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New data on hoverflies (Diptera, Syrphidae) in Romania

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Data for three species new to the Romanian fauna are presented: *Cheilosia schnabli* Becker, 1894, *Merodon nigritarsis* Rondani, 1845 and *Paragus constrictus* Šimić, 1986, with male genitalia drawings and additional features. The new records of these species are given together with maps of their European range. The paper also contains a re-description of *Cheilosia schnabli* and a short discussion about West Palaearctic species of the subgenus *Pandasyopthalmus*.

Zusammenfassung

Daten von drei für die Fauna Rumäniens neuen Arten werden vorgelegt: *Cheilosia schnabli* Becker, 1894, *Merodon nigritarsis* Rondani, 1845 und *Paragus constrictus* Šimić, 1986, mit Abbildungen der männlichen Genitalien und anderer Merkmale. Die Verbreitung dieser Arten in Europa wird auf Karten dargestellt. Die Arbeit enthält außerdem die Wiederbeschreibung von *Cheilosia schnabli* sowie eine kurze Diskussion der westpaläarktischen Arten des Subgenus *Pandasyopthalmus*.

Introduction

The Romanian syrphid fauna is well-known due to the intensive faunistical work of recent authors, especially V. Brădescu and Carmen Stănescu during the last 20 years. The result is the list of 447 recorded species presented by Brădescu (1991). Examination of material from the collection of the Natural History Museum in Sibiu demonstrated the presence of three species new to Romania. One species, *Cheilosia schnabli* is little known in Europe, the second, *Merodon nigritarsis* was recently elevated to the species level (Hurkmans 1993), and the third, *Paragus constrictus* Šimić, 1986 described from Yugoslavia, has recently been discovered in other parts of the Western Palaearctic (Speight & Chandler 1995; Doczkal 1996; Hayat & Claußen 1997).

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New records

Cheilosia schnabli Becker, 1894

Record: Sura Mare (Sibiu county), 12.IV.1972, 1♂, leg. E. Schneider.

Vujić (1996) mentioned this as a valid species, and presented the distribution data for the Balkan Peninsula. The original description of this species is based on a single female from the Caucasus (Becker 1894). Later Strobl (1898) described the *nigritarsis* form of the female from Bosnia and Herzegovina, based on three females. Vujić (1996) referred to the first records of males, but without giving morphological features. The species is extremely similar to *C. impressa* and redescription can help to clarify the status of *C. schnabli* in other parts of Europe.

Diagnosis

Medium sized dark species with bluish-shiny thorax, black legs and yellowish wing base. Monophyletic with *C. impressa* in the presence of a distinct knob on the fore coxa, but differing in possessing fine puncturation on the mesoscutum (rough and dense in *C. impressa*), reddish-yellow antennae (usually dark in *C. impressa*), and features of the male genitalia (symmetric sclerite of the distiphallus – fig. 15, and elongated dorso-apical prong of the superior lobe – fig. 11). Further, the extent of the dull area on tergite 3 is geater, reaching the posterior margin of the tergite (fig. 3) (in *C. impressa* last fourth of tergite 3 shiny – fig. 4).

Description

Male (figs. 1, 3, 5, 7, 11-16)

Size: body length 7-9,5mm.

Head (fig. 1). Eyes covered with short pale hairs of uniform length. Face bare, shining, grey-dusted below antennae and on ocular margin. Ocular margin very narrow, pale haired. Frons and occiput shiny, black haired. Third antennal segment (fig. 5) yellowish-red to brown-red (in some specimens can be darkened). Arista long and distinctly pubescent.

Thorax. Black haired, except for pale hairs on sternopleuron. Color of mesoscutum black with very strong bluish reflection. Puncturation on mesoscutum fine. Post-alar calli and hind margin of scutellum with many long black hairs and bristles. Two lengths of hairs on mesoscutum (fig. 7) not so visible as in *C. impressa* (fig. 9). Legs dark, predominantly black haired. Wings brown-yellow with dark veins in apical two thirds and yellowish in basal third. Haltere and calypterae pale-yellowish.

Abdomen (fig. 3). Tergites covered with mixed gray-yellowish and black hairs. Tergites 1-3 shining only at sides, tergite 3 with dull area extending from anterior to posterior margin. Male genitalia (figs. 11-16) with elongated dorso-apical prong of superior lobe, broadened basally and narrowly pointed in apical part (figs. 11, 12), sclerite of the distiphallus with symmetric left and right side (figs. 13, 15).

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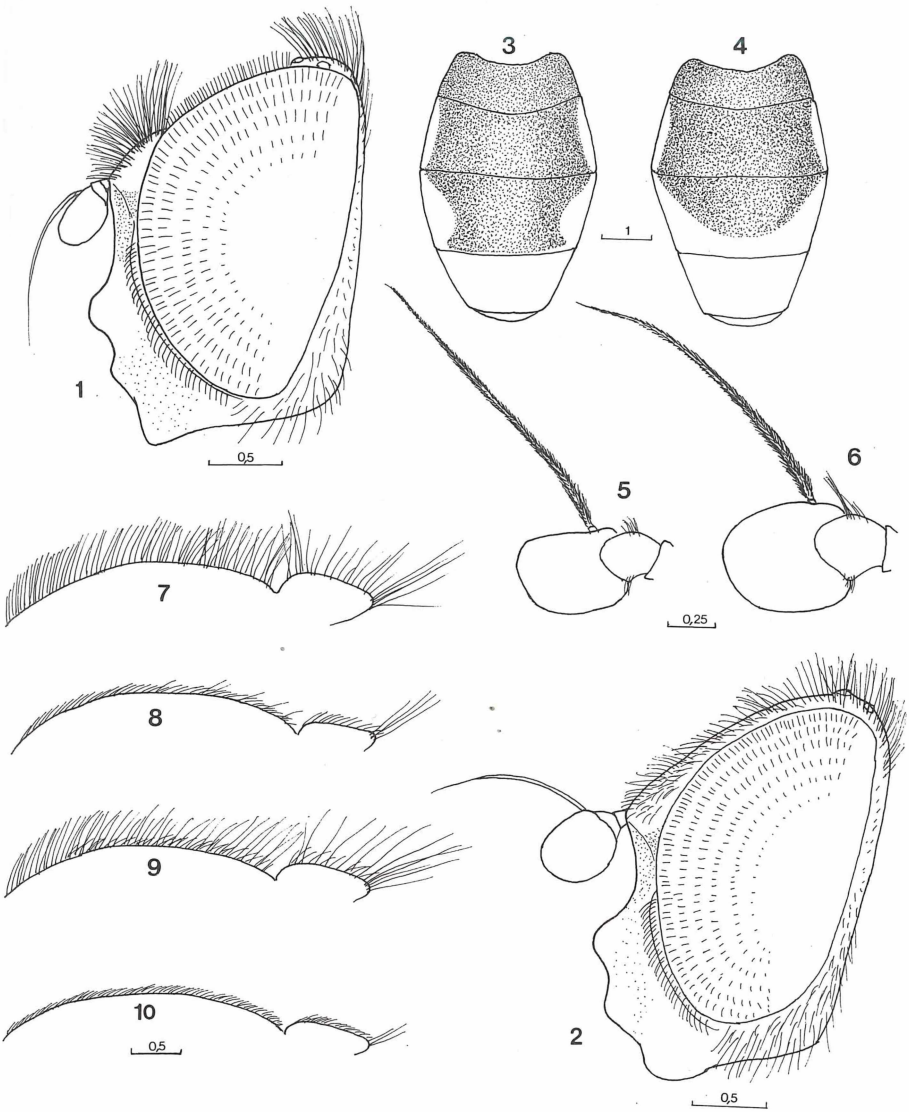

Figs. 1-10: ***Cheilosia schnabli*** **(1-3, 5-8) and** ***C. impressa*** **(4, 9, 10).** – 1. head, ♂, lateral view; – 2. head, ♀, lateral view; – 3, 4. ♂ abdomen, dorsal view; – 5, 6. third antennal segment: 5. ♂; 6. ♀; – 7-10. mesoscutum, lateral view: 7, 9. ♂; 8, 10. ♀. – Scales in mm.

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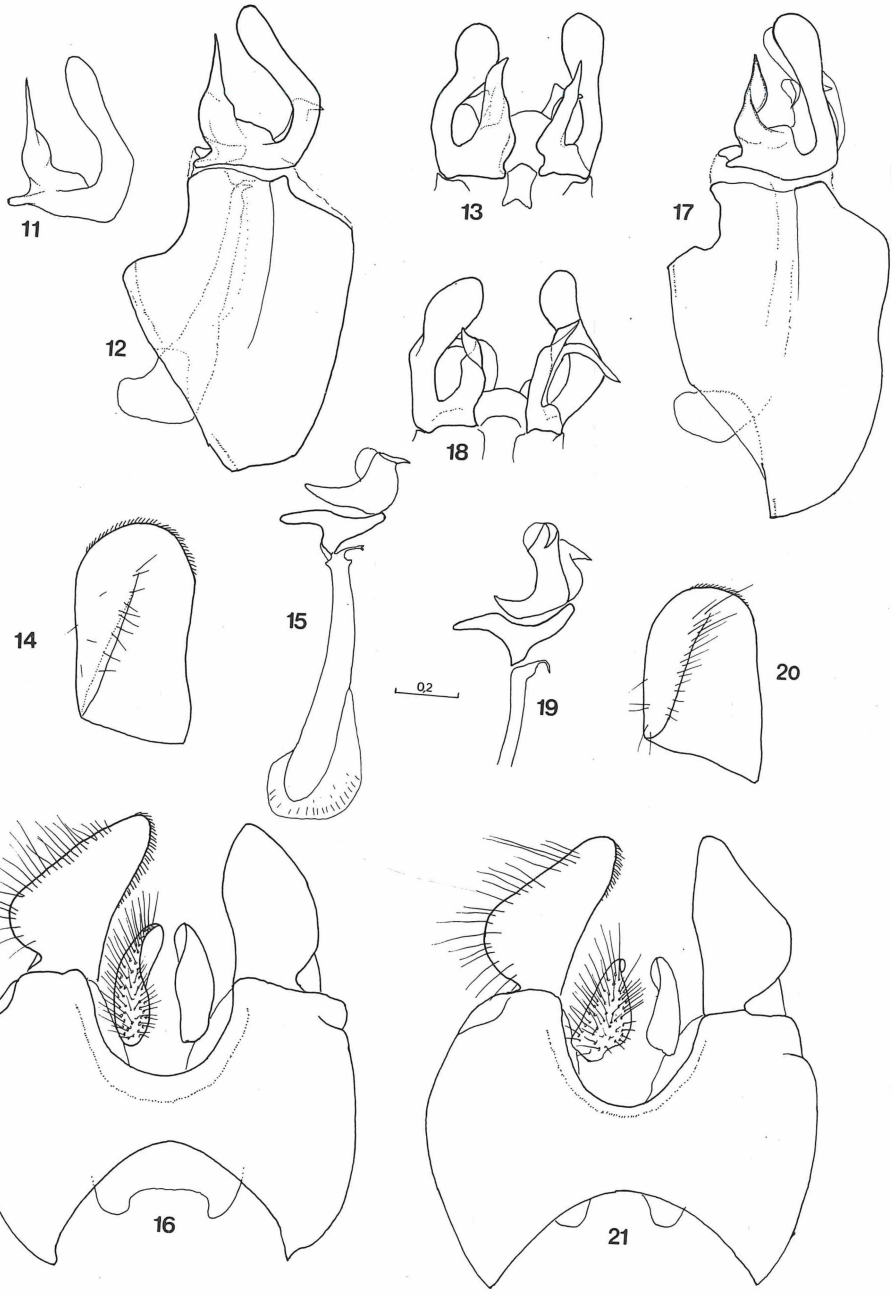

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Female (figs. 2, 6, 8)

Size: body length 6,7-9,1mm.

Similar to the male except usual sexual dimorphism. Frons with short mixed pale and black hairs. Mesoscutum covered with adpressed short pale and black hairs, and several long black hairs (fig. 8). Puncturation of mesoscutum fine. Distal ends of femora and both ends of all tibiae usually pale. Wing base distinctly yellow. Hairs on tergites adpressed and predominantly pale.

Distribution (map 1). *Cheilosia schnabli* is known from the Caucasus and the Balkan Peninsula. It can be defined as a Balkan-Caucasus endemic. The habitat types of *C. schnabli* and *C. impressa* are very similar, but until now, these two species have never been found at the same localities (it is possible that the presence of one excludes the second).

Tab. 1: Characters to distinguish males and females of *Cheilosia schnabli* Becker and *C. impressa* Loew.

Cheilosia schnabli	***Cheilosia impressa***
♂ **and** ♀	♂ **and** ♀
antennae reddish	antennae usually dark-brown
mesoscutum finely punctured	mesoscutum with rough and dense puncturation
♂	♂
sclerite of the distiphallus symmetric (figs. 13, 15)	sclerite of the distiphallus asymmetric (figs. 18, 19)
dorso-apical prong of the superior lobe narrow and elongated in apical part (figs. 11, 12)	dorso-apical prong of the superior lobe broadened below top (fig. 17)
tergite 3 with dull area extending to the posterior margin (fig. 3)	tergite 3 with dull area in anterior half, never reaching the posterior margin (fig. 4)
♀	♀
tibiae usually pale at both ends	tibiae dark
short hairs on mesoscutum semi-adpressed mixed with some longer hairs (fig. 8)	all mesoscutal hairs short and adpressed (fig. 10)

← **Figs. 11-21:** ***Cheilosia schnabli*** **(11-16) and** ***C. impressa*** **(17-21),** ♂ **genitalia.** – 11. superior lobe; – 12, 17. hypandrium, lateral view; – 13, 18. distal part of hypandrium, dorsal view; – 14, 20. right surstylus, lateral view; – 15, 19. aedeagus, lateral view; – 16, 21. epandrium, dorsal view. – Scale in mm.

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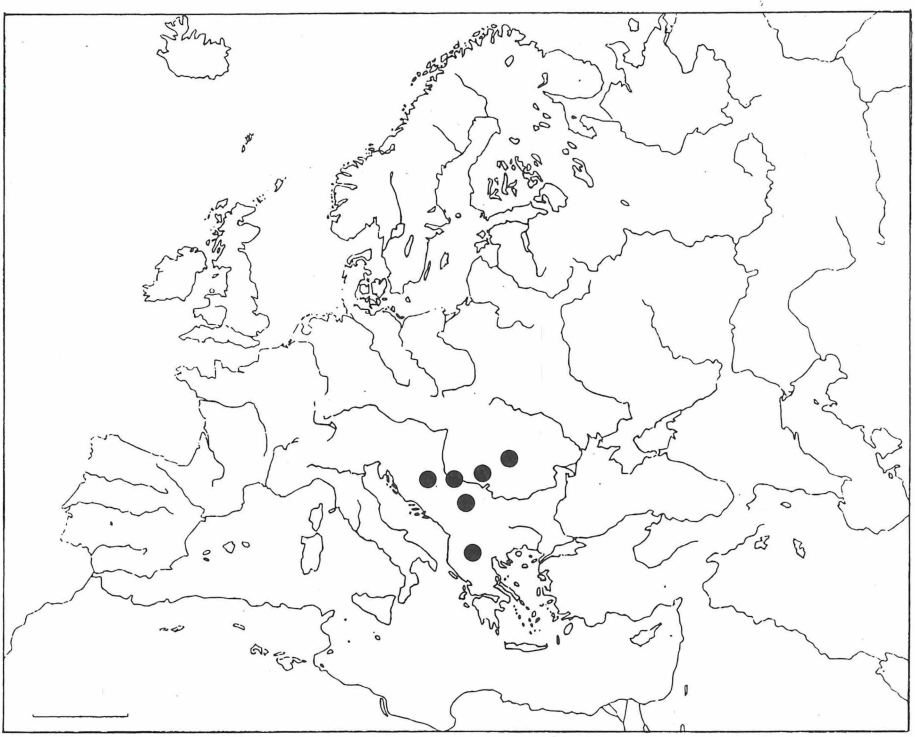

Map 1: Distribution of *Cheilosia schnabli* in Europe.

Merodon nigritarsis Rondani, 1845

Record: Dobrogea, Tekirghiol, VI.1933, 1♂, leg. E. Worell.

M. nigritarsis has been considered as a variety or subspecies of *M. avidus* (Rossi, 1790) (figs. 22, 23), but can be distinguished from other *Merodon* species by male genitalia (figs. 24, 25) and the contrast of colors on the dorsal and ventral surfaces of basitarsi 3. Hurkmans (1993) separated *M. nigritarsis* and *M. femoratoides* Paramonov, 1925 as a distinct *nigritarsis* group of species. *M. nigritarsis* occurs in the Mediterranean and the southern parts of central Europe. Records from Romania have been missing until now.

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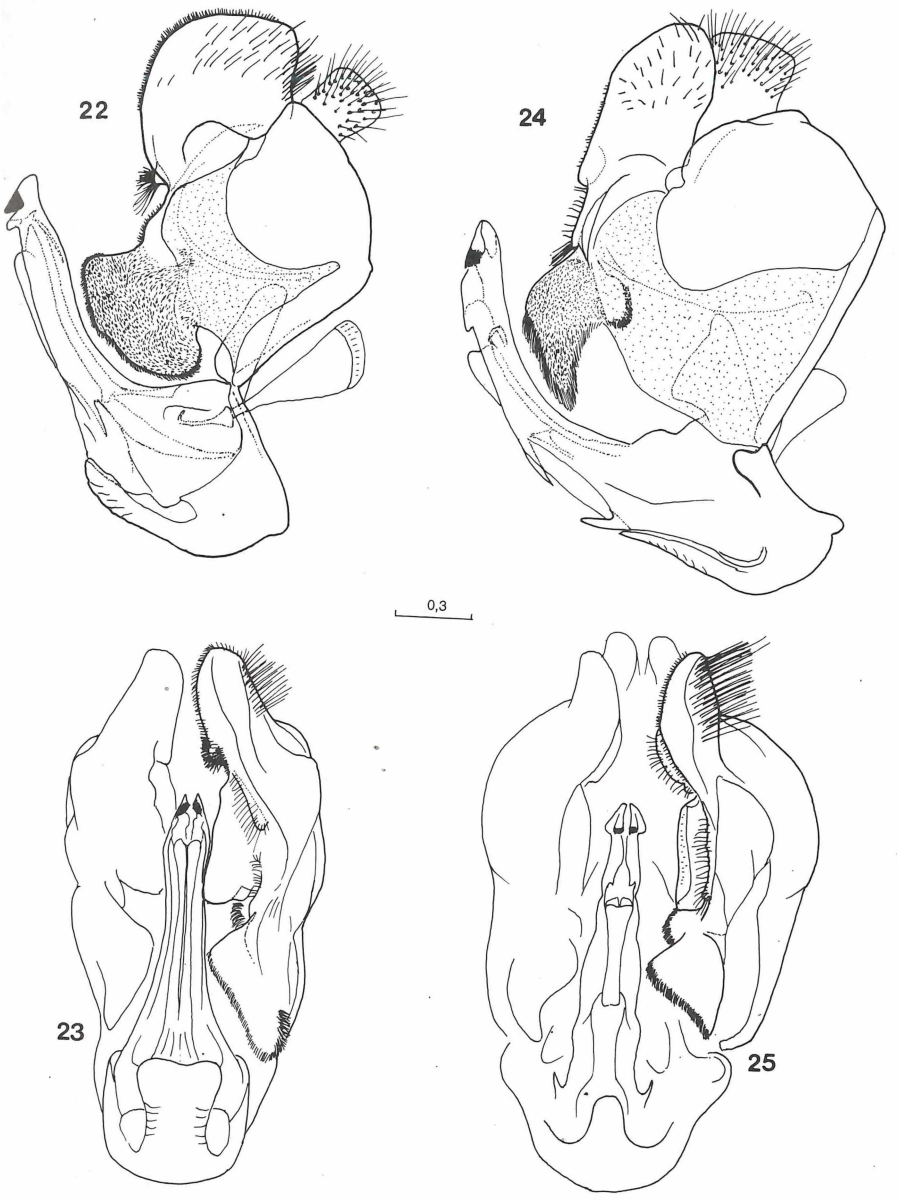

Figs. 22-25: ***Merodon avidus*** **(22, 23) and** ***M. nigritarsis*** **(24, 25),** ♂ **genitalia.** – 22, 24. lateral view; – 23, 25. ventral view. – Scale in mm.

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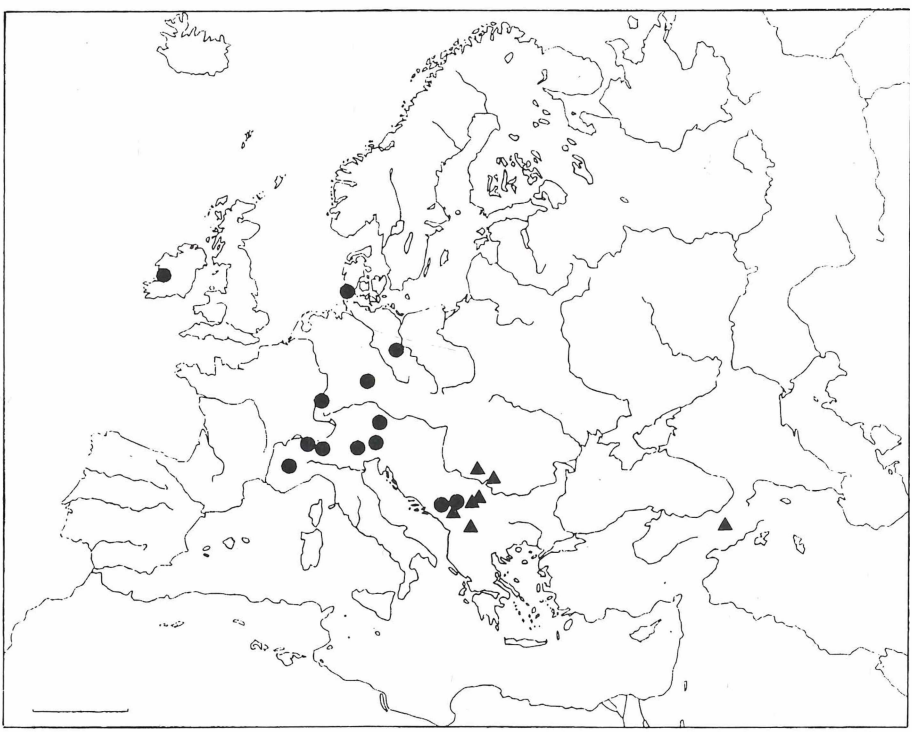
Paragus constrictus Šimić, 1986

Records: Valea Jidostita (Mehedinti county), near Turnu Severin, 24.VII.1978, 3♂, leg. C. Stănescu; Turnu Severin (Mehedinti county) 5.VI.1984, 1♂, leg. C. Pârvu.

Remark: On map 2 the records of *P. constrictus* in Yugoslavia are updated with new findings. It has also been found (beside the type locality) on several mountains in Serbia (Vršac hills, Dubašnica, Juhor, Šar-planina) and Montenegro (Durmitor).

Many species of the subgenus *Pandasyopthalmus* appear in the Afrotropical region but the real number of taxa can be known only after checking of records given by Stuckenberg (1954). Subgenus *Pandasyopthalmus* contains six species in the Western Palaearctic region. Two of them are restricted in parts of the Mediterranean (map 3). The presence of *Paragus coadunatus* Rondani, 1847 (figs. 26, 27) has been established in Italy, Morocco and the Canary Islands (Dirickx 1994), and recently for Turkey as well (Hayat & Claußen 1997). The other one, *P. ascoensis* Goeldlin de Tiefenau & Lucas, 1981 (figs. 30, 31) is endemic to Corsica and Sardinia. By contrast, the species *P. haemorrhous* Meigen, 1822 (figs. 34-37) and *P. tibialis* (Fallén, 1817) (figs. 32, 33) are widespread. *P. haemorrhous* occurs in the Nearctic (the only species



Map 2: Distribution of *Paragus constrictus* in West Palaearctic. ▲ = new records.

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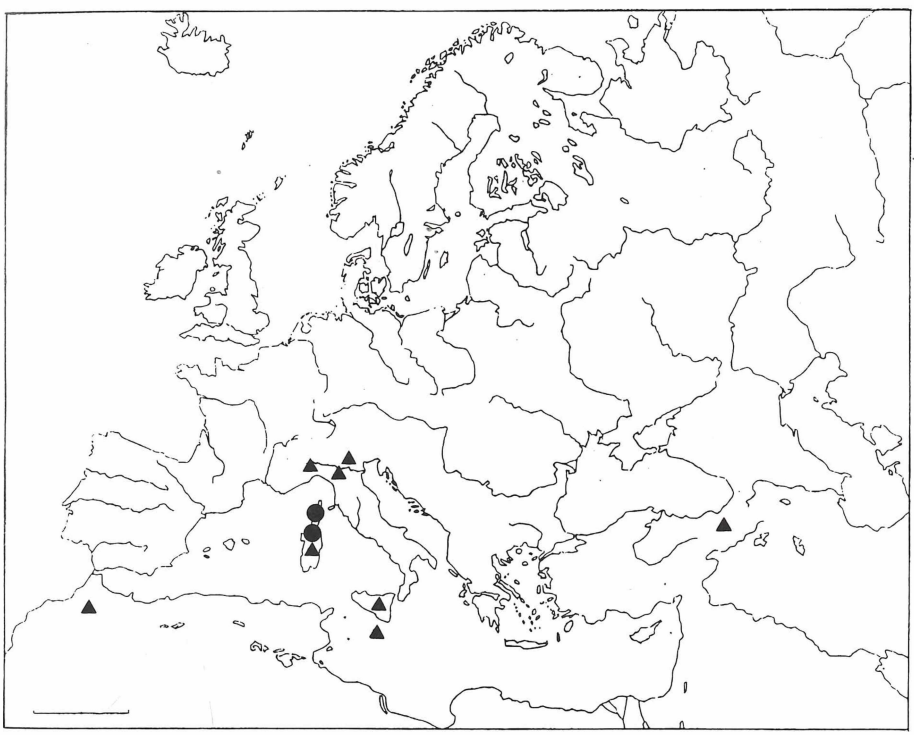
of the subgenus, after Vockeroth 1986), Palaearctic and Afrotropical regions. *P. tibialis* has been registered for the Palaearctic and part of Oriental region. The fifth species, *P. abrogans* Goeldlin de Tiefenau, 1971 (fig. 28, 29) is distributed in Turkey (Hayat & Alaoğlu 1990) and Iran (the type locality). The potential synonymy of *P. abrogans* with *P. albipes* Gimmerthal, 1842 (Peck 1988) or *P. rufocinctus* Brunetti, 1908 (Thompson & Ghorpadé 1988) requires investigation, but is not the subject of our paper. The range of *P. constrictus* (figs. 38-41) includes (beside former Yugoslavia) many European countries: Ireland, France, Germany, Switzerland, Austria (Doczkal 1996) and Turkey (Hayat & Claußen 1997) (map 2). Records from Romania extend the known range of *P. constrictus*. In South-East Europe it appears to be sympatric with *P. tibialis* and *P. haemorrhous*, but has smaller populations.

The main diagnostic character inside the subgenus *Pandasyopthalmus* is the shape of the superior lobe of the male terminalia. The shape of the superior lobe in *P. constrictus* is intermediate to that found in *P. tibialis* and *P. haemorrhous* (figs. 32-41) (for more details see Doczkal 1996). The determination of all species is dependent on features of male genitalia (figs. 26-41), and recognition of females is difficult.



Map 3: Distribution of *Paragus coadunatus* (▲) and *P. ascoensis* (●) in West Palaearctic.

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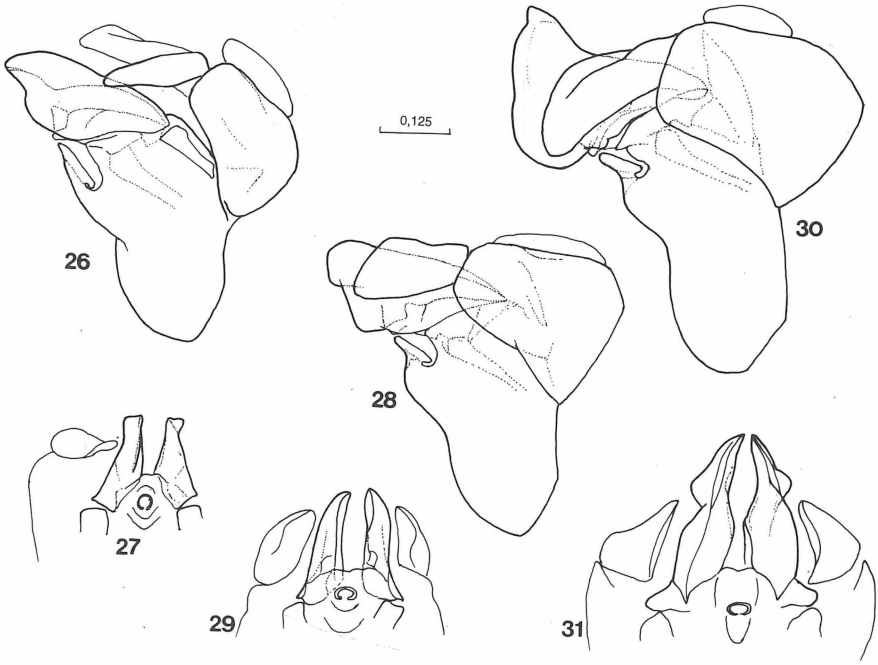

Figs. 26-31: ***Paragus coadunatus*** **(26, 27),** ***P. abrogans*** **(28, 29) and** ***P. ascoensis*** **(30, 31),** ♂ **genitalia.** – 26, 28, 30. lateral view; – 27, 29, 31. distal part, ventral view. – Scale in mm.

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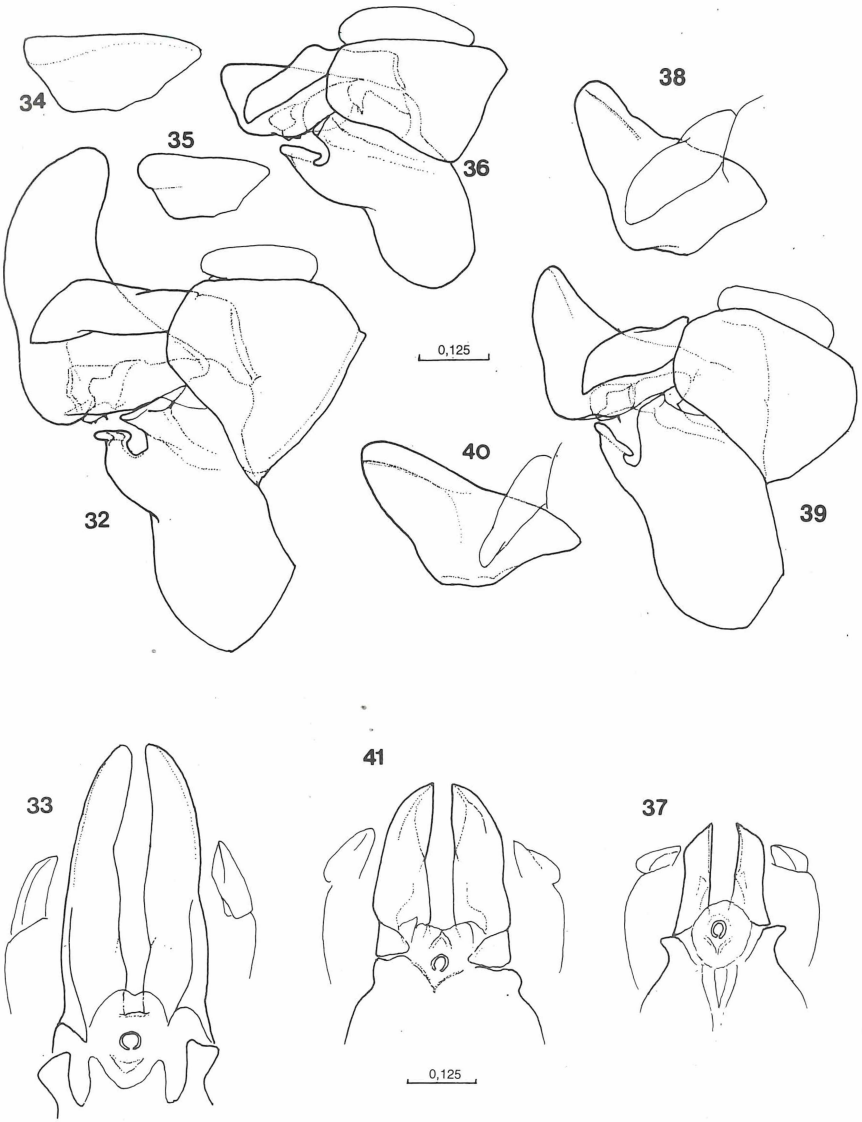

Figs. 32-41: ***Paragus tibialis*** **(32, 33),** ***P. haemorrhous*** **(34-37) and** ***P. constrictus*** **(38-41).** – 32, 36, 39. ♂ genitalia, lateral view; – 34, 35, 38, 40. superior lobe, lateral view; – 33, 37, 41. distal part of ♂ genitalia, ventral view. – Scale in mm.

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