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A new species of *Aprostocetus* WESTWOOD (Hymenoptera: Eulophidae) from Central Europe

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Aprostocetus (Aprostocetus) sensuna n. sp. is described and illustrated; its position in the subgenus and discrimination from similar species are briefly discussed. The species was swept on banks of the river Sense in Switzerland.

Keywords: *Aprostocetus (Aprostocetus) sensuna*, new species, Switzerland.

INTRODUCTION

The genus *Aprostocetus* WESTWOOD (Eulophidae: Tetrastichinae) has a worldwide distribution; the number of its species is expected to be vast. GRAHAM (1987) in his monograph of European species treats more than 200 species, most of them united in the subgenus *Aprostocetus*. They are known as parasitoids of various insects and arachnids (Acari); phytophagy is rare. GRAHAM (1987) mentions one species likely to be used as biological control agent.

Knowledge about the genus in Switzerland, from where the new species originates, is very poor, i.e. we do not know how many species occur or how they are distributed, since nobody has ever seriously attempted to study them. GRAHAM (1987) and DOMENICHINI (1966, under *Tetrastichus* HALIDAY and *Hyperteles* FÖRSTER) together list just 10 species for Switzerland. However, it is to be expected that the composition of species is somewhat similar to that listed for other Central European countries (KALINA, 1989), because many species are widely distributed. Collecting during the last two years and examination of the most important Swiss Chalcidoidea collections (coll. FERRIERE at the MHN, Geneva, and coll. DELUCCHI at the ETH, Zürich) indicate this, too.

MATERIAL AND METHODS

The species described below was swept on banks of the river Sense near Bern. The specimens were card-mounted and air-dried. For more accurate examination antenna, mid leg and wings of one side were removed and slide-mounted, using Euparal as embedding medium. Terminology, abbreviations and measurements follow GRAHAM (1987), except for the major diameter of eye which is termed eye height. For measurements the true distance was taken, i.e. the points of reference were equidistant from the objective of the microscope.

DESCRIPTION

Aprostocetus (Aprostocetus) sensuna n. sp.

♀: Head in frontal view trapezoid, 1.2-1.25 times as broad as high, 1-1.05 times as broad as mesoscutum, 2.4-2.55 times as broad as long. POL 1.4-1.5

times OOL, OOL 1.7-1.95 times OD. Eye 1.25-1.35 times as high as broad, separated by 1.25-1.35 times their height. Malar space 0.55-0.6 times height of eye, malar sulcus straight to very slightly sinuate. Mouth 1.35-1.5 times malar space. Antenna (fig. 1) with scape 0.75-0.85 times height of eye, reaching at most to level of middle of median ocellus, 3.75-3.9 times as long as broad; pedicellus plus flagellum 1.05-1.1 times breadth of mesoscutum; pedicellus (dorsal) 1.85-2.15 times as long as broad, 0.75-0.9 times as long as F1; 4 anelli (fig. 2); funicle slender, 1.05-1.15 times as stout as pedicellus, filiform, its segments slightly decreasing in length, F1 1.9-2.25, F2 1.9-2.15, F3 1.55-1.65 times as long as broad; clava very slightly broader than F3, about 1.05 times as long as F2 plus F3, 2.85-3.2 times as long as broad, C1 1.1-1.3 times as long as broad, spine 0.35-0.4 times as long as C3, apical setae about 0.7 times length of C3; sensilla moderately numerous, uniseriate to partly biseriate, with long decumbent bases and projecting blades.

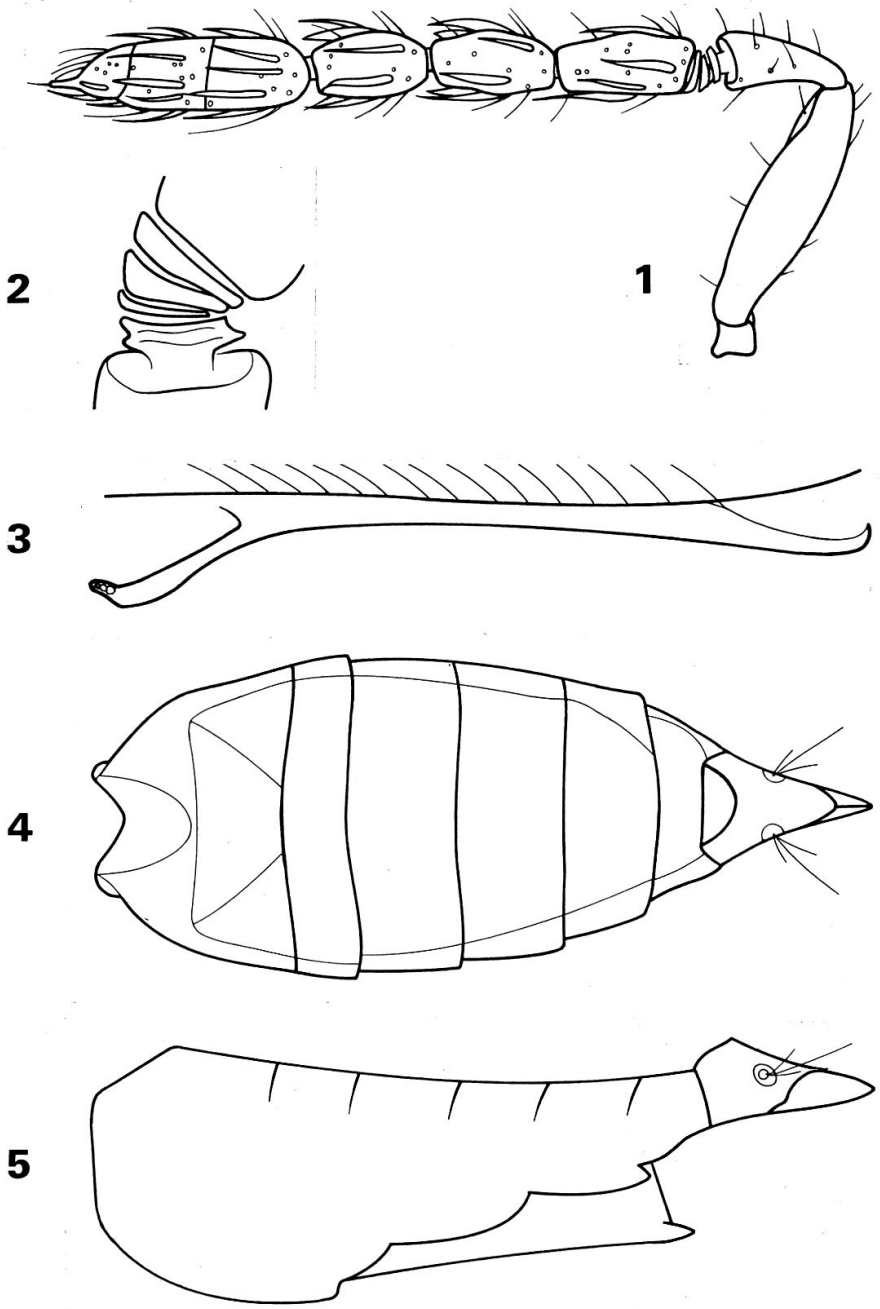
Thorax 1.4-1.45 times as long as broad; propodeal slope 45-50°. Pronotum short, setae on hind margin suberect and rather conspicuous. Mid lobe of mesoscutum about 0.95 times as long as broad, moderately convex, rather shiny; sculpture fine, delicately engraved, with most areoles about 4 times as long as broad; median line rather fine, effaced anteriorly over a short distance; 3-4 adnotaular setae on each side. Scutellum 1.35-1.45 times as broad as long, moderately convex, sculpture slightly finer than on mesoscutum; submedian lines parallel to very slightly converging, hardly to slightly nearer to sublateral lines than to each other, enclosed space 2.25-2.35 times as long as broad; setae equal in length, anterior pair slightly to distinctly behind the middle, 1.8-2.5 times as far from the front edge of scutellum as from posterior setae. Dorsellum at its hind edge triangularly rounded, 2.4-2.95 times as long as broad. Propodeum 0.9-1.2 times as long as dorsellum, shiny, with fine and weak superficial reticulation which is somewhat coarser in the middle; median carina with a small triangular basal fovea, slightly expanded posteriorly; hind margin rather broadly emarginate; callus with 2 setae. Legs of medium length and thickness; hind femur 3.75-4.05 times as long as broad; sculpture of hind coxa fine, delicately engraved, anterior edge slope 45-50°; spur of mid tibia 1-1.05 times length of basitarsus which is about as long as fourth tarsomere. Forewing about 2.35 times as long as broad, 1.25-1.3 times as long as hindwing; costal cell 0.85-0.9 times as long as M, 11.4-13.2 times as long as broad; SM with 4-6 dorsal setae; M (fig. 3) thin, 3-3.15 times as long as ST, front edge with 12-16 setae; ST at 30-35°, thin proximally, slightly expanded beyond middle to form a small oblong stigma, uncus conspicuous; PM a very short stub; speculum of moderate size, extending as a narrow strip to beginning or middle of M; wing beyond speculum moderately pilose; cilia 0.2-0.3 times length of ST. Hindwing 4.7-4.85 times as long as broad, obtusely pointed; cilia 0.15-0.25 breadth of wing.

Gaster (figs. 4, 5) lanceolate, acute, about 1.2 times length of head plus thorax, 2.35-2.75 times as long as broad, 0.8-0.95 times as broad as mesoscutum; last tergite 1-1.25 times as long as broad; ovipositor sheaths 0.5-0.85 times length of postcercale; longest seta of each cercus 1.85-2 times length of the next longest, slightly kinked; hypopygium prominent, ventrally keeled, its tip at 0.75-0.8 length of gaster.

Length: 1.85-2.25 mm.

Color of body black, non-metallic with only mouth-edge narrowly, facial sutures, upper angle of mesopleuron and sometimes scapular flange brownish.

Antenna with scape black, pedicellus black with brownish tip, flagellum brownish testaceous to brown. Legs with coxae black except for narrowly testaceous tips; trochanters more or less infuscate; femora black with narrowly testaceous tips; tibiae testaceous except for infuscated fore and sometimes hind tibiae; fore tarsi infuscate, other tarsi with fourth and sometimes third article infuscate to black, otherwise testaceous. Tegulae black, sometimes brownish anteriorly. Wings hyaline, venation greyish to yellowish testaceous.



Figs. 1-5. *Aprostocetus sensuna* n. sp.: 1, antenna; 2, anelli; 3, fore wing venation; 4, gaster, dorsal view; 5, gaster, lateral view.

♂: Unknown.

Material examined: HOLOTYPE ♀, Schweiz, Bern, Schwarzenburg, Sense, 591.0/185.7, 640 m, 8.VII.1993, Flussufer, leg. H. BAUR, coll. Naturhistorisches Museum Bern.

Paratypes: 2 ♀♀, same data as holotype; 1 ♀, same data as holotype, coll. Natural History Museum, London.

Etymology: The specific name *sensuna* is derived from «Sensuna», the oldest documented name of the river Sense (HUBSCHMID, 1924:188). It is treated as a noun standing in apposition to the generic name.

Biology: Unknown.

DISCUSSION

Aprostocetus sensuna n. sp. clearly belongs to the species group of lycidas as defined by GRAHAM (1987:279). It is easily distinguishable from most other European species by its long and prominent hypopygium. Only four species of *Aprostocetus* are somewhat similar in that respect, but differ as follows (only the most important characters mentioned):

A. clavicornis (ZETTERSTEDT, 1838) belongs to the *clavicornis* species-group and differs by its extremely short spur of mid tibia which is hardly as long as breadth of tibia.

A. cultratus GRAHAM, 1987 which belongs to the *caudatus* species-group, has a distinct metallic lustre, propodeum much more deeply and broadly emarginate, only half as long as dorsellum and tip of hypopygium at 0.6-0.65 length of gaster.

A. escherichi (SZELÉNYI, 1941) belongs to the *lycidas* species-group and has at least some body parts pale in addition to those mentioned above, head only 2-2.3 times as broad as long, propodeal callus with 3 setae and tip of hypopygium only at 0.6-0.66 length of gaster.

A. holoxanthus GRAHAM, 1991 (= *flavus* GRAHAM, 1987, see GRAHAM & LASALLE, 1991) which belongs to the *caudatus* species-group, has body mainly pale and ovipositor sheaths far exserted.

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ZUSAMMENFASSUNG

Aprostocetus (Aprostocetus) sensuna n. sp. wird beschrieben und illustriert. Die Stellung in der Untergattung und die Unterscheidung von ähnlichen Arten werden kurz diskutiert. Die Art wurde mit dem Netz am Ufer der Sense in der Schweiz erbeutet.

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