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## A new species of the genus *Platypalpus* MACQ. from Saxonia-Anhalt (*Insecta : Diptera : Empidoidea : Hybotidae*)

With 7 Figures

PATRICK GROOTAERT & ANDREAS STARK

**Abstract.** Among several thousands of *Platypalpus* specimens collected since 1984 in agricultural crops in the environs of Halle (Saale) we found males and females of a hitherto unknown species of that genus. It belongs to the *hackmani* species group and is described as *Platypalpus hallensis* spec. nov. The male terminalia are figured in detail. A key to the *hackmani* species group in adaptation to the key of European *Platypalpus* species by GROOTAERT & CHVÁLA (1992) is given.

### Introduction

Since 1984 the second author collected and determined more than 40,000 *Platypalpus* specimens from agricultural crops, mainly cereals, in the environs of Halle (Saale). As a whole they were represented by more than 35 species, whereas *Platypalpus articulatoides* (FREY, 1918), *P. pallidicornis* (COLLIN, 1926), *P. pictitarsis* (BECKER, 1902), *P. kirtlingensis* (GROOTAERT, 1986), *P. maculimanus* (ZETTERSTEDT, 1842), *P. minutus* (MEIGEN, 1822), *P. pallidiventris* (MEIGEN, 1822), *P. infectus* (COLLIN, 1926), and *P. excisus* (BECKER, 1907) (in order of dominance) have to be found as the characteristic ones of the cereal fields in central Germany (STARK 1994). Many other species were only represented by few individuals. Among them, there was a hitherto unknown species of the *hackmani* species group which will be described here.

### Systematic account

#### *Platypalpus hallensis* spec. nov. (Figs. 1–7)

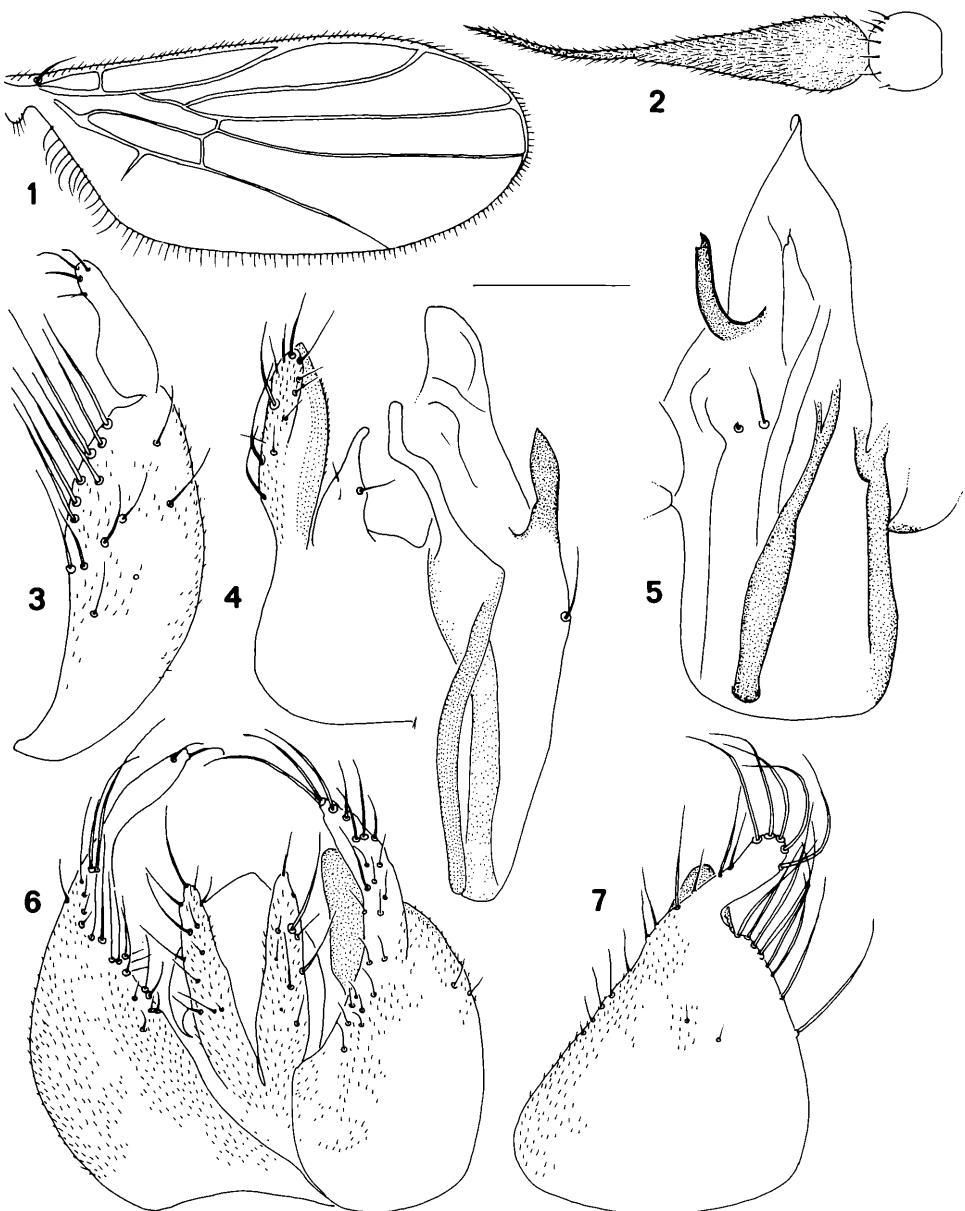
A small species (2.2–2.7 mm) of the *hackmani* group with two pairs of short pale vertical bristles, yellow basal antennal segments and a black third antennal segment which is three times as long as deep. Legs yellow, but terminal tarsal segment of fore legs annulated black. Mid femora slender, ventrally with only fine bristles and no posteroventrals. Mid tibiae without spur, but with two short, black spines.

**Male.**  
Head black in ground-colour, thinly pale dusted. Frons in front very broad, much wider than second antennal segment, gently widening towards ocellar triangle. Face as broad as second antennal segment, densely silvery grey dusted, including clypeus. A pair of pale anterior ocellar bristles which are twice

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Authors' addresses:

Dr. P. Grootaert, Department of Entomology, Koninklijk Belgisch Instituut voor Natuurwetenschappen, Vautierstraat 29, B-1040 Brussels (Belgium)  
Dr. A. Stark, Universität Lüneburg, Institut für Umweltwissenschaften, Wilschenbrucher Weg 84, D-21335 Lüneburg



Figs. 1–7: *Platypalpus hallensis* spec. nov., male paratype (Germany, Saxonia-Anhalt, Mötzlich near Halle [Saale], 26. VI. 1990): – 1: wing; – 2: antenna; – 3: right periandrial lamella; – 4: left cercus and hypandrium; – 5: hypandrium; – 6: periandrium; – 7: left periandrial lamella. Scale = 0.1 mm.

as long as second antennal segment. Two pairs of pale yellow to pale brownish verticals as long as ocellar bristles. Occipital bristles short, pale above, becoming longer and darker downwards. Basal antennal segments clear yellow, third segment (Fig. 2) completely black, nearly three times as long as deep; arista pubescent and a little shorter than third segment. Proboscis black, nearly as long as height of head. Palpi large, pointed apically, with a dark subterminal bristle not as long as palpus; whitish-yellow, paler than the legs.

Thorax evenly grey dusted, including the katepisternum ("sternopleura"). All bristles and hairs pale. A long humeral with several short bristles in front, a posthumeral, two long notopleurals; acrostichals biserial, nearly as long as second antennal segment; the rows closer together in front, but disappearing in the prescutellar depression; dorsocentrals in a single row, becoming longer posteriorly and ending into two pairs of long prescutellars, a long supra-alar, and a pair of very long apical scutellars with a short bristle at each side. Pleura including katepisternum completely dusted.

Legs yellow, including coxae but posterior four coxae sometimes brownish. Fore legs with apical tarsal segment nearly completely black annulated; posterior four legs with terminal tarsal segment brownish. Fore femora strongly thickened on basal three quarters, thicker than mid femora. One row of pale ventral bristles, half as long as femur is deep. Fore tibiae a little swollen along the whole length, on apical half with some dark dorsal bristles. Basitarsus ventrally with some bristles as long as tarsus is deep. Mid femora slender, ventrally with a double row of bristles but not the usual spine-like ones; no posteroventrals present; anteriorly on apical fifth with one very long pale bristle, as long as femur is deep. Mid tibiae apically with two short black bristles, but no spur present. Basitarsi ventrally with some long dark bristles. Hind femora as stout as mid femora, dorsoventrally a little arched. No ventral bristles visible. Hind tibiae with a dark, dorsal preapical bristle, nearly as long as tibia is wide. Basitarsus ventrally with a dense, white pubescence.

Wings (Fig. 1) clear with pale veins becoming a little darker towards tip. A pale costal bristle. Stigma at tip of  $R_1$  distinct, the costa is darkened beyond the stigma.  $R_4+5$  and  $M$  parallel. Cross veins separated. Second basal cell shorter than first basal cell; angle of cross vein of second basal cell on  $Cu$  sharp. Vein closing anal cell recurrent and distinct. Squamae a little darkened with white cilia. Halteres white.

Abdomen dark brown, completely thinly grey dusted with only very short bristles. Hypopygium as in Figs. 3–7. Cerci short, enclosed in lamella. Left periandrial lamella with a long extension, bearing long pale bristles. Hypandrium with a long curved, spine-like extension.

Length: body: 2.2–2.7 mm; wing: 1.6–1.8 mm.

#### Female.

In most respects identical to male. Apical three tarsal segments becoming gradually more brownish so that the terminal segment is completely brown. No annulation like on the male fore tarsi. Posterior four coxae darkened. Mid tibiae anteroventrally in apical half with a row of distinct short bristles. Cerci not very long, ventrally contrastingly black (polished).

Length: body: 2.7 mm; wing: 1.9 mm.

#### Type material.

Holotype male: Germany, Saxonia-Anhalt (Sachsen-Anhalt), Halle (Saale), 22. VI. 1990 (leg. A. STARK) conserved in ethanol at the Koninklijk Belgisch Instituut voor Natuurwetenschappen Brussels [ISNB].

Paratypes: Saxonia-Anhalt: Halle-Mötzlich, 14. VI. 1988, 1 ♀; 13. VI. 1989, 1 ♂; 25. V. 1990, 1 ♀; 26. VI. 1990, 1 ♂; 26. VI. 1991, 1 ♀; 25. V. 1992, 1 ♀; 02. VII. 1995, 1 ♀ (all specimens from Halle were caught with yellow water traps but one female [26. VI. 91] with a green water trap, all paratypes from Saxonia-Anhalt are deposited in the collection of A. STARK [in ethanol] but the female from 25. V. 1992 is deposited in the collection of Staatliches Museum für Tierkunde Dresden [SMTD]); Thuringia: Numburg near Kelbra, 11. VII. 77, 2 ♀♀; Steudnitz near Jena, 07. VII. 81, 1 ♀; Apfelstädt Ried near Arnstadt, 11. VII. 1984: 1 ♂, 21. VII. 1984: 1 ♀; 18. VI. 1985: 1 ♂; 13. VII. 1985: 1 ♂ (all specimens from Thuringia were collected by R. BÄHRMANN and are preserved on pin in coll. BÄHRMANN); Nordrhein-Westfalen, Kraichgau, 26. V. 1991, 1 ♂ (D-vac in field of *Phacelia*, leg. GREILER, in coll. STARK, in ethanol).

Derivatio nominis. The name *hallensis* refers to the type locality Halle in Germany.

#### Discussion.

The *Platypalpus hackmani* group is a small group comprising now six species. This group is characterized by the presence of distinct humeri, a posthumeral bristle, dusted katepisternum and a more or less dusted abdomen. The fore femora are very thickened, while the mid femorae are slender with only

fine bristles ventrally instead of the usual double row of spine-like bristles. There are no posteroventral bristles and the mid tibiae bear no apical spur. *Platypalpus hallensis* is closely related to *P. nanus* (OLDENBERG, 1924) but the latter has a broader third antennal segment that is brownish and at most one and a half times as long as deep, completely yellow legs, including tarsi, and the left lamella with a blunt tip. The left periandrial lamella has a comparable structure in that it is composed of two parts: an anterior long extension and a posterior rounded part. *Platypalpus canariensis* GROOTAERT et CHVÁLA, 1992 has two pairs of black vertical bristles and a longer third antennal segment. It is endemic on the Canary islands. *P. minutissimus* (STROBL, 1899) has two pairs of dark vertical bristles, black antennae with the third segment a little longer than deep, and dark brown legs.

The northern European species *P. hackmani* CHVÁLA, 1972, has only one pair of yellow vertical bristles, a short third antennal segment about as long as deep, being yellowish at base and brownish at tip. The palpi are long and slender. The abdomen is dusted but the large hypopygium is shining black. *Platypalpus perspicuus* (COLLIN, 1959), described from Israel, has also only one pair of yellow vertical bristles and apart from the length of the extension on the left periandrial lamella, has no other characteristics different from *P. hackmani*.

#### Key to the species of the *P. hackmani* group

Very densely light grey dusted species with sternopleura (katepisternum) usually dusted. Anal lobe of wing distinct, the vein closing anal cell at right angles to vein *cu*. Humeri conspicuously large, a posthumeral bristle. Fore femora very thickened; mid femora slender, with only fine ventral bristles in two rows. *Dysaletria*-like species with broad frons and linear face.

The new species would run within the key of GROOTAERT & CHVÁLA (1992) as follows: 1–22–32–177–193–194–195–196–197 (on pages 51–52).

197 (196) Third antennal segment longer (3–4 times as long as deep).	197a
– Third antennal segment very short, only slightly longer than deep.	198
197a (197) All bristles blackish to blackish brown. Legs extensively darkened. Palpi darkened, very small. Katepisternum with a small, narrow polished patch at middle.	
	<i>P. canariensis</i> GROOTAERT et CHVÁLA
– All bristles and hairs pale. Legs yellow, only posterior four coxae sometimes brownish. Palpi large, whitish yellow, pointed apically and bearing a dark subterminal bristle not as long as palpus. Katepisternum dusted.	
	<i>P. hallensis</i> spec. nov.
198 Basal antennal segments yellow; legs completely yellow and all bristles and hairs pale (light brownish from some points of view). Palpi whitish.	
	<i>P. nanus</i> OLDENBERG
– Basal antennal segments more darkened; legs extensively darkened; all bristles and hairs on head and thorax dark. Palpi yellowish brown.	
	<i>P. minutissimus</i> (STROBL)

#### Literature

GROOTAERT, P. & CHVÁLA, M. (1992): Monograph of the genus *Platypalpus* (Diptera: Empidoidea, Hybotidae) of the Mediterranean region and the Canary Islands. - *Acta Universitatis Carolinae-Biologica* 36 (1–2): 3–226; Prague.

STARK, A. (1994): Zum Beutespektrum und Jagdverhalten von Fliegen der Gattung *Platypalpus* (Empidoidea, Hybotidae). - *Studia dipterologica* 1 (1): 49–74; Halle (Saale).

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