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Pedro Crome M.

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**New species of *Spathius* Nees, 1818 and a key to the
species of Europe and Canary Islands**

(Hym. Ichneumonoidea, Braconidae)

BY

K.-J. HEDQVIST.

Estocolmo.

In 1943 Nixon revised the *Spathiinae* of the "Old World", but for Europe he met some difficulties because he could not see the types during the second world war. He tried to give a key to the European species and I think it will be the base for the taxonomical work with *Spathius* Nees, 1818 in Europe because some of the types has been lost during the war, specially species described by Ratzeburg (see Königs-mann 1964).

The keys given by Fahringer (1930-34), Marshall (1888-90) and Telenga (1941) are partly or quite unworkable. Fischer (1966) compiled a key and redescribed some species, but he writes that he is not satisfied. Below I have tried to compile a key. To my disposal I have had over 1.000 specimens—mostly reared—from many localities of Europe. To all entomologists who have given me specimens, I am much indebted.

1. *Spathius canariensis* nov. sp.

Holotype ♀, Las Mercedes, Teneriffe, Canary Islands (In coll. Hedqvist).

♀. Head, antennae, all tarsi and terebra yellowish brown. The rest of body dark brown with trochanters and a basal ring of tibiae pale yellowish white. The colour is variable and in some specimens only gaster brown.

Apterous (fig. 1 B) with in some specimens ocelli nearly wanted. Pronotum and pleurae with striation, mesothorax and propodeum ru-

gose. Terebra as long as gaster + half thorax. Antennae 22-jointed. Femora thickened.

♂. Similar to the female but yellowish brown and with antenna 24-jointed.

Length: ♀ 3.0-3.2 mm; ♂ 3.1 mm.

Holotype: iii coll. mea. Canary Islands, Teieriffe. Las Mercedes, 12-111-1970. leg. Karl-Johan Hedqvist.

Paratypes: 1 ♂ + 6 ♀♀, Canary Islands, iii coll. mea: 3 ♀♀, Teneriffe, Santa Cruz (leg. T. Palm); 1 ♀, Teieriffe, Monte Aguirre; 1 ♀ and 1 ♂, Teieriffe, Bailadero; 1 ♂, La Gomera.

2. *Spathius hirtus* nov. sp.

Holotype ♀, Estepona, Málaga, Spain (In coll. Hedqvist).

♀. Stramineus with head and gaster dorsally brownish.

Apterous (fig. 1C) with scattered long hairs. Antennae 18-jointed. Terebra as long as gaster except petiole. Thorax finely rugose.

♂. Unknown.

Length: 2.3 mm.

Holotype: In coll. mea. Spain, Málaga, Estepona, 27-VII-1959 (leg. S. Erlandsson).

3. *Spathius depressus* nov. sp.

Holotype ♀, Träkvista, Prov. Uppland, Sweden (In coll. Hedqvist).

♀. Yellowish brown with head brown. Thorax dorsally, propodeum and gaster dark brown. Claw-joint of mid tarsi dark brown. Fore wing with veins brown except base of stigma. Wings very faintly fuscous.

This species differs from all known European species except *Spathius phymatodis* Fisch. by flattened thorax (fig. 2A). From the latter differs *Sp. depressus* nov. sp. by rounded head and flattened propodeum—see the key—. Mesoscutum, scutellum and propodeum in lateral view on the same line. Notauli shallow with rugose sculpture. Head nearly smooth. Antenna with 30 joints. Thorax dorsally reticulate coriaceous. Propodeum with a median carina, which is forked and

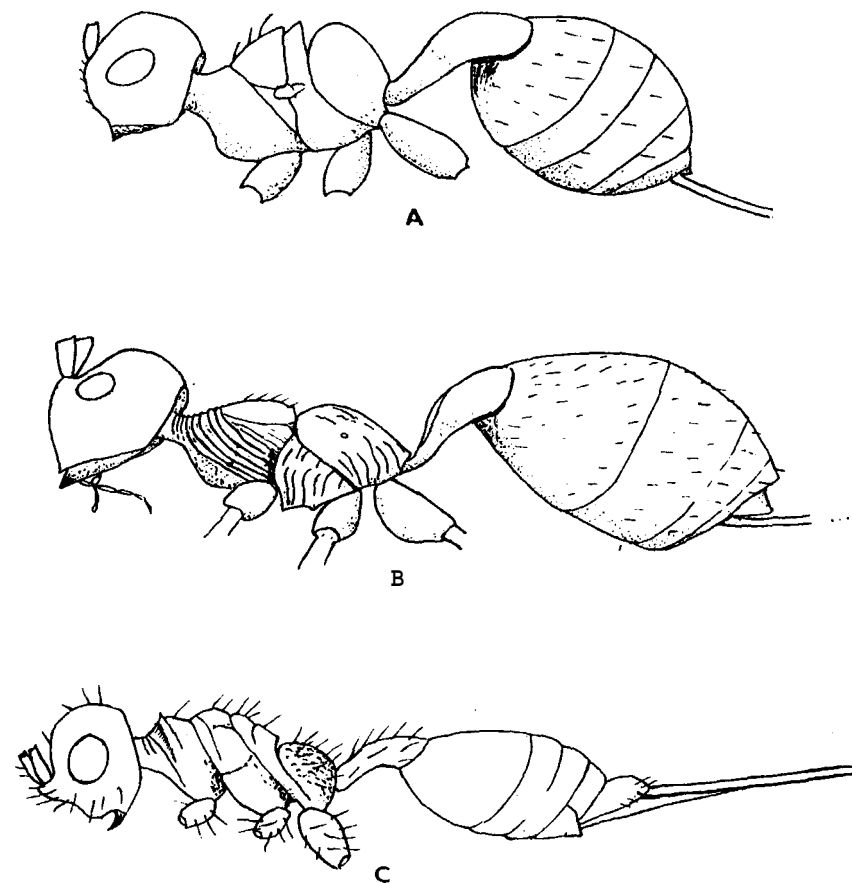


Fig. 1.—Lateral view of: A) *Spathius pedestris* Wesm., P; B) *S. canariensis* nov. sp., ♀; C) *S. hirtus* nov. sp., ♀.

enclosing an oblong areola. Sculpture of propodeum is reticulate coriaceous with some irregular carinae. Gaster (fig. 3 F) with 2nd tergite finely reticulate coriaceous, terebra a little longer than half gaster.

♂. Similar to the female. Antenna 27-jointed.

Length: ♀ 3,5 mm; ♂ 3,4 mm.

Holotype: iii coll. mea. Sweden, Prov. Uppland, Träkvista (leg. R. Baranowski). Reared from *Betula* sp. infested by *Agrilus viridis* L. and *Magdalis carbonaria* L.

Paratype: 1 ♂ in coll. mea. Rumania, Herculane, 18-V-1970 (leg. T.-E. Leiler).

KEY TO SPECIES OF *Spathius* FROM EUROPE AND CANARY ISLANDS.

- | | |
|---|-----------------------------|
| Apterous | 2. |
| — Winged species | 4. |
| 2. Scutellum indistinct, wanted | <i>canariensis</i> nov. sp. |
| — Scutellum distinct | 3. |
| 3. Terebra shorter than gaster, whole body with scattered long hairs | <i>hirtus</i> nov. sp. |
| — Terebra as long as or longer than gaster, the scattered hairs short | <i>pedestris</i> Wesm. |
| 4. Head with transverse striation | 5. |
| — Head without transverse striation only near antennal sockets with very fine striation | 6. |
| 5. Terebra longer than gaster. Head red, thorax black, pronotum and mesonotum partly reddish yellow | <i>plonicus</i> Niezb. |
| — Terebra shorter than gaster. Head dark, thorax red with mesonotum, scutellum and post-scutellum dark (brown) | <i>melanophilae</i> Fisch. |
| 6. Thorax flattened | 7. |
| — Thorax arched | 8. |
| 7. Head in lateral view triangle-shaped, thorax flattened with propodeum rounded | <i>phymatodis</i> Fisch. |
| — Head in lateral view hemispherical, thorax flattened with propodeum flattened in lateral view nearly on the same line as thorax | <i>depressus</i> nov. sp. |
| 8. Propodeum on each side with a rounded tooth | <i>dentatus</i> Tel. |
| — Propodeum without a tooth on each side | 9. |

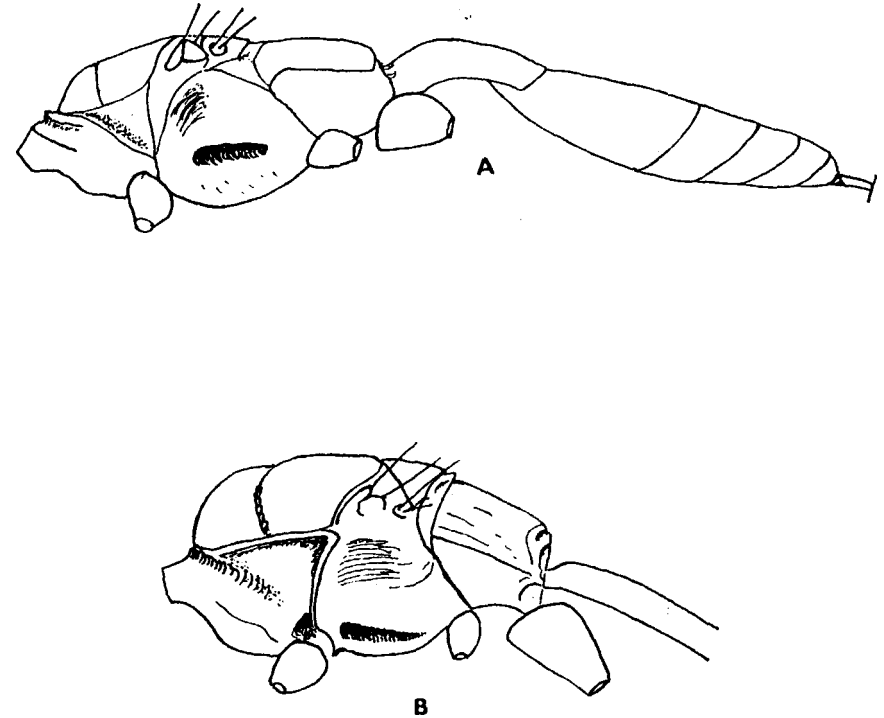


Fig. 2.—Lateral view of: A) *Spathius depressus* nov. sp., ♀; B) *S. exarator* (L.), ♀.

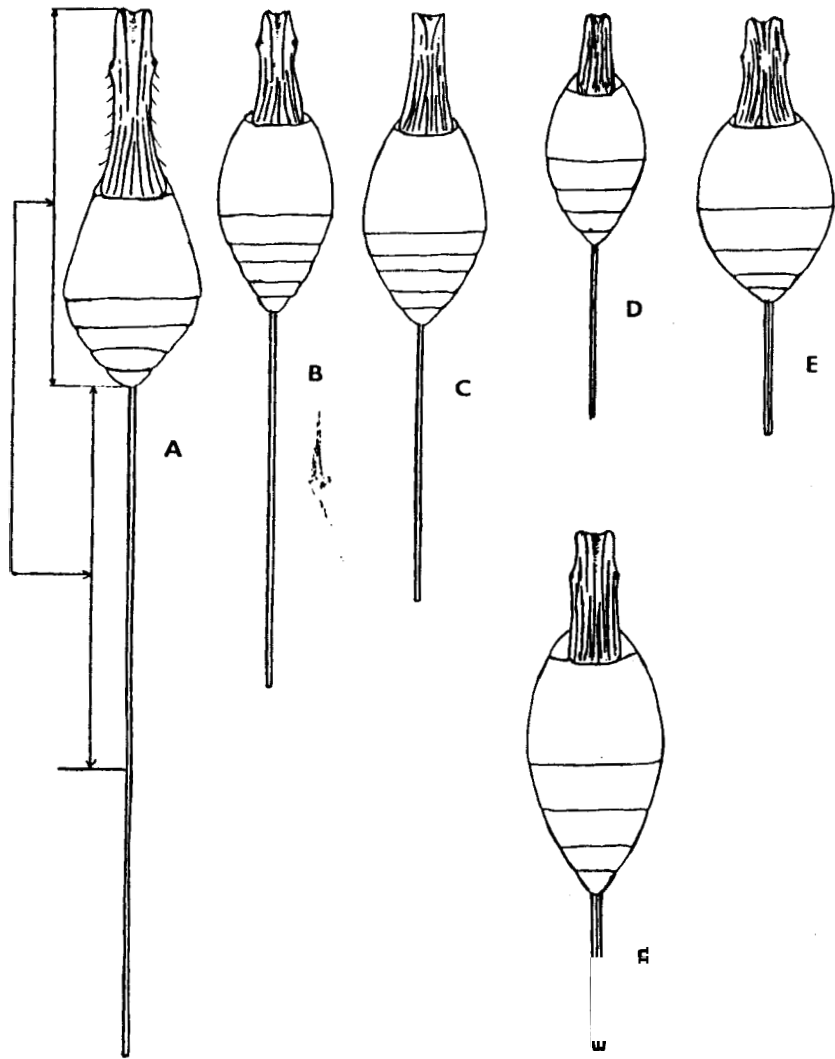


Fig. 3.—Gaster of: A) *Spathius exarator* (L.), ♀; B) *S. curvicaudis* Ratzb., ♀; C) *S. crythrocephalus* Wesm., ♀; D) *S. brevicaudis* Ratzb., ♀; E) *S. rubidus* (Rossi), ♀; F) *S. depressus* nov. sp., ♀.

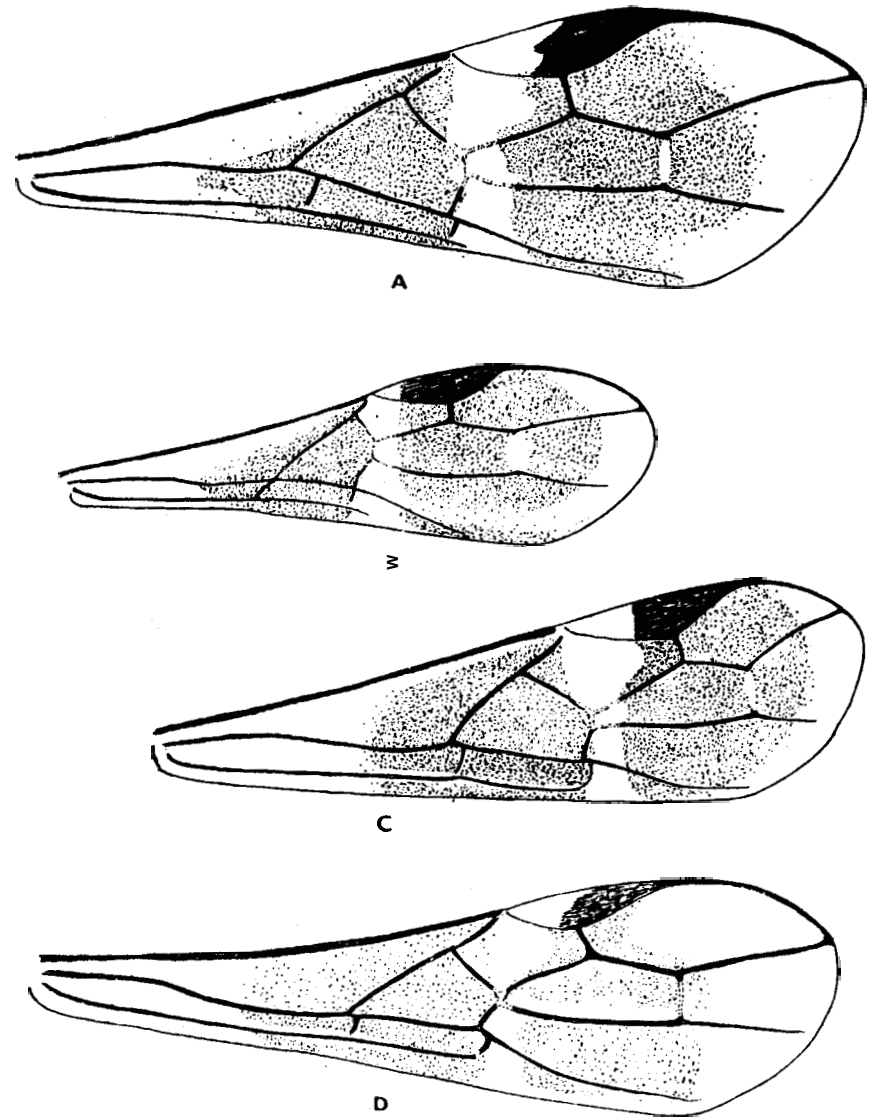


Fig. 4.—Fore wing of: A) *Spathius rubidus* (Rossi), ♀; B) *S. curvicaudis* Ratzb., ♀; C) *S. crythrocephalus* Wesm., ♀; D) *S. exarator* (L.), ♀.

Distribution: Cyprus, Denmark, England, France, Germany, Siberia, Sweden, Morocco and USSR.

Host: *Agrilus biguttatus* F. (Buprestidae), *Anobium rufipes* F. and *Hedobia imperialis* L. (Anobiidae).

13. *Spathius radzaynus* Ratzb., 1848.

Spathius radzaynus Ratzburg, 1848. *Ichneum. Forstins.*, t. II, pág. 43.

Distribution: Germany.

Host: Unknown.

This species seem to me dubious but I have included it in the key.

14. *Spathius curvicaudis* Ratzb., 1844 (fig. 3 B, 4 B, 5 B).

Spathius curvicaudis Ratzburg, 1844. *Ichneum. Forstins.*, t. I, pág. 4

Distribution: France, Germany, Italy, Jugoslavia, Sweden and Turkey.

Host: *Agrilus biguttatus* F. (Buprestidae), *Xestobium plumbeum* Ill. (Anobiidae), *Obrium cantharinum* L. (Cerambycidae) and *Magdalis carbonaria* L. (Curculionidae).

15. *Spathius erythrocephalus* Wesm., 1838 (fig. 3 C, 4 C, 5 D).

Spathius erythrocephalus Wesmael, 1838. *N. Mém. Acad. Sci., Bruxelles*, t. XI, pág. 131.

Distribution: Austria, Denmark, England, Hungary and Sweden.

Host: *Ochina plinoides* Marsh. (Anobiidae).

Remarks: I have been restrictive above with the host records because many of them seem dubious.

In the Palearctic region following not included species are known:

Spathius fasciatus Walker, 1874. *Cist. ent.*, t. I, pág. 307. Japan.

Spathius radjabii Fischer, 1970. *Ann. Soc. ent. Fr.* (N. S.), t. VI (3), págs. 705-708. Iran.

Spathius ussuriensis Tobias, 1961. *Izvestija Sibirskoi Akademii Nauk SSSR.*, núm. 11, págs. 121-123. East Siberia.

Following species are not possible to place satisfactory:

Spathius ferrugatus Goureau, 1866. *Bull. Soc. Sc. hist. Yonne*, página 55, perhaps synonymous to *Sp. exarator* L.

Spathius petiolatus (Spinola, 1808) (*Bracon petiolatus* Spin.), *Insect. Ligur.* 11, pág. 137, núm. 23.

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