. 3). Hind femora with a few short thorns on outer side. First and second recurrent veins of fore wings ending in second submarginal cell.

Petiole reaching about as far as three quarters of hind femora, about four times as long as broad at apex; dorsally with V-shaped carina which is flattened on anterior half; laterally with upper and lower longitudinal keel; ventrally with a strong median and a few weaker lateral carinae. Gaster finely alutaceous, extremely finely punctate. Pygidial area triangular, shining, with two median rows of punctures (Fig. 4, 5).

Pubescence of face silvery and appressed, with a few long hairs. Pubescence of



Figs. 6—10. *Psen (Mimumesa) wuestneii* Faester ♂; 6, head in antero-dorsal, 7, head and pronotum in dorsal view, 8—10, genitalia in dorsal, lateral and ventral view.

rest of body short, greyish, rather dense on gaster. Petiole with a row of long hairs along laterodorsal margins, also ventrally with long erect hairs.

Length about 7—7.5 mm.

Male. — Resembling female, but head large, broader than thorax (Fig. 6), mandibles extraordinarily long, bent, bidentate at apex, dorsally with a row of shallow punctures, each bearing a long hair (Fig. 7). Interantennal carina distinct, connected below with antennal sclerites by fine carinae. Scape of antennae about twice as thick as third antennal segment at apex, segments 10—12 about one and a half times as long as broad at apex, no distinct tyloidea. Scutum finely punctate, punctures anteriorly in weak rugae, apical margin of scutum with short stronger rugae, as in female. Petiole not long, about 3.5 or 4 times as long as broad at apex, with low but completely distinct V-shaped carina narrowing towards apex, this carina with somewhat coarse, irregular sculpture. Genitalia: Fig. 8, 9 and 10.

Face with appressed silvery pubescence and also with long erect hairs.

Length, without mandibles, about 9 mm.

Thus far the following specimens are known: 3 ♀ (holotype and 2 paratypes), Austria, Vienna, coll. WÜSTNEI (Zoological Museum, Copenhagen); 1 ♀, Roma-

nia, Cluj, 24 June 1967, coll. C. NAGY (Coll. P. M. F. VERHOEFF); 3 ♂, Austria, East Tyrol, Matrei-Isel near Lienz, 9 Sept. 1964, coll. A. KOFLER (Coll. KOFLER, one in the author's collection).

FAESTER placed this species in the subgenus *Mimumesa* Malloch. Although the shape of the epicnemial area and the ventral side of the thorax differ considerably from that of the other species belonging to this subgenus, I have provisionally followed him.

One of the paratypes is labelled "Wien/Phragmites". A short piece of *Phragmites*, with a diameter of 3.5 mm, is pinned under it. It contains two almost complete cocoons and fragments of at least one more cell. The outer side of the cocoon consists of a woolly tissue, cream-coloured, but the upper part is brownish. The inner side of the cocoon is covered by a fine tissue, smooth and whitish. The bottom is chocolate-brown and is probably darkened by faeces.

2. *Psen (Mimumesa) sibiricus* Gussakovskij, 1937

On July 26th, 1960, a female was collected west of Ouddorp, in the island of Goeree-Overflakkee, by Mr. Ph. PRONK and is now in the collection of the Rijksmuseum van Natuurlijke Historie, Leiden. This is the second record from the Netherlands. In August 1947 a female was caught at "De Beer", formerly a nature reserve opposite of Hook of Holland. Both specimens were taken along the coast, the distance between the two localities being about 18 kilometers. No further captures seem to have been made abroad since three females and one male were recorded from Siberia by GUSSAKOVSKIJ in 1937. It is obvious that *P. sibiricus* is a rare species. In view of the second record from the Netherlands it may still belong to the Dutch fauna. I wonder, however, what its chances will be after the alterations of the coastline south of Hook of Holland during the last years and the intensified recreation.

3. *Psenulus gussakovskij* nom. nov. for *Psenulus puncticeps* Gussakovskij, 1932

In the collections of the British Museum (Natural History), London, is a *Psenine* wasp labelled "*Psen puncticeps* Cam. type Bombay" (handwritten by CAMERON), the pin also bearing a typewritten label "Matheran 3.99". The type-number is 21.819. In the original description (CAMERON, 1907) Simla in the state of Punjab was given, apparently erroneously, as the locality of the capture. Matheran is situated about 40 kilometers east of Bombay.

Psen puncticeps Cameron should now be placed in the genus *Psenulus* Kohl and is closely related to *Psenulus antennatus* Rohwer. Consequently the name of *Psenulus puncticeps* Gussakovskij, described in 1932 after material from Siberia and East Europe, is a junior secondary homonym and is hereby replaced by *Psenulus gussakovskij*.

In 1941 J. DE BEAUMONT proposed *Psen (Mimesa) gussakovskij* as a new name for *Psen (Aporina) costae* Gussakovskij (1937) nec André. There is no fear, however, that *Psen* and *Psenulus* will ever be regarded as congeneric and a new synonymy might be created.

4. *Psenulus cypriacus* spec. nov.

In 1944 Dr. DELFA GUIGLIA, Genova, recorded 72 females and 46 males of *Psenulus pallipes* Panzer, 1798 (*Psenulus atratus* Fabricius, 1804), collected by Mr. G. A. MAVROMOUSTAKIS at Limassol, Cyprus. Later more specimens have been sent by the same collector to various museums and private entomologists.

This form from Cyprus is distinctly different from continental representatives of *P. atratus*, the size being smaller and the punctation of scutum and mesopleura much stronger. DE BEAUMONT (1947) already noticed the much stronger punctation of various Sphecidae from Cyprus, especially in the genera *Crabo* and *Cerceris*. MAVROMOUSTAKIS had reported to him the same phenomenon for the bee genus *Anthidium* and TRAUTMANN (1927) for Chrysididae. As regards the latter family LINSENMAIER (1959) described for instance *Holopyga cypruscula* from Cyprus with extraordinarily coarse punctation and *H. cypruscula detrita* from Iran and Palestine, which is much finer punctate. *Hedychridium verboeffi* Linsenmaier from Corfu and Yugoslavia has a distinctly finer punctate gaster than its subspecies *yermasoyiense* Linsenmaier from Cyprus.

As long as little was known of the forms of *Psenulus* from the nearby continent, I have hesitated to name the Cyprian form, of which moreover I had only females at my disposal. Meanwhile, however, a few related forms — *P. meridionalis* from the Mediterranean area and *P. pan* from Turkey — have been described by De BEAUMONT whilst a few relatively finely punctate forms have been collected in Daghestan and Lebanon. Dr. DELFA GUIGLIA had the kindness to send me two couples from the material recorded by her in 1944. I am convinced now that the principal and most obvious characters, namely the smaller size and the stronger punctation, are constant and also that the clypeal teeth of the female are distinctly smaller than those of *P. atratus* from West Europe. Further, but to a lesser extent, the pygidial area of the female and in both sexes the length of the mid basitarsus differ. Therefore the Cyprian form is described here as a distinct new species.

Female. — Black; underside of flagellum of antennae reddish-brown, palpi brownish, labrum reddish, central part of mandibles reddish-brown, tegulae brown. Fore tibiae yellowish-brown, with darker streak on outer side, fore and mid tarsi yellowish-brown, apices only of hind tibiae and of hind tarsi yellowish-brown. Sixth sternite brownish. Veins of wings dark brown.

Clypeus, especially lower part, more convex than in *P. atratus*, median part of anterior margin with two small teeth, disk shining, upper two-thirds finely and densely punctate. Raised interantennel carina broadened, about as in *P. atratus*, not as much as in *P. pan*, *P. meridionalis* or in two unidentified forms from Lebanon and Daghestan. Interantennal carina ending in a distinct transverse carina. Frons densely, almost striato-punctate, upper part with smooth and shining interspaces, vertex less densely punctate, interspaces slightly larger than diameter of punctures, smooth beside posterior ocelli. Tempora and cheeks with fine and dense oblique striae. Antennae somewhat clavate, third segment about one and a half times as long as broad at apex, following segments gradually shorter, segments 9—11 distinctly shorter than broad, last segment slightly more than one and a half times as long as broad at base.

Scutum shining, with strong punctures, closest anterolaterally and posteriorly, interspaces mostly somewhat larger than diameter of punctures, posterior margin with short longitudinal rugae. Scutellum finer, metanotum much finer punctate, interspaces a few times diameter of punctures. Enclosed area of propodeum with short oblique lateral carinae, median part with some irregular carinae (as in *P. atratus*). Back of propodeum with coarse irregular carination, also behind enclosed area, only indistinctly obliquely striate there. Sides of propodeum with fine oblique striation. Epicnemium finely punctate. Mesopleura and ventral side of thorax shining, strongly punctate, posterior margin of mesopleura densely striate. Metapleura smooth and shining. Mesosternum on either side of median carina dull, almost impunctate. Punctuation of hypo-epimeral area finer than that of lower part of mesopleura. Anterior plate of mesepisternum coarsely striato-punctate. Anterior oblique suture foveolate, widened upper part with transverse carinae.

First recurrent vein of fore wings ending just in second submarginal cell, sometimes interstitial, second recurrent vein ending in third submarginal cell, distance from second cell less than one fourth of bottom of third cell. Top of second submarginal cell narrowed, cell almost triangular. Mid basitarsus distinctly longer than following three segments (in *P. atratus* only little longer).

Petiole rounded below, sides with indistinct longitudinal carinae, dorsally with shallow longitudinal sulcus, apex with deep elongate-triangular pit. Gaster except petiole finely punctate. Pygidial area dull, finely but distinctly punctate, broadly triangular, slightly broader than in *P. atratus* and its lateral carinae somewhat shorter. Second gastral sternite with distinctly bordered elongate-triangular depression, sternites finely punctate.

Face with appressed silvery pubescence, leaving sculpture visible, and also with a few long, erect white hairs. Vertex and thorax with silvery-white pubescence, dense on mesosternum, epicnemial areas below with circular patch of dense short pubescence. Gaster with fine whitish pubescence, yellowish-grey on last segment. Fourth and fifth sternites with fringe of long white hairs on hind margin, sixth sternite with dense pubescence of long, backwards directed yellowish-grey hairs.

Length about 4.5—5 mm.

Male. — Very similar. Foreside of antennal segments slightly rounded. Segments 3—6 more than one and a half times as long as broad at apex, last segment nearly twice as long as broad at base. No distinct tyloidea. Back of propodeum coarser reticulate-carinate. Depression on base of second sternite less distinct. Mid basitarsus distinctly longer than following three segments.

Easily distinguished from *P. pan* and *P. meridionalis* by the stronger punctuation, the smaller size and the narrower interantennal carina.

Cyprus: Limassol, 1 ♀ (holotype), Oct. 1933, 1 ♂ (allotype), August 1933, 1 ♀ (paratype), Sept. 1933, 1 ♂ (paratype), August 1933 (Museo Civico di Storia Naturale, Genova; ♂ paratype in author's collection).

Further I have seen the following females: Limassol (altitude 0—500 feet), 18 and 20 April 1951, 7 July 1951, 3 ♀, 1 July 1964; Zakaki (0—500 feet), 26 May 1950; Kivides (500—1000 feet), 6 May 1951; Kalopanayiotis (about 2500 feet), 24 Oct. 1964; Famagusta (0—500 feet), 18 Oct. 1955; all collected by Mr. MAVROMOUSTAKIS.

DE BEAUMONT (1960) records one male and two females from Rhodes as *Psenulus* sp., regarded by him as being identical with the Cyprian form.

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Bledius-materiaal. — Bij een onderzoek naar de verspreiding en de ecologie van *Bledius*-soorten in het Waddengebied is gebleken dat, ondanks het verschijnen van LOHSE's bewerking van deze „mollen onder de kortschildkevers" (1964, *Die Käfer Mitteleuropas* 4: 89—99) de determinatie nog steeds verre van eenvoudig is. Alleen op Schiermonnikoog al werden 10 soorten aangetroffen, waarvan twee met een tot op heden onopgehelderde taxonomische status. Speciaal de groep rond *B. fuscipes* Rye, welke trouwens niet uitsluitend kustsoorten omvat, is vol raadsels.

Bledius-kevertjes graven tunnels (retraite-gangen, voedselgangen en broedgangen) in bodems in de nabijheid van water, vooral aan de zee kant, op slikken en kwelders, in vochtige duinvalleien, om plasjes, langs beken en rivieren, etc., waar ze zich voeden met algen. Over de ecologie van *Bledius*, onder andere over de interessante broedzorg, heeft E. BRO LARSEN (1937, *Vidensk. Medd. Dansk naturh. Foren.* 100: 1—232, platen 1—2) uitvoerig geschreven. De dieren, die onder meer te herkennen zijn aan de graafdoorns op hun schenen, zijn in aantal te verzamelen door te „spoelen", d.w.z. door water op de bodem te gooien. Daarop komen ze — met kevers van diverse andere groepen — uit hun gangen om zich voor deze kunstmatige overstroming te redden.

Graag ontving ik voor een gedetailleerd onderzoek binnen- en buitenlands *Bledius*-materiaal, liefst grote series in alcohol; wat Nederland betreft vooral van plaatsen die niet als trekpleisters voor insektenverzamelaars te boek staan.

Mijn *Bledius*-determinaties geven trouwens aanleiding tot een dringende suggestie. Laten ecologen en andere niet-vaktaxonomeren, voor zover ze dat nog niet doen, toch hun materiaal, geheel, of monsters daaruit, veilig deponeren in een centrale instelling, zodat achteraf verificatie en eventueel revisie van taxonomische informatie mogelijk blijft.

J. KRIKKEN, Rijksmuseum van Natuurlijke Historie, Raamsteeg 2, Leiden.