

**PARAGUS CONSTRICTUS SP. N. AND OTHER SPECIES
OF THE GENUS PARAGUS LATREILLE, 1804
(DIPTERA: SYRPHIDAE) IN YUGOSLAVIA**

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ABSTRACT. – ŠIMIĆ *Smiljka*, Institute of Biology, Novi Sad, YU. – *Paragus constrictus* sp. n. and other species of the Genus *Paragus* Latreille, 1804 (Diptera: Syrphidae) in Yugoslavia. – Acta entomol. Jugosl., 1986, **22**, 1-2: 5-10. (Engl., Serbo-Croat. Summ.).

New species *Paragus constrictus* as well as two infrequent species (*P. hermonensis* Kaplan, 1981 and *P. bradescui* Stanescu, 1981) are described. A check-list of species of the genus *Paragus* recorded from Yugoslavia is presented, too.

Diptera – Syrphidae, *Paragus constrictus* sp. n., new taxa, taxonomic descriptions, keys, check-lists, Yugoslavia.

Introduction

Problems regarding the identity of the species of the genus *Paragus* have been formulated by a number of authors. The detailed analyses of status of individual species and their distribution are found in the papers of Goeldlin (1976, 1981), Pedersen (1972), Speight (1978) and in many others.

This paper will describe only the species which have been recorded from Yugoslavia. More than 200 specimens of *Paragus* collected in Yugoslavia, have been examined. In certain cases, determination was extremely difficult although numerous references concerning the species of *Paragus* are available. The reason lies in the minute morphological differences between species and in the infraspecific variability. However, the male genitalia shows the most valid characters, whereas the females cannot yet be determined definitely.

In »Catalogus faunae Jugoslaviae« – *Syrphoidea* (Glumac, 1972), eight species of *Paragus* are recorded: *P. albifrons* Fallen, *P. bicolor* Fabricius, *P. cinctus* Schiner, *P. productus* Schiner, *P. pulcherrimus* Strobl, *P. quadrifasciatus* Meigen, *P. strigatus* Meigen and *P. tibialis* Fallen. *Paragus pulcherrimus* Strobl, 1893 is a junior synonym of *P. quadrifasciatus* Meigen, 1822, and *P. productus* Schiner, 1862 a junior synonym of *P. punctulatus* Zetterstedt, 1838 (Goeldlin, 1976).

In 1982, another two species, *P. haemorrhous* Meigen, 1822 and *P. majoranee* Rondani, 1857 (Šimić, Vujić, 1984) were recorded. In 1983, I personally sent three specimens of *Paragus* to Dr. P. Goeldlin for his consideration. As a reply it was stated that a specimen belongs to the species *P. hermonensis* Kaplan, 1981, the other to *P. bradescui* Stanescu, 1981, whereas the third specimen was estimated to be probably a new species.

The new species is described below and *P. hermonensis* and *P. bradescui* are redescribed since these specimens extend the species definitions.

Results and conclusion

Paragus constrictus sp. n.

Holotype: 1 ♂ Tjentište (580-600 m altitude), July 30, 1983., leg. S. Šimić. ✓

Paratypes: 2 ♂♂, Tjentište (580-600 m altitude), July 31, 1983.; 1 ♂, Šupljice ✓
(Kokin Brod, 820 m altitude), August 11, 1982.

The species belongs to the group *tibialis* of the subgenus *Pandasyopthalmus* Stuckenberg, 1954.

Male: Head. Eyes with evenly distributed short, white hairs, scarcely jointed. Face protruding, whitish-yellow, with white hairs. Black, smooth, broad stripe connected with black margin of mouth extends from antennal base to the mouth margin. Antennae dark yellowish-brown, 3rd segment lighter at lower, inner side. Bristle appears from first third of 3rd segment, barely extending its length. Parietal triangle long, black, smooth, with dark yellowish-brown hairs.

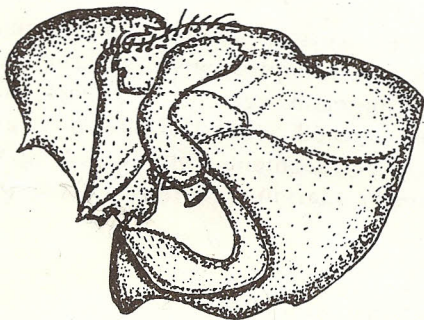
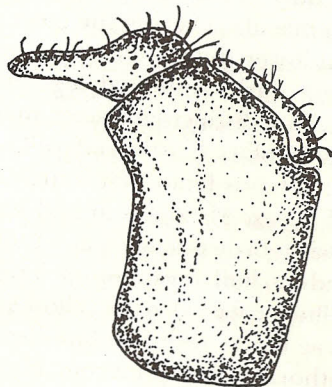
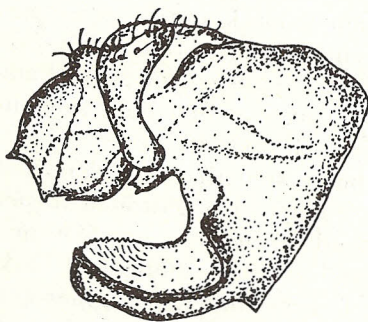
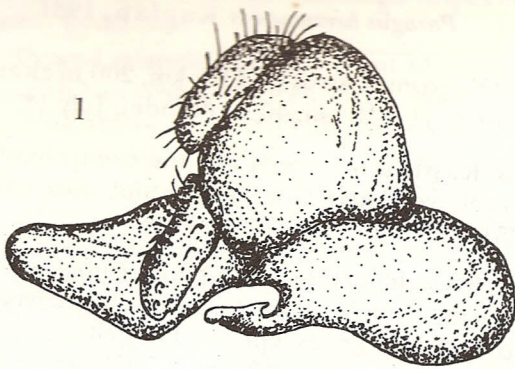
Thorax. Mesonotum and scutellum black with bronzy luminescence, covered with long, erect, yellowish hairs. Individual white hairs at scutellar margin. PLEURAE black, with a bundle of long, white hairs on mesopleura and metathoracic katepimeron. Haltere albescent, with somewhat darker stalk. Wings vitreous, stigma yellowish-brown. p_1 and p_2 yellow, with basal third of femur black. p_3 also yellow but with basal three thirds of femur black. Legs covered with short, yellow hairs.

Abdomen. First and 2nd tergum black, coarsely punctated; 3rd tergum black with yellowish-red triangular macula with its base on lower segment margin and its top reaching upper segment margin; 4th tergum black, yellow only at anterior and posterior margins; 5th tergum yellow. Hair colour corresponds to tergum colour. First and 2nd sterna black, others yellow, at abdominal side. Abdomen characteristically constricted at articulation between 2nd and 3rd segment. The specific name is derived from the abdominal constriction.

Male genitalia presented in Fig. 1.

Key to the Males of the Species of the Subgenus *Pandasyopthalmus* in Yugoslavia

1. Lobus superior relatively short, with upper and lower margins subparallel, fiat *haemorrhous* Meig.
– Lobus superior large with upper and lower margins nonparallel 2
2. Lobus superior extremely large, 2 times as long as surstyle axially, with its top upwards *tibialis* Fall.
– Lobus superior 1,5 times as long as surstyle axially, not deflected, broadly rounded at apex *constrictus* sp. n.



bradescui je bliži hermonensis-4

Fig. 1. *Paragus constrictus* sp. n. Male genitalia: lateral view.
Fig. 2. *Paragus hermonensis* Kaplan Male genitalia: lateral view.
Fig. 3. *Paragus bradescui* Stanescu Male genitalia: lateral view.

Paragus hermonensis Kaplan, 1981

Findings: 1 ♂, Virpazar-Ostros (at 11th km, 200 m altitude), May 14, 1982; 2 ♂♂, Virpazar-Ostros (12-16 km, 40 m altitude), July 13, 1983.

P. hermonensis Kaplan is a species of the group bicolor of the subgenus *Paragus*. It has been recorded from Israel and also from Italy (Kaplan, Thompson, 1981).

Male. Head. Eyes characteristically pilose (subgen. *Paragus*). In front of ocelli, at black parietal triangle, distinct, dusted field covered with white hairs. Parietal region with white hairs except for the ocellar region where black hairs are observed. Brow yellow, extremely small, with white scattered hairs. Face white, only mouth margin black. From mouth margin originates light yellowish-brown macula covering the most protuberant face region. Face slightly protuberant at lower third, with white hairs. Antennae black, upper, inner part of 3rd segment dark. Antennal segment 3 extremely long, about 4 times as long as wide. This distinct character most readily distinguishes the species among the group bicolor. Bristle red yellowish-brown only at first half, remaining half black; extends from first fourth of 3rd segment up to its end.

Thorax. Mesonotum and scutellum black, smooth. Small, semicircular red yellowish-brown macula at scutellum apex. The two longitudinal, dusted stripes extending half mesonotum length are found on mesonotum. Mesonotum and scutellum covered with yellow hairs, as well as with a number of darker ones. Pleurae black, with two bundles of long, silvery-white hairs at mesopleura and metathoracal katepimeron. Haltere white, with yellow dark yellowish-brown stalk. Wings vitreous, stigma yellow-brown. p_1 and p_2 yellow, basal halves of femur black and metatarsus of p_1 blackish externally. p_3 yellow, femur black, except almost white apex; tibia with dark ring medially; tarsi yellowish dark yellow-brown, metatarsus and two next segments characteristically black externally. Legs with whitish-yellow hairs.

Abdomen. Black, smooth, with three pairs of whitish, dusted, narrow stripes on 2nd, 3rd and 4th tergum, located in depressions at anterior, lateral part of the terga. Prostrated, dense, short hairs on segments 1-4; black hairs in black fields and grayish-white in whitish, dusted fields. Hairs of 5th segment silvery-white. Laterally, at anterior part of 2nd segment, a bundle of long, white hairs. 1st sternum dark, black at anterior margin, others black except for sometimes lighter margins.

Male genitalia presented in Fig. 2.

^{ANTOINETTE}
Paragus bradescui Stanescu, 1981

Findings: 1 ♂, Trogir (1 m altitude), July 25, 1978; 2 ♂♂, Rovinj (32 m altitude), April 24, 1983.

P. bradescui Stan. is the species described in 1981. for Romania. In Yugoslavia, the specimens of the species were found in the surroundings of

Rovinj and Trogir (the Adriatic Coast). According to the characteristics, the specimens belong to the subgenus *Paragus*, although stripes of short, white hairs on eyes are not readily noticeable.

Male. Head. Parietal triangle black, in front of ocelli yellowish, dusted, with yellowish hairs; in the region of ocelli hairs black, at the occipital area yellow. Brow yellow with yellow hairs. Over antennae small, ovate, black macula with 3-4 short, black hairs. Face whitish-yellow, almost parallel to eye margin, with short, whitish-yellow hairs. Mouth margin encircled with narrow, black field, slightly darkened towards face center. Antennae black, lower, inner part of 3rd segment dark yellowish-brown. Third antennal segment about 2,5 times as long as wide. Basal bristle extends from first third of the segment up to the middle, basally slightly thickened, yellowish-red, black towards the apex.

Thorax. Black with bronze-greenish luminescence, especially towards the head. The two whitish, dusted stripes, broadened at their bases, tapering towards the end, extends from medial region to half of length of mesonotum. Hairs reddish-yellow. Scutellum more than a half black, yellow towards the apex, with yellow hairs. Pleurae black, with two bundles of long, silvery hairs at mesopleura and mesothoracic katepimeron. Haltere yellow with somewhat darker stalk. Wings vitreous, stigma yellow-brown. p_1 and p_2 yellow, only basal third of femur black. p_3 yellow, basal two thirds of femur black. Legs with whitish yellow hairs.

Abdomen. Whitish, dusted depressions on 2nd, 3rd and 4th tergum. Terga not totally black, red colour pervades, being more apparent on 4th and even more visible on 5th segment. Terga subpilosus. Only yellow hairs on dusted parts distinct. On sterna, black and yellow dark-yellowish brown colour mingled.

Male genitalia presented in Fig. 3.

Check-list of species of the genus *Paragus* Latreille, 1804 in Yugoslavia

- FIRST CONFIRMED ✓ *albifrons* (Fallen, 1817) - MAJORANAE
+ ✓ *bicolor* (Fabricius, 1794) ✓
✓ *bradescui* Stanescu, 1981 ✓
✓ *cinctus* Schiner et Egger, 1853 ✓
✓ *constrictus* sp. n. ✓
✓ *haemorrhous* Meigen, 1822 ✓
aff. ← ✓ *hermonensis* Kaplanj, 1981 ✓
✓ *majoranae* Rondani, 1857 ✓
FIRST CONFIRMED *punctulatus* Zetterstedt, 1838 ? BH
quadrifasciatus Meigen, 1822 ✓
LANGHOPPER *strigatus* Meigen, 1822 ? Cro ??
tibialis Fallen, 1817 ✓

On the basis of the literature data available, possible Yugoslav species are:

- absidatus* Goeldlin, 1971 ✓ KOPAONIK
coadunatus Rondani, 1848
finitimus Goeldlin, 1971
flameus Goeldlin, 1971

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Sažetak

PARAGUS CONSTRICTUS SP. N. I DRUGE VRSTE RODA PARAGUS LATREILLE,
1804 (DIPT., SYRPHIDAE) U JUGOSLAVIJI

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Opisana je jedna nova vrsta roda *Paragus* Latreille, 1804 - *P. constrictus* i dat je ključ za vrste podroda *Pandasyopthalmus* Stuckenberg, 1954 nađene u Jugoslaviji. Takođe je data redeskripcija dve retke vrste (*P. hermonensis* Kaplan, 1981 i *P. bradescui* Stanescu, 1981) koje su prvi put nađene u našoj zemlji. Za sve tri pomenute vrste prikazani su crteži građe genitalnog aparata mužjaka. Na kraju je priložen spisak svih vrsta ovog roda nađenih u Jugoslaviji.

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