

Two new species of *Spilomena* from Yemen (Hymenoptera: Sphecidae)

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Abstract: Two new species of *Spilomena* (Pemphredoninae) from Yemen are described: *Spilomena elephantodeta* spec. nov. and *S. nigrifrons* spec. nov.

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Introduction

The material was collected by Mr. A. van Harten, Yemeni-German Plant Protection, Sana'a, Republic of Yemen, longitude east 44° 11' and latitude north 15° 16' at an altitude of 2350 m and has been deposited in the collections of the Institute for Systematics and Population Biology (Zoological Museum), Amsterdam (ZMA) and the National Natural History Museum, Leiden (RMNH).

The microsculpture terms used in this paper are after Eady (1968).

Spilomena Shuckard, 1838

Spilomena is a cosmopolitan genus comprising over 50 species, for the greater part found in the Palaearctic (22) and Ethiopian (9) Regions (Bohart & Menke, 1976). The species nest in twigs, structural timber, and decayed wood. The primary prey appears to be immature thrips.

Spilomena elephantodeta spec. nov. (figs 1-3)

Material

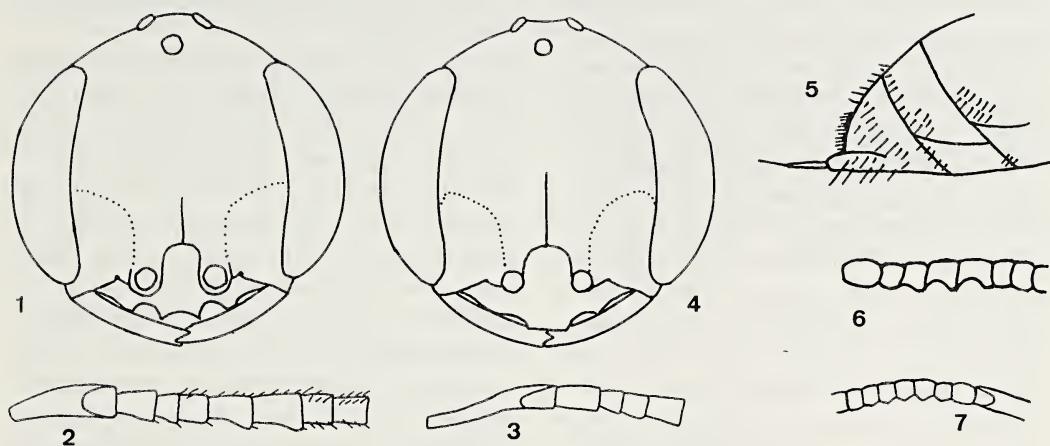
Holotype: ♂, Sana'a, ix.1992, light & mal. trap, A. van Harten (ZMA). Paratypes: 1 ♂, same data as holotype; 1 ♀, same locality and collector as holotype, v.1992 (ZMA); 1 ♀, same locality and collector as holotype, v.1992 (RMNH).

Additional specimens: 1 ♂, Sana'a, ii.1993; 1 ♀, Sana'a, i.1991; 2 ♀, Sana'a, ii.1991; 1 ♀, Sana'a vii.1991, A. van Harten (ZMA).

Description

Male 2.4 mm. Mainly black. Palpi, mandible, apart from light brown rimmed apex, clypeus, malar space, lowest part of gena, scape underneath, and face laterally ivory white. Dorsal part of scape, lower half of pedicel and all flagellomeres, front leg including coxa, apex of midfemur, interior sides of tibiae II and III, and tarsi II and III brownish yellow. Femur and exterior sides of tibiae II and III, pronotal lobe and tegula brown.

Maxillary palpus with 5 segments, labial palpus with 3. Mandible bidentate. Lateral parts of clypeus narrow, middle area bulging and reaching far above antennal sockets, apical margin of middle part truncated (fig. 1). Ivory white part of the face not translucent. Malar space as wide as the length of flagellomere II. Genae aciculate. Flagellomeres III and IV dented, brightly shining below, widened at apex, and one and a half time as long as wide (fig. 2). Flagellomeres I, II, and V-IX equally long and wide. Last flagellomere conical and two times as long as wide at base. All flagellomeres with erect hairs. Frons and vertex pustulate. Frontal line as long as scape, starting from clypeus. Eyes broadly separated. Basal half of compound eyes parallel; upper part somewhat converging above. OOL: POL = 7 : 4; OOL : SOL = 7 : 3; posterior ocelli just behind an imaginary line interconnecting the posterior corners of the eyes.



Figs 1-7. *Spilomena*; 1-3, *S. elephantodeta*; 4-5, *S. nigrifrons*; 6, *S. maghrebensis*; 7, *S. fulvicornis*; 1, 4, Facial portrait of male; 2, 7, scape, pedicel and flagellomeres I-VI of male; 3, scape, pedicel and three flagellomeres of female; 5, last three gastral segments of female; 6, pedicel and flagellomeres I-VI of male.

A sharp carina on front of pronotum. Mesonotum, scutellum, and metanotum alutaceous. Dorsal part of propodeum very finely transversally strigose with points in between. Mesopleuron shining, side of propodeum stribose.

Gaster shining. Tergite II somewhat wider than long, wider than other tergites. Tergite VII with white hairs along lateral sides and apex. Sternites III-VI with an apical row of stiff long hairs.

Wings hyaline with scattered fine hairs. Veins brown. Stigma with small whitish basal point. Front metatarsus without spines.

Female 3 mm. Mainly black. Mandible white with light brown rimmed apex; palpi, antenna interiorly, and tibiae light brown; antenna exteriorly brown. Structure mostly as in holotype. Frons with scattered short hairs. Tegula whitish. Antenna normal with many short erect hairs. Scape five times as long as wide at apex (fig. 3). Clypeus and mandible with stiff long hairs. Metatarsus I without spines. Tergite VI pointed with hairs; at apex two parallel longitudinal rows of short white hairs; without pygidium. Apical rim and lateral sides of sternites and tergites III-IV brown. Sternites III-V with an apical row of stiff long hairs. Apical half of sternite VI with long erect

hairs (as in fig. 5). Wings hyaline; stigma and veins ivory white. Wings covered with scattered short hairs, more close on apical half.

Etymology

The greek trivial name means inlaid with ivo-ry.

Spilomena nigrifrons spec. nov.

(figs 4-5)

Material

Holotype: ♂, Yemen, Sana'a, ii.1991, A. van Harten (ZMA). Paratypes: 7 ♂, same data as holotype; 9 ♀, same place and collector as holotype, i.1991 (ZMA); 1 ♂, same data as holotype; 1 ♀, same place and collector as holotype, i.1991 (RMNH).

Additional specimens: 2 ♂, i.1991, Sana'a, A. van Harten; 1 ♀, 30.viii.1991; 3 ♀, ii.1991; 3 ♀, ii.1992; 1 ♀, iii.1992; 10 ♀, iv.1992; 2 ♀, v.1992; 3 ♀, vi-vii.1992; 8 ♀, viii.1992; 2 ♀, ix.1992; 1 ♀, xii.1992; 1 ♀, i.1993, all Sana'a, mal. trap, A. van Harten (ZMA); 2 ♀, xi.1992, Sana'a, mal. trap, A. van Harten (RMNH).

Description

Male 2.8 mm. Mainly black. Mandible dirty white, apex somewhat darker; palpi, clypeus, and interior side of scape dirty white; tegula and first pair of legs light ferruginous.

Antenna exteriorly brown and interiorly light brown. Exterior sides of all tibiae brown.

Maxillary palpus with 5 segments, labial palpus with 3. Middle part of clypeus strongly bulged, reaching above antennal sockets; lateral parts narrow (fig. 4). Face laterally translucent dark greyish. Malar space as wide as length of flagellomere II. Malar space with some silvery pubescence. Frons and vertex punctulate. Genae strigose. Frontal line as long as scape, starting from clypeus. Flagellomeres III and IV dented below and brightly shining below and widened at apex, these two flagellomeres one and a half times as long as wide. Flagellomeres I-II and V-X equally long and wide. Last flagellomere one and a half time as long as wide. All flagellomeres with many erect hairs. OOL : POL = 7 : 5; OOL : SOL = 7 : 3; posterior ocelli just behind an imaginary line interconnecting the posterior corners of the eyes.

Pronotum in front sharply carinated. Mesonotum, scutellum, and metanotum alutaceous. Dorsal part of propodeum transversely very finely strigose with points between the ridges. Mesopleuron shining and finely punctulate. Sides of propodeum obliquely strigose.

Gaster smooth and highly shining. Tergite VII with white hairs along rounded apex. Sternite VII dark brown. Sternites III-VI with an apical row of stiff long hairs.

Wings hyaline with scattered short dark hairs. Veins from base to stigma brown, from

stigma to apex nearly black. Front metatarsus without spines.

Female 3 mm. Mainly black. Palpi, mandible, antenna interiorly, tegula, and front tibia brown. All tarsi light brown. Maxillary palpus with 5 segments, labial palpus with 3. Structure mostly as in holotype. Scape five times as long as wide at apex (as in fig. 3). Apical edge of clypeus and external side of mandible with some stiff hairs. Tergite VI pointed with hairs; at apical part two parallel longitudinal rows of short white hairs; without pygidium. Sternite VI black. Apical half of sternite VI with long erect hairs (fig. 5). Sternites III-V with some stiff long hairs at the apex. Lateral sides and apical rim of tergites and sternites black. Wings hyaline; veins light brown. Stigma nearly black. Wings covered with scattered short hairs, more close on apical half.

Etymology

The name of the species refers to the black colour of the frons.

Comparative notes

The old world species of *Spilomena* are known from the Eurasian region and the southern Ethiopian region. The two new species from Yemen are from in between these two regions.

Table 1. Differences in characteristics and colour of *Spilomena elephantodeta* spec. nov., *S. nigrifrons* spec. nov., and *S. maghrebensis* Dollfuss.

	<i>S. elephantodeta</i>	<i>S. nigrifrons</i>	<i>S. maghrebensis</i>
length of male	2.4 mm	2.8 mm	2.8 mm
mandible	ivory white	dirty white	yellow
flagellomeres exteriorly	brownish yellow	brown to black	dark brown
face laterally	ivory white, not translucent	dark grey, translucent	yellow
clypeus	ivory white	dirty white	yellow
malar space	white	dirty white	yellow
length of female	3 mm	3 mm	3 mm
mandible	white	brown	light brown
veins	ivory white	light brown	brown
stigma	ivory white	black	brown
pronotal lobe	brown	black	yellow
apical half of sternite VI	with erect hairs	with erect hairs	without hairs

Most of the males of *Spilomena* species in the Palaearctic and Ethiopian regions have normally formed antennae (Dollfuss, 1986). There are two exceptions. The flagellomeres II-IV of *S. maghrebensis* Dollfuss from Tanger are dented (fig. 6) and the flagellomeres I-V of *S. fulvicornis* Gussakovskiy from Uzbekistan are bulged (fig. 7). The flagellomeres III and IV in both new species from Yemen are dented (fig. 1).

In *S. nigrifrons* the coloration of the tibiae and femora vary from nearly black to brown; the antennae vary from black to brown.

Both new species resemble *S. maghrebensis*, the differences are summarized in table 1.

References

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