

Discovery of a new species of *Diadromus* (Hymenoptera: Ichneumonidae; Ichneumoninae)

J. SELFA & E. DILLER

SELFA, J. & E. DILLER, 1996. DISCOVERY OF A NEW SPECIES OF *DIADROMUS* (HYMENOPTERA: ICHNEUMONIDAE; ICHNEUMONINAE). – *ENT. BER., AMST.* 56 (8): 121-124.

Abstract: *Diadromus zwakhalsi* Diller, spec. nov. is described from the southern part of the western Palearctic region.

Jesús Selfa, Laboratori d'Entomologia i Control de Plagues, Departament de Biologia Animal, Universitat de València, Dr. Moliner 50, E-46100 Burjassot, Spain.

Erich Diller, Zoologische Staatssammlung, Münchhausenstrasse 21, D-81247 München, Germany.

Introduction

Diadromus Wesmael is a holarctic genus belonging to the subtribe Phaeogenina (Selfa & Diller, 1994). *Diadromus* is closely related to *Raninia* Diller, because in both genera the clypeus is not clearly separated from the supra-clypeal area and its apical border is retracted at right angles to the plane of the clypeus (Diller, 1985). In *Diadromus* the apical border is polished and more strongly retracted. In *Raninia* this part is matt and the hypostomal carina is strongly raised behind the base of the mandible.

A new *Diadromus* species was found to occur in northern Italy and in Spain.

The author of *Diadromus zwakhalsi* spec. nov. is Diller.

***Diadromus zwakhalsi* Diller, spec. nov.**
(figs 1-2, 5)

Type material

Holotype: ♀, Italy, Bolzano, Sarntal, 1250 m, 17.vi.1977, C.J. Zwakhals leg. (coll. ZSM).

Paratypes: 11 ♀, Spain, Sierra Morena, Ciudad Real, Fuencaliente, 15.viii.1924, Seyrig leg. (1 ♀ coll. ZSM, 9 ♀ coll. MNHNP, 1 ♀ coll. UV); 1 ♀, Spain, Sierra Morena, Ciudad Real, Fuencaliente, 11.vi.1925, Seyrig leg. (coll. ZSM); 3 ♀, Spain, Sierra Morena, Ciudad Real, Fuencaliente, 12.vi.1925, Seyrig leg. (coll. MNHNP); 2 ♀, Spain, Sierra Morena, Ciudad Real, Fuencaliente,

15.viii.1925, Seyrig leg. (1 ♀ coll. ZSM, 1 ♀ coll. MNHNP); 1 ♂, Spain, Sierra Morena, Córdoba, El Soldado, 8.vi.1926, Seyrig leg. (coll. UV); 1 ♀, Spain, Sierra Morena, Córdoba, El Soldado, 8.viii.1926, Seyrig leg. (coll. MNHNP); 1 ♀, Spain, Madrid, El Escorial, 24.x.1978, J.S. Noyes leg. (coll. NHML); 1 ♀, Spain, Madrid, El Ventorrillo, 1480 m, 1-6.vi.1988, Rey & Nieves-Aldrey leg., Malaise trap, (coll. MNCNM); 1 ♂, Spain, Sierra Morena, Hoyo, 23.v.1925, Seyrig leg. (coll. ZSM).

The following museums contain material of the new species: Muséum National d'Histoire Naturelle (Paris), France (MNHNP); Museo Nacional de Ciencias Naturales (Madrid), Spain (MNCNM); Natural History Museum (London), United Kingdom (NHML); Zoologische Staatssammlung (München), Germany (ZSM); Laboratori d'Entomologia i Control de Plagues, Universitat de València, Spain (UV).

Description

Female: Head black; clypeus usually, ventral part of genae and of facial orbits, and supra-clypeal area sometimes, dark reddish brown; mandible yellowish red except for the black or blackish brown base and the reddish brown teeth. Flagellum bright red, dorsally with an ivory yellow ring on segments 7(8)-9(10), segments 1-6 dorsally sometimes bright brown, scape and pedicel dorsally black or fuscous and ventrally reddish brown. Palpi yellowish red.

Thorax black; sometimes with a variable dark red pattern on pronotum, scutellum, metanotum, propodeum, mesopleurum, mesosternum, metapleurum and juxtacoxal area; ivory yellow on hind corner of pronotum, subtegular

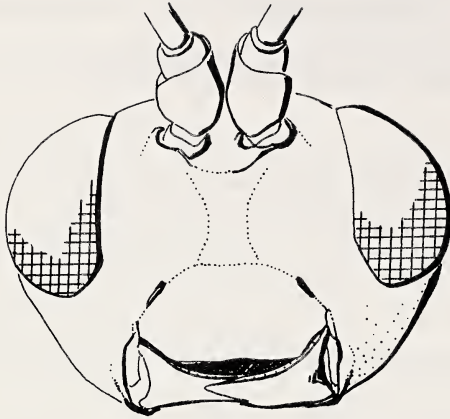


Fig. 1. *Diadromus zwakhalsi* spec. nov., ♀, holotype, head in frontal view.

ridge and base of wings; in some specimens the scutellum with small yellowish red spots on the central and subdistal part; tegulae red or yellowish red.

Legs red; last segment of tarsi completely and sometimes the hind tibiae dorsally bright brown. Pterostigma fuscous.

Gaster black to reddish brown, the main part of the first tergite is always darkened; distal border of gastral tergites 2-7 bright reddish, sometimes the distal border of tergites 5-7 ivory yellow.

Head sublinearly narrowed in frontal view (fig. 1); frons convex and very densely punctate; temple rounded (figs 2, 5); distance be-

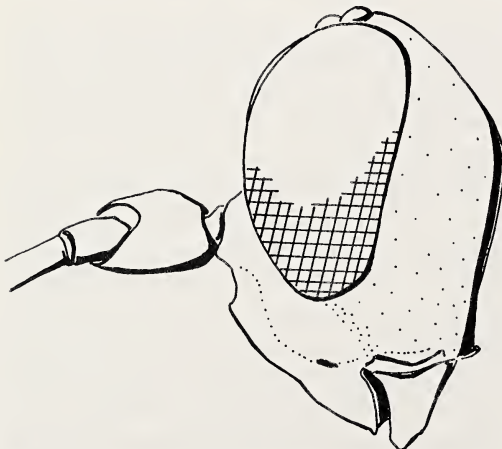


Fig. 2. *Diadromus zwakhalsi* spec. nov., ♀, holotype, head in lateral view.

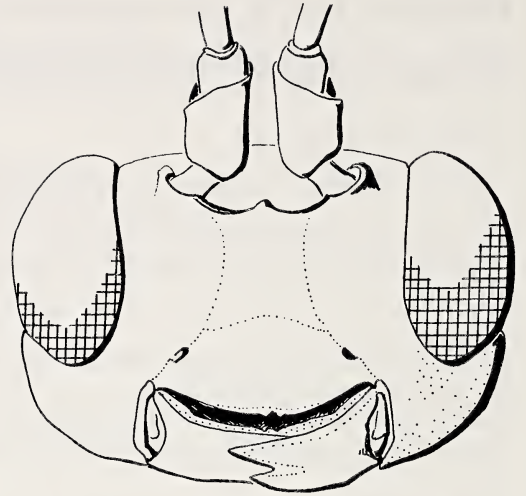


Fig. 3. *Diadromus candidatus* (Gravenhorst), ♀, head in frontal view.

tween lateral ocellus and compound-eye 0.18-0.22 times as long as eye (0.20 in holotype); temple and gena widely punctate (fig. 2); face densely punctate, 1.3-1.5 times as long as wide (1.5 in holotype), supraclypeal area not clearly differentiated; clypeus convex, polished and scarcely punctate, the apical margin polished and sharply retracted, its distal border exposed and thin (fig. 1); malar space coriaceous, 0.7-1.0 times as long as width of base of mandible (1.0 in holotype); mandible punctate, 1.4-2.0 times as long as basal width (2.0 in holotype), the upper tooth larger and

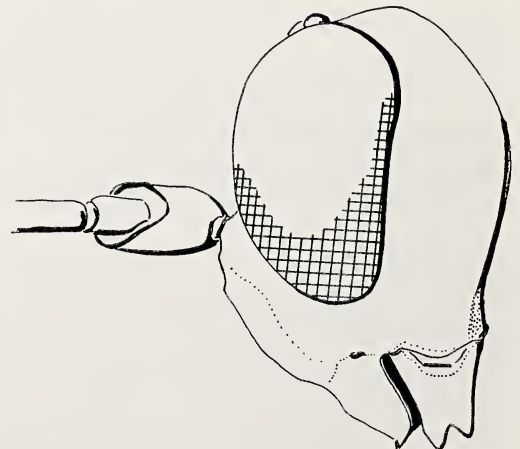


Fig. 4. *Diadromus candidatus* (Gravenhorst), ♀, head in lateral view.

longer than lower one; genal carina meeting oral carina at a distance from base of mandible equal to the width of the front metatarsus. Antenna long; flagellum with 25-28 segments (27 in holotype); first flagellar segment 3.2-4.0 times as long as wide (4.0 in holotype).

Thorax polished and punctate; notauli impressed to 0.3 of mesoscutum; sternauli deeply impressed and reaching almost to centre of mesopleurum; mesoscutum sparsely and deeply punctate, median lobe of mesoscutum coriaceous; scutellum weakly convex, sparsely punctate; prescutellar carinae only at base of scutellum; pronotum polished, with few punctures and ventrally with some carinulae; propleurum polished, sparsely punctate; mesopleurum und mesosternum densely and deeply punctate.

Propodeum with distinct carinae; area basalis elongate; area superomedia variable, pentagonal to hexagonal, 1.0-1.5 times as long as wide (1.25 in holotype), rugose, its apical transverse carina often concave; area spiraculifera strigose and with diagonal carinulae; metapleural area and juxtacoxal area strigose and punctate; area posteroexterna and area petiolaris without lateral longitudinal carinae but with many transverse carinulae.

Hind coxae punctate; hind femora 3.3-4.0 times as long as wide (3.6 in holotype). Nervellus of hind wing postfurcal.

Gaster coriaceous and densely punctate; first gastral tergite elongate, 3 times as long as

wide; median field of postpetiolus strigose and distinctly coriaceous; second tergite 1.0-1.4 times as long as wide (1.3 in holotype), granulate between the gastrocoeli, gastrocoeli strigose, thyridiae at a distance from base of tergite equal to 0.7 times their width; distance between the thyridiae 0.5-1 times the width of a thyridium (0.6 in holotype); tergites 2-4 coriaceous and punctate; tergites 5-7 more polished; visible part of ovipositor 0.5 times as long as hind basitarsus.

Body length : 4.5-7 mm (6 mm in holotype). Fore wing length: 3-4.5 mm (4 mm in holotype).

Male: Face, clypeus, gena (in basal half along the eye), mandible (except for the red teeth), and palpi ivory yellow; remaining part of genae and temples black or with reddish brown pattern. Flagellum dorsally brown and ventrally red; scape and pedicel dorsally fuscous and ventrally ivory yellow.

Pronotal collar, except for the central red part, hind corner of pronotum, subtegular ridge, tegulae (sometimes yellowish red), base of wings and central part of scutellum ivory yellow; scutellum with a red border around the yellow central spot; the dark reddish pattern on the thorax varies as in the female. Fore and middle coxae, trochanters and trochantelli ivory yellow. Pterostigma reddish brown. Colour pattern otherwise as in female. Body generally duller and more strongly punctate than in the female.



Fig. 5. *Diadromus zwakhalsi* spec. nov., ♀, paratype, head in dorsal view.



Fig. 6. *Diadromus candidatus* (Gravenhorst), ♀, head in dorsal view.

Table 1. Differences in morphology and colour pattern between *Diadromus zwakhalsi* and *D. candidatus*.

<i>Diadromus zwakhalsi</i> ♀	<i>Diadromus candidatus</i> ♀
thorax with ivory yellow	black
hind coxae completely red	predominantly brown
head in frontal view	
sublinearly narrowed (fig. 1)	rounded (fig. 3)
clypeus polished	matt
mandible slender	broad
prescutellar carinae only	
at base of scutellum	to middle of scutellum
area superomedia elongate	transverse
postpetiolus centrally strigose	without striae
tergite 2 elongate	quadratic
tergite 2 coriaceous	polished
<i>Diadromus zwakhalsi</i> ♂	
<i>Diadromus candidatus</i> ♂	
face completely yellowish	
white	partly black
pedicel ventrally white	ventrally black
front and middle tarsi red	brown
hind leg red	predominantly black

Distance between lateral ocellus and compound eye 0.2-0.25 times as long as eye; face 1.3 as wide as long; malar space 0.7 times as long as width of base of mandible; mandible 1.65-1.8 times as long as width at base. Antenna slender; flagellum with 27 segments; first flagellar segment 2.6 times as long as wide, 1.35-2.0 times longer than segment 2; long tyloidae on segments 7-12.

Area superomedia pentagonal, 1.0-1.15 times as long as wide, its apical transverse carina as in the female. Hind femur 4.15-4.25 times as long as wide. Second gastral tergite 1.5-1.6 times as long as wide; distance be-

tween the thyridiae 0.65-0.7 times the width of a thyridium; the morphology otherwise as in the female. Body length: 6 mm. Fore wing length: 4.5 mm.

Etymology

The species is named after C.J. Zwakhals who collected the holotype.

Discussion

Diadromus zwakhalsi Diller, spec. nov. is closely related to *Diadromus candidatus* (Gravenhorst) (figs 3-4, 6). The two species can be distinguished by the characters listed in table 1.

Acknowledgements

The authors are greatly indebted to C.J. Zwakhals (Arkel, The Netherlands) for providing the holotype; to Dr I. Izquierdo (Madrid), Madame M. Lachaise (Paris) and D. Notton (London) for the kind loan of material and to A. Tato (Valencia) for the SEM-pictures.

References

- DILLER, E., 1985. Eine neue Gattung und Art der Unterfamilie Ichneumoninae (Hymenoptera, Ichneumonidae). – *Entomofauna* 6: 1-7.
- Selfa, J. & Diller, E. 1994. Illustrated Key to the Western Palearctic Genera of Phaeogenini (Hymenoptera, Ichneumonidae, Ichneumoninae). – *Entomofauna* 15: 237-252.

Accepted 10.iv.1996.