

## New and interesting parasitic Bees (Hymenoptera, Apoidea)

by

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(with 4 figures)

(concluded)

### *Ammobates* (*Xerammbates*) *minutissimus* sp. nov.

Male. — Length 3.5 mm.

Black; labrum very shiny, longer than broad, basal half shorter than its length, convex, not carinate, basal half somewhat strongly punctured and almost black, apical half polished and yellowish; antennal joints 4 to 9 all alike and a little broader than long; third antennal joint almost as long as broad, somewhat longer than fourth (all more easily visible from above); clypeus plain, shiny, with very short and thin white hairs not covering the surface; paraocular area, supraclypeal plate and frons with very short, thin white hairs not covering the surface; vertex and occiput very shiny, almost bare; cheeks with very fine, short white pubescence. Mesoscutum polished and shiny, with somewhat sparse, fine punctures and with very short, thin and sparse white hairs on anterior and posterior margin and laterally; scutellum unmodified; pilosity on mesepisternum sparse and white; tegulae yellowish brown; wings hyaline, veins light yellowish brown; second recurrent vein interstitial with second transverse cubital vein; first recurrent vein visible only at its base (remaining vein missing) but enclosed in second cubital cell; basal vein interstitial with transverse median vein; legs black, femora and tibiae light yellow brown at the apex; tarsi light yellow brown; hind spurs yellowish brown; tibiae with short, thin shiny white hairs not covering the surface. Abdomen very shiny, minutely and very sparsely punctured; the basal apical margin of tergites 1 to 6 yellow (posterior tergites with the yellow of apical margin very slightly tinged with yellowish brown on inner side); seventh tergite short and forming a broad obtusely edged pygidium, its base a little broader than the apex; anterior tergites almost bare, tergites 3 to 6 with very sparse, very short and thin golden white hairs mostly on the apical margin; sternites 1 to 6 tinged with yellowish brown, apical margins yellow; sternites with sparse, very short, thin golden white hairs.

Tunisia: Djerba Island, 1 ♀ (type), 14—20.IV.1955 (P. M. F. VERHOEFF), in my collection.

This very small *Ammobates* belongs to the subgenus *Xerammbates* Popov, by having the second recurrent vein interstitial with the second transverse cubital vein. Taking into consideration the known species belonging to the genus *Ammobates*, no species can be compared or related to *Ammobates* (*Xerammbates*) *minutissimus* sp. nov.

### Tribe Neopasitini

#### Genus *Schmiedeknechtia* Friese

Female. — Length 4—5 mm.

Clypeus not protruding, very short, five times as broad as long; labrum longer than broad reaching beyond the closed mandibles, apical margin obtuse and

narrower than base; antennae twelve-jointed; sixth tergite hidden or retracted; fifth sternite trapeziform, apical margin slightly concave in middle and with a short white fringe; sixth sternite visible between fifth tergite and sternite, appenticulate at each side; wings without pilosity, but beyond the venation with minute sparse papillation and intermixed with very sparse minute pilosity; marginal cell long, elongate ovate, very slightly appenticulate at the apex which is a short distance from the wing tip; two cubital cells; first cell about thrice as long as second; hind claws not cleft.

**Male.** — Length 4—5 mm. Similar to the female; antennae thirteen-jointed; third antennal joint longer than fourth; seventh tergite with a pygidium.

*Schmiedeknechtia* differs from the genus *Biastes* by having a longer labrum, a differently shaped scutellum and a different venation; from the genus *Ammobatoides* by the shape of the clypeus, scutellum, venation, size and other details. From *Pasites* by the presence of a well-developed pygidium in the male, by the shape of scutellum and clypeus and by the venation. From *Parammobatodes* it differs by having a longer labrum, a different shape of clypeus and scutellum, by the venation beside other details. All the above mentioned characters were taken from the description of both species.

#### *Schmiedeknechtia verhoeffi* sp. nov.

**Female.** — Length 4 mm.

Black; clypeus yellowish brown, very short, not protruding over labrum, broader than long, almost five times as broad as long, with short, shiny white hairs not covering the surface; mandibles and labrum yellowish brown; antennae deep yellowish brown; third antennal joint longer than broad, and longer than fourth; antennal joints 4 to 11 longer than broad and all alike (all more easily seen from the frontal view); tip of eyes with a deep yellowish brown mark; head spherical, a little broader than thorax (more easily seen from the frontal view); paraocular area not reaching tip of eyes, supraclypeal plate and posterior part of frons, with short shiny white hairs; remainder of head almost bare; vertex shiny, somewhat sparsely and finely punctured. Mesoscutum shiny, convex, sparsely and finely punctured, bordered with reddish brown laterally, almost bare, with very sparse, very short golden white hairs on anterior margin; scutellum convex, sloping posteriorly and not reaching the level of the mesoscutum, deep reddish brown, with very short, sparse and depressed golden white hairs; postscutellum (metanotum) reddish brown; mesepisternum mostly reddish brown, covered with very short, shiny white, very thick hairs; tubercles pale reddish brown, pale yellow anteriorly, with very short shiny white hairs; pronotum deeply and widely emarginate in middle, reddish brown; tegulae light yellow brown; wings hyaline; veins and pterostigma brown; basal vein nearly interstitial with transverse median; legs light reddish brown, femora dark (except for their base and apex); basitarsi linear; hind basitarsi a little thicker, straight and longer than median, the apex protruding to an obtusely edged point; claws simple, without a cleft; hind spurs yellow brown. Abdomen shiny, light reddish brown; tergites very finely and somewhat sparsely punctured; second tergite with a transverse subapical depression; tergites almost bare, with a thin but very short and sparse, pale pubescence; fifth tergite broad,

apical margin truncate and obtuse laterally, with a median longitudinal, obtusely edged fine carina, apical margin and carina densely covered with a very short, thin and shiny white pubescence, sixth tergite margin concave and covered with a short shiny white fringe; sixth sternite with an appendage on either side, reddish brown, hidden between fifth sternite and tergite, each appendage having three or four sharp fingers.

*Male*. — Length 4 mm.

Similar to the female; black; clypeus very short, a great deal broader than long, apical margin straight, light yellow brown, with basal very short shiny white hairs (more easily seen from a lateral view); remainder of frons, paraocular area antennae orange; scape a little darkened posteriorly (except base and apex); third antennal joint longer than broad, much broader than fourth; antennal joints 5 to 11 somewhat longer than broad and all alike (more easily seen from below); anterior part of frons and upper paraocular area with very sparse, short, thin pale hairs (more easily seen from a lateral view); remainder of frons, paraocular area and supraclypeal plate with very short, somewhat dense shiny white hairs. Mesoscutum convex, shiny, sparsely and very finely punctured, black, with very short, sparse, depressed, pale hairs, more so anteriorly and less so posteriorly; scutellum as in the female, black, with a reddish brown tinge (excepting the basal margin), with very few and short, sparse pale hairs, denser at sides; mesepisternum black, with denser, very short shiny white hairs; propodeum bare, shiny; tubercles pale yellow, with very short shiny white hairs; pronotum deeply emarginate, each lateral part covered with very short shiny white hairs; tegulae light yellow brown; wings hyaline; second recurrent vein as in the female; first recurrent vein enclosed in first cubital cell, a little away from the line of the apex of the first transverse cubital vein; coxae very short and black (except a narrow pale yellow area at the base of the middle and hind coxae); hind coxae much longer and broader than fore or middle coxae, longer than trochanters; trochanters and femora black; femora with pale yellow apex; remainder of legs pale orange; tibiae dorsally very slightly darkened and basally pale yellow; all basitarsi linear; tibiae with very thin and short, sparse shiny white hairs. Abdomen light reddish brown, apical margins a little paler; base of first tergite black, disc on each side of middle with a hair tuft, each consisting of 5 to 9 very short white bristles; disc of second tergite with six very short and hardly visible depressed white bristles on either side of middle; remaining tergites almost bare, with very short and thin, very sparse pale pubescence (visible only from a lateral view); pygidium of seventh tergite densely punctured, apex obtuse (fig. 2); sternites light reddish brown, apical margin polished and a little paler.

*Tunis*: Djerba Island, 1 ♀ (type), 1 ♀ (paratype), 1 ♂ (allotype), 14—20. IV.1955 (P. M. F. VERHOEFF), in my collection.

I have pleasure in naming this interesting bee, as well as the small new *Ammobates*, after Mr. P. M. F. VERHOEFF.

*Schmiedeknechtia verhoeffi* sp. nov., is very different from the Algerian *Schmiedeknechtia oraniensis* Friese and the Turkestanian *Schmiedeknechtia gussakovskiyi* Popov. From these species it differs as follows:

*Schmiedeknechtia oraniensis* Friese, *female*. Length 5 mm. Fuscous; head and thorax densely and distinctly punctured, the former broader than the latter,

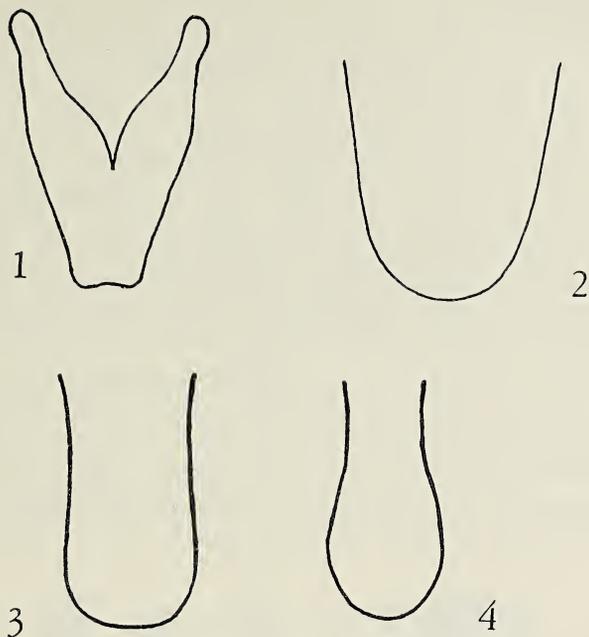


Fig. 1. Seventh sternite of *Ammobatoides lebanensis* sp. nov., ♂. Fig. 2. Seventh tergite of *Schmiedeknechtia verhoeffi* sp. nov. Fig. 3. Seventh tergite of *Schmiedeknechtia araniensis* Friese (drawn by Professor H. BISCHOFF from the type). Fig. 4. Seventh tergite of *Schmiedeknechtia gussakovskiyi* Popov (drawn by Professor H. BISCHOFF from the paratype).

the head very short and with short white hairs only near base of antennae; clypeus and labrum light yellow; mandibles yellow with brown tips; antennal joints 3 to 11 as long as broad; scutellum orange, flat and with a somewhat produced and feebly emarginate hind margin; abdomen very dark brown, very densely and rather coarsely punctured, the tergites with broad red brown borders; on either side of middle tergite 1 with a minute patch of yellow hair, tergites 2 to 4 with two such patches on either side; legs very dark brown, all parts with reddish margins, sparsely covered with white hairs, the last 4 tarsal joints black; wings infusate, with narrow dark margins, veins brown; tegulae large and yellow brown. Male. — Length 5 mm. Similar to the female, but more predominantly black; clypeus, mandibles and labrum yellow; apical antennal joints with faint knobs on the underside; tergites with more numerous distinct white hair scale spots than in the female, the fifth tergite has two such spots; pygidium of seventh tergite entirely yellow (fig. 3). According to Professor BISCHOFF (*Trav. Inst. Zool. Acad. Sc. URSS* 2 : 60, 1934), *Schmiedeknechtia oraniensis* Friese, "has so great a density of punctation of head and thorax that there is no shiny surface".

*Schmiedeknechtia gussakovskiyi* Popov, female. Length 4.5 mm. Closely allied to *S. oraniensis* Friese. Head and thorax covered with widely separated large coarse punctures; basal parts of tergites 1 to 3 covered with similar but more dense punctures, apical parts with smaller punctures; sternites covered with coarse and rather large punctures; each lateral appendage of sixth sternite has 15 to 17 setae

on its apical external margin. Black; mandibles, labrum, clypeus, cheeks and paraocular area with a narrow brown yellow band extending to the occiput (occipital band interrupted in middle); first abdominal tergite and all sternites, excepting the dark basal parts, red brown. Male. — Length 4.5 mm. Seventh tergite prolonged so as to form a process quite similar to those in the male of the genus *Ammobatoides*, the tergite rather narrowed basally and more than twice as long as its greatest width (fig. 4); colour darker than in the female; red brown patterns almost absent; yellow patterns enlarged; mandibles, clypeus and antennae yellow (except for the brown spot on the second joint of flagellum); tubercles and tegulae yellow; tergites with red brown patterns smaller than in the female; sternites almost entirely black; white pubescence strongly developed, especially on the face and abdomen.

*Schmiedeknechtia verboeffi* sp. nov., differs from the two above mentioned species by the cuticular colour, size, punctuation, pilosity, length of antennal joints, the shape of male pygidium and by other details.

I am indebted to Professor Dr. H. BISCHOFF for sending me figs. 3 and 4 based on material of *Schmiedeknechtia oraniensis* Fr. and *Schmiedeknechtia gusakovskiyi* Pop. in the Zoological Museum, Berlin.

## Tribe Dioxyni

### Genus *Paradioxys*

#### *Paradioxys ammobius* (Mavrom.)

*Dioxys ammobius* G. A. Mavromoustakis, 1954, in *Bull. Res. Counc. Israel* 4 (3) : 271—272.

*Paradioxys ammobius* (Mavrom.) and *Paradioxys moricei* (Friese) (*Entom. Nachr.* 25 : 3, 1899) belong to the genus *Paradioxys* and are members of the group of *Paradioxys moricei* (Friese).

### Genus *Prodioxys*

*Prodioxys* H. Friese, 1914, in *Stett. ent. Zeitschr.* 75 : 220.

*Prodioxys* G. A. Mavromoustakis, 1954, in *Bull. Res. Counc. Israel* 4 (3) : 272.

In this genus the basal part of the first abdominal tergite is convex and not separated by a carina or a trace of a carina from the horizontal dorsal surface.

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Symposium „Insect and Foodplant”. Bij de Directeur van het Laboratorium voor Entomologie, Generaal Foulkesweg 37, Wageningen, zijn de Proceedings van bovengenoemd symposium, hetwelk in 1957 te Wageningen werd gehouden, verkrijgbaar. 118 pp. met vele afb., prijs f 5.—

G. L. VAN EYNDHOVEN, Secretaris.