

Notes on palaeartic *Psenini*. V-VIII (Hymenoptera, Sphecidae)

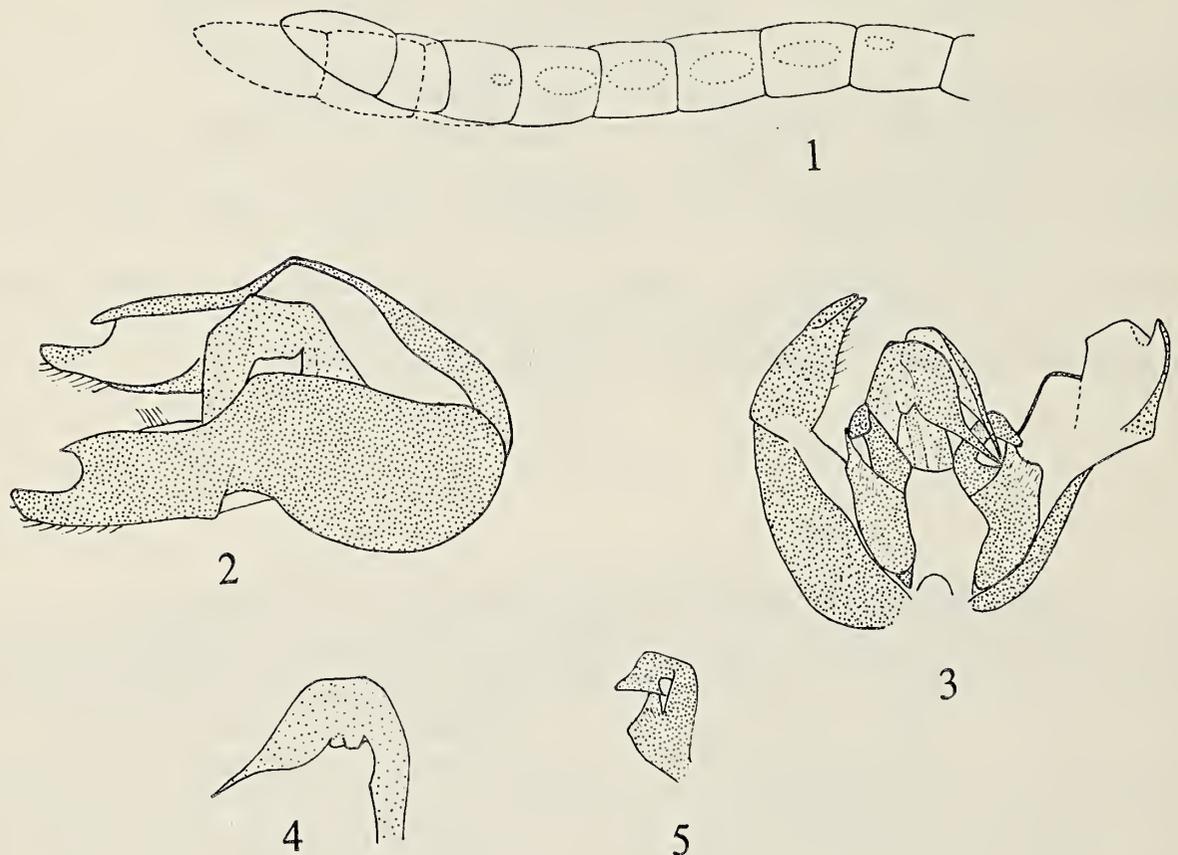
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5. *Psen (Mimumesa) sibiricus* Gussakovskij, 1937

A female and the first known European male of *P. sibiricus* were collected by Jacques Petit, Wonck (Belgium), near the mouth of the river Schelde (Saeftinge, municipality of Hulst, Dutch-Flanders) in August 1973. Further particulars regarding this find and other interesting Hymenoptera from this area will be published elsewhere by Mr. Petit. In the meantime he kindly enabled me to prepare a few taxonomic notes on both sexes, in supplement to the description by Gussakovskij (1937).



Figs. 1—5. *Psen (Mimumesa) sibiricus* Gussakovskij ♂; 1, antenna, 2 and 3, genital apparatus, in lateral and postero-ventral view, 4, right penis valve, 5, volsella.

Female. — First and second tergites entirely red but the black base of the third tergite shining through the transparent red hind margin of the second tergite. On re-examination of the female recorded from De Beer (Van Lith, 1948) I found that also in this specimen the second tergite is completely red. Ventral plate of petiole and entire second sternite red. Antennae completely black. Tarsal segments 2—5 of fore legs and tarsal segments 2—4 of mid legs reddish-brown.

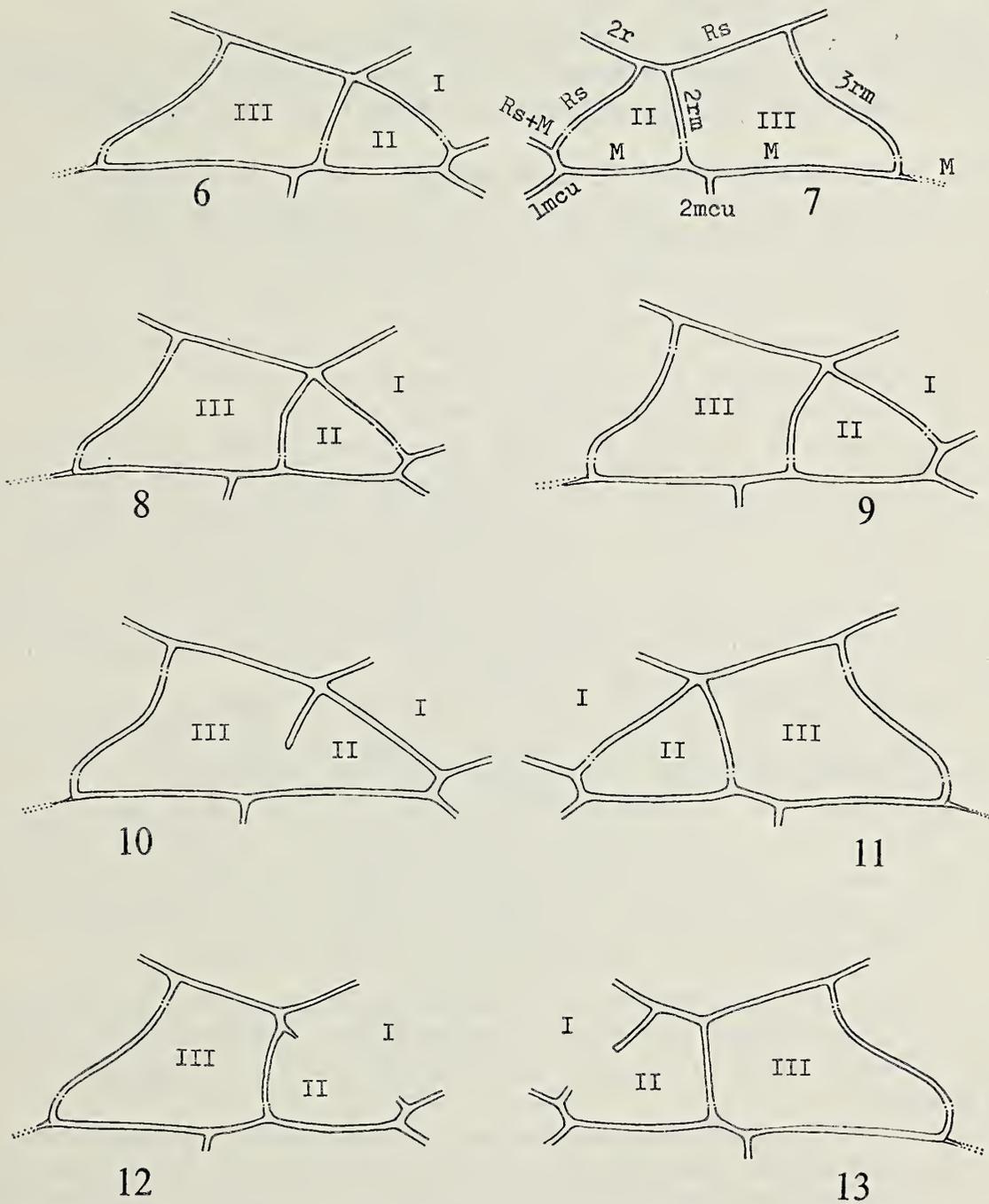
Scutum with fine punctures and fine longitudinal striae. Sculpture of mesopleura similar but finer, hypo-epimeral area almost smooth. Scutellum punctate, interstices larger than punctures, posterior margin with short longitudinal striae. Interepicnemial area finely striate. Acetabular carina short, about half as long as distance between lateral epicnemial carinae below, these latter carinae slightly bent backwards. Dr. W. J. Pulawski, Wroclaw, kindly examined the syntypes of *P. sibiricus* in Leningrad and reported that these have the same course of the epicnemial carinae.

Petiole about four times as long as wide in the middle, dorsally with V-shaped

carina which is single on posterior half, basal half with some indistinct irregular transverse rugae; latero-dorsal edges sharp, ventral side of petiole flattened with sharp lateral edges, sides also with median longitudinal carina, therefore each side with two grooves. Back of hind femora entirely pubescent.

Length nearly 9 mm.

Male. — Resembling female in coloration but only sides of ventral plate of petiole red, second tergite and sternite with black apical margin, as wide as one-fourth or one-fifth of visible length of tergite or sternite. Median part of clypeal margin blunt, not tridentate as in female. Genae finely punctate, also finely striate. Fourth and fifth antennal segments with indistinct, somewhat shining ridge, sixth segment with small



Figs. 6—13. *Psenulus concolor* (Dahlbom); I, II and III, submarginal cells of fore wings; 6, left wing of ♂, cell II with acute upper side, 7, right wing of same ♂, venation normal, Rs, radial sector, M, media, 2r, 2rm and 3rm, cross-veins, 1mCu and 2mCu, first and second recurrent veins; 8, left wing of ♂, 9, left wing of ♀, cells II with acute upper sides (right wings of both specimens similar), 10, left wing and 11, right wing of same ♀, cells II with acute upper sides, in left wing 2rm incomplete, 12, left wing of ♀ with petiolate cell II and reduced abscissa Rs, right wing similar in both respects, 13, right wing of ♀ with normal dorsal side of cell II but reduced Rs, left wing normal.

oval tyloides, about one-third of length of segment, segments 7—10 with large broad oval, slightly convex, tyloidea, not reaching base or apex of segments, eleventh segment with small oval tyloides, length over one-fifth of length of segment (Fig. 1; as the last segments of the antenna were bent forward when sketched with the aid of a camera lucida, a dotted line indicates their appearance in a straight position).

Length about 9 mm.

Genital apparatus (Fig. 2 and 3) large, blackish-brown and shining, resembling that of other species of the subgenus *Mimumesa*; stipes with convex outer side, a flat whitish membrane connecting margins on inner side, apices below with some fine curved hairs; penis-valves (Fig. 4) brown, sharply pointed; volsellae (Fig. 5) blackish-brown.

6. *Psenulus concolor* (Dahlbom, 1943) — aberrant wing-venation

In 1946 and 1947 a few nests of *Psenulus concolor* were collected from twigs of ash-trees near Ulvenhout (North Brabant). In the spring of 1947 a number of adults emerged of which four females and two males showed abnormal venation of the fore wings.

Usually the upper side of the second submarginal cell of the forewings is flattened, with a distinct abscissa of the radial sector (Rs). The normal shape of the submarginal cell is shown in Fig. 7; the transparent short stretches in the veins, the fenestrae, are indicated in the figures by a dotted interruption of the lines. On the whole the nervation of the wings is somewhat variable, for instance the place where the second recurrent vein (2mcu) ends in the third submarginal cell. As a result the length of the part of M between 2rm and 2mcu ranges between about one-sixth or one-third of the abscissa of M between 2rm and 3rm (Fig. 6 and 12).

In the left wing only of one of the wasps (Fig. 6) and in both wings of three other specimens (Fig. 8, 9 and 10—11) the second submarginal cell is sharply pointed dorsally and might be called triangular but for a small abscissa of M between Rs+M and 1mcu. In an other female the second submarginal cells of both wings are even petiolate (Fig. 12). These facts are interesting as in a few groups of closely related Oriental and Ethiopian species triangular second submarginal cells are normal and a petiolate cell is characteristic for a few African species. In palaeartic *Psenulus* the upper side of the second cell normally is open, as far as I know.

Apart from the pointed or petiolate cells I also found a reduction of the lateral legs of the triangle, vein 2rm (Fig. 10) or Rs (Fig. 12 and 13) being more or less reduced. In the female of Fig. 12 the two abnormalities are quite symmetrical.

Two males (Fig. 6—7 and 8) and one female (Fig. 9) with sharp second cells emerged from the same nest, numbered 67, another male this nest is normal. Two females (Fig. 10—11, left and right wing of one female, and Fig. 12) with abnormal venation were reared from nest Nr. 53. Fig. 13 shows part of the right wing of a female with reduced venation, eleven other adults from this nest are normal.

7. *Caenocryptus macilentus* Gravenhorst, parasite of *Psenulus concolor* (Dahlbom)

In March 1950 a female and a male of *Caenocryptus macilentus* (Ichneumonidae, Cryptinae) emerged from a twig-nest of *Psenulus concolor* found near Ulvenhout (North Brabant).

In March and April 1965 eight females and one male of *C. macilentus* were reared from a twig-nest, together with one female and one male of the host *Psenulus concolor*. The nest was collected by Father Arnoud along the road from Nijswiller to Wahlwiller (Dutch South Limburg) and kindly sent to me for study.

These are the only ichneumonid wasps I have found in the many nests of *Psenulus concolor* examined in the course of a few decades. I do not know whether *C. macilentus* has been mentioned earlier as a parasite of *P. concolor*. (Identification of the parasites by Mr. G. E. J. Nixon of the Commonwealth Institute of Entomology, London).

8. *Perithous septemcinctorius* Thunberg, parasite of *Psenulus fuscipennis* (Dahlbom, 1843).

Previously (1951) I recorded a few females and males of *Perithous septemcinctorius* Thunberg (= *varius* Gravenhorst) (Pimplinae) reared from trap-nests, set out in Den Dolder (province of Utrecht) by Mr. P. M. F. Verhoeff, Utrecht, and occupied by *Psenulus fuscipennis*. Both sexes of the ichneumonid also developed in March 1950 in a nest of *Psenulus fuscipennis* collected near Ulvenhout (North Brabant). (Identification of the parasites by Dr. J. F. Perkins, British Museum (Natural History), London, and Mr. G. E. J. Nixon).

Later I observed *Perithous septemcinctorius* hovering before beetle-holes in a wooden barn near Chaam (North Brabant). These holes were also visited by females of *Psenulus fuscipennis* which probably nested there but carried no prey.

REFERENCES

- Gussakovskij, V., 1937. Espèces paléarctiques des genres *Didineis* Wesm., *Pison* Latr. et *Psen* Latr. (Hymenoptera Sphecoidea). — *Trudy Zool. Inst. Leningrad* 4: 599—698.
- Lith, J. P. van, 1948. *Psen sibiricus* Gussakovskij f.n.sp. (Hym. Sphecid.). — *Ent. Ber., Amst.* 12: 230—231.
- , 1951. Over de biologie van het geslacht *Psenulus* Kohl (Hym. Sphec.). — *Ent. Ber., Amst.* 13: 211—217.

Nieuwe aanwinsten voor de bibliotheek

- ALAYO, D., 1968, Los Neurópteros de Cuba (Poeyana B, 2).
- ANDO, H., 1962, The comparative embryology of Odonata with special reference to a relic dragonfly *Epiophlebia superstes* Selys.
- ANDREWES, C., 1969, The lives of wasps and bees.
- BOORMAN, J., 1971, West African butterflies and moths.
- CONGRESS, 1969, Proceedings of the second international congress of Acarology (G. Owen Evans ed.).
- DESCAMPS, M., 1964, Révision préliminaire des Euschmidtinae (Mém. Mus. natn. Hist. nat. n.s. A, Zool., 30).
- DISPERSAL and dispersal power of carabid beetles, 1971 (Symposium, Wijster).
- DÖRING, E., 1955, Zur Morphologie der Schmetterlingseier.
- EARLY stages of Japanese moths in colour, 1969, 1970 (2 vols).
- FAUNE DE MADAGASCAR vol. 24, 1967, Whalley, P.E.S., Thyrididae.
- 25, 1967, Slater, J. A., Lygaeidae, Blissinae.
- 26, 1968, Dirsh, V. M. & M. Descamps, Pyrgomorphidae and Acrididae.
- 27, 1968, Paulian, R. & P. Viette, Papilionidae.
- 28, 1968, Villiers, A., Reduviidae I.
- 29, 1969, Kiriakoff, S. G., Notodontidae.
- 30, 1969, Brindle, A. Dermaptera.
- 31, 1970, Dufay, Cl., Noctuidae, Plusiinae.
- GUIDO, A. S. e.a., 1958, Investigaciones sobre acridoideos del Uruguay.
- GUY, I., 1966, Contribution à l'étude des araignées de la famille des Lycosidae et de la sous-famille des Lycosinae avec étude spéciale des espèces du Maroc (Trav. Inst. chéri-fien).
- KALYANAM, N. P., 1967, Common insects of India.
- KLIUTSCHKO, Z. F., 1963, The Noctuidae of the western Ukraine (Russisch).
- LAIDLAW, W. B. R., 1970, Butterflies of New Zealand.
- PICKARD, B. C., 1954, Grasshoppers and crickets of Great Britain and the Channel Islands.
- SALT, G., 1970, The cellular defense reactions of insects (Cambr. Mon. exp. Biol. 16).
- nieuw tijdschrift:
 Videnskabelige Meddelelser fra Danks Naturhistorisk Forening, København, vanaf vol. 133, 1970.