A note on a collection of *Platypalpus* (Diptera Empidoidea Hybotidae) from Durmitor National Park (Montenegro) with the description of a new species

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Abstract

Sixteen Platypalpus species are reported from the Durmitor National Park in the Balkan Peninsula. P. baechlii sp. n. is described.

Few studies on the *Platypalpus* fauna were made in the Balkan peninsula. STROBL (1893) described some species from the coast. In 1962, BE-QUAERT studied the empidids collected by COE (1960) in ex-Yugoslavia. This material was revised by GROOTAERT & CHVÁLA (1992) and they described also some new species from that area.

The present paper deals mainly with a collection made by Dr. G. BAE-CHLI in August 1988 in the Durmitor National Park (Montenegro, Yugoslavia). The *Platypalpus* were caught using fermenting fruit as bait for *Drosophila*. Most material was collected in a small wet open area within a more or less dense coniferous woodland near Zabljak at an altitude of about 1,500 m. Some additional material was collected by Dr. V. KEKIČ in 1983 and 1987.

Faunistic account

As can be seen in the following table, 16 species of *Platypalpus* are now recorded from the Durmitor national Park.

P. ciliaris, P. pectoralis and P. nigritarsis are species that occur both in the lowland and the highland. They have a wide distribution all over Europe. P. ciliaris and pectoralis are typical for wet forested areas as was shown by CASPERS and WAGNER (1982). P. nigritarsis on the other hand

seems to prefer dryer habitats such as heathland and semi-dry woodland. It is confined to the herb layer (BÄHRMANN & STARK, 1990). *P. stigmatellus*, *P. luteicornis*, *P. scandinavicus*, *P. boreoalpinus* and *P. alpigenus* are mountain species (CHVÁLA, 1989).

Striking is the abundance and co-occurrence of a number of closely related and sister-species. *P. ciliaris*, *P. pectoralis*, *P. parvicauda* and *P. mikii* all belong to the *ciliaris*-group and are closely related. The abundant species *P. stigmatellus* is also closely related to the *ciliaris*-group. On the other hand there is a striking absence of representatives of the *pallidiven*-tris-group which is the dominant group in the lowland.

P. scandinavicus CHVÁLA is rather northern in distribution and seems to be very rare in temperate Europe. The most southern record was Czechoslovakia (CHVÁLA, 1989). *P. mikii* (BECKER) is a forest species of highlands and mountains and also uncommon in central Europe (CHVÁLA, 1989).

	30. V11-5. V111 1988 G. Baechli		22-25.VIII 1983 V. Кекіс		3-9.VIII 1987 V. Кекіс	
ciliaris (Fallén) pectoralis (Fallén)	34 රේ, 16 රේ,	51 ♀ 14 ♀	රටේ, 8 ට්,	4	6 д,	6 9
nigritarsis (FALLÉN)	15 ð,	14 Ŷ	14 ð,	1 9		
stigmatellus (ZETT.)	2 8,	19 P	4 ð,	5 Ŷ	2 Ŷ	
mikii (Becker)	1 8,	1 Q				
parvicauda (COLLIN)	18					
baechlii sp. n.	2 8					
albiseta (PANZER)	1 9					
scandinavicus Chvála	19					
boreoalpinus Frey	2 ¥					
luteicomis (MEIGEN)	1 9					
kirtlingensis GROOT.	1 9					
pallidiventris (MEIGEN)	2 ሪ					
luteus (Meigen)	1 9					
rapidus (Meigen)	1 ሪ					
alpigenus (STROBL)			1 8			

Systematic account

Platypalpus baechlii sp. n. (Figs 1-5)

A medium-sized (2.2-2.4 mm) completely yellow species with no distinct vertical bristles. Occiput, frons, face and antennae yellow. Legs yellow, but terminal tarsal segment darkened. Acrostichals and dorsocentrals evenly distributed on mesonotum. Mesonotum shining yellow, humen and sides of mesonotum whitish dusted. Pleura silvery-white dusted, but sternopleura polished. A short spur present on mid tibiae.



Figs 1-5. *Platypalpus baechlii* sp.n. paratype male. 1: antenna; 2: mid femora and tibia posteriorly; 3: right periandrial lamella; 4: periandrium with cerci; 5: left periandrial lamella. Scale 0.1 mm.

Male

Head yellow, including occiput, frons, face, proboscis, palpi and antennae. Frons broad, wider than basal antennal segments and still widening towards ocellar triangle, dusted. Face as wide as front of frons, a little widening below, silvery dusted. Clypeus long, shining. Anterior ocellars

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golden-brown, longer than third antennal segment. Vertical bristles not distinct from the short yellow hairs on occiput. The latter not becoming longer nor denser below. Antennae (Fig. 1) short, yellow. Third segment very short, triangular, as long as deep. Arista brown, four times longer than third antennal segment. Palpi yellow, somewhat strap-shaped, pointed with a yellow subterminal bristle that is shorter than the palpus is long.

Pleura dusted, except for the polished sternopleura. Acrostichals and dorsocentrals short, yellowish, densely and evenly distributed over mesonotum. Large thoracic bristles brownish. No humeral, a notopleural, a postalar, a short prescutellar just in front of scutellum and a pair of long scutel- present on the mid femora. lars with a hair at each side which is half as long as a scutellar.

Legs yellow, but tip of terminal tarsal segments of all legs brown. Front femora slender, only a little wider than front tibia. Ventral hairs on front femora short. Front tibiae thickened. Third and fourth tarsal segment of front leg slender. Mid femora (Fig. 2) almost twice as wide as front femora, with a row of short black anteroventral bristles and a row of short and longer posteroventral bristles. The bristles in the apical half black and at most half as long as femur is wide, those in the basal half pale and indistinct. Ventrally a double row of short spine-like bristles. Those in the anterior row shorter than those in the posterior row. Mid tibiae with a short pointed, yellow apical projection shorter than tibia is deep; tip of mid tibiae not swollen nor covered with pile. Hind femora and tibiae long and slender. Ventral hairs on hind femora short.

Wings clear with yellow veins. Veins and wing membrane somewhat brownish near tip. Costal bristle yellow. Veins R 4+5 and M almost straight, only gently diverging near middle and converging again near tip to end almost parallel in wing tip. Crossveins contiguous. Vein closing anal cell straight on anal vein. Halteres whitish-yellow. Squamae yellow with white cilia.

Abdomen yellow including genitalia. Terga densely covered with whitish hairs, especially on sides. Genital lamellae (Figs 3-5) covered with microtrichia.

Length body: 2.2-2.6 mm; wing: 3.4-3.5 mm.

Type material: Holotype male and paratype male: Durmitor (Montenegro, Yugoslavia), 30. VII-5. VIII. 1988, leg. G. BAECHLI. Types on pin, conserved in the collection of Dr. G. BAECHLI at the Zoological Museum of the University of Zürich (Switzerland).

Derivatio nominis: The present species is dedicated to its collector Dr. G. BAECHLI from the Zoological Museum of the University of Zürich-Irchel.

Discussion

Platypalpus baechlii sp. n. is probably very closely related to P. nonstriatus which was described by STROBL in 1901 from Austria and which seems to be very common in north-eastern Europe (Finland, Russian Carelia and Estonia). P. baechlii differs however in possessing a yellow occi-Thorax yellow, with mesonotum polished, but its sides greyish dusted. put, brown anterior ocellar bristles, completely yellow third antennal segment, the presence of short black anteroventral and posteroventral bristles and a yellow abdomen. In P. nonstriatus the occiput, the anterior ocellars and the abdomen are black. Further, there are no posteroventral bristles

> P. baechlii resembles also P. luteus but the latter has the third and fourth tarsal segments of the front legs broadened, better developed vertical bristles and a fine humeral.

> The two males identified here as P. pallidiventris have features intermediate between P. pallidiventris and P. longiseta. The front tibiae are slender and the third antennal segment is completely black, but the tarsal segments are not annulated and the last segment is strikingly black like in P. longiseta. The genitalia resemble those of P. pallidiventris. The P. pallidiventris - longiseta complex have a Pan-european distribution but in southern Europe there is quite some variability as to the coloration of legs and bristles.

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L'organe de Waterston des Ceraphronidae (Hymenoptera Ceraphronoidea)

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Résumé

L'organe de Waterston est une plage réticulée, alvéolaire, située près du bord antérieur du tergite abdominal T6 de tous les Ceraphronidae des deux sexes, au moins partiellement recouverte par le tergite précédent. L'auteur retrace l'historique de sa découverte et discute les hypothèses (respiratoire, sématique) suggérées jadis et en propose une autre, qui reste à démontrer: l'organe pourrait servir de surface d'évaporation accrue de substances volatiles (phéromones?): on trouve en effet des structures semblables chez des fourmis où la présence de glandes a été démontrée. Les premières photos SEM laissent deviner ce qui pourrait être des orifices glandulaires mais des études anatomiques fines devraient encore confirmer l'hypothèse.

Summary

Waterston's organ is a reticulate, alveolary area, lying near the fore margin of the abdominal tergite T6 of all the Ceraphronidae of both sexes, at least partially overhung by the preceeding tergite. The author recounts the historics of its discovery and discusses the hypotheses (respiratory, sematic) formerly suggested and proposes another one: the organ could be used as increased evaporation surface of volatile substances (pheromones?): such similar structures are observed, indeed, among some ants where the presence of glands has been demonstrated. The first SEM photos let guess what could be glandular orifices but fine anatomical researches should still confort the hypothesis.

En 1923, J. WATERSTON décrit une nouvelle espèce de Ceraphronidae sous le nom générique alors en usage: *Calliceras dictynna* (passée depuis au genre *Aphanogmus* - cfr Dessart, 1971); il figure une structure réticu-

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