

Coniopteryx cerata Hagen, 1858, further description and lectotype designation (Neuroptera, Coniopterygidae)

By BO TJEDER

Through the courtesy of Dr. Howard E. Evans, Cambridge, Mass., I have had the opportunity to study a type specimen of *Coniopteryx cerata* Hagen from Ceylon. The species was described in 1858 and probably based on a single specimen. The description is very short but contains the important statement that the 1st and 2nd antennal segments are thick, long and cylindrical while the other segments are moniliform. Enderlein (1906) has in spite of this statement redescribed the species as a true *Coniopteryx*, basing the redescription on a ♀ (with short basal segments of antennae) from Pattipola, Ceylon, and Withycombe (1925) suggests that a ♂ from Nuwara Eliya, Ceylon, probably represents the same species and gives a redescription and a figure of the abdominal apex of that specimen under the name of *Coniopteryx cerata* Hagen. Banks (1939) on the other hand, after a revision of Hagen's series of the species, declares that the species belongs to the genus *Spiloconis* Enderl., 1907, a genus of the subfamily Aleuropteryginae, distinguished by "die auffällig langen und dicken beiden Basalglieder der Antennen und durch das Vorhandensein von schwärzlichen Flecken auf den Vorderflügeln". Banks reports that there is also a small species of *Malacomyza* (i.e. *Coniopteryx*) in the series which "may have been in a later sending from Nietner, as he (Hagen) had two or three sendings from Ceylon".

The now available type specimen is labelled "Ceylon/Nietner", "Hagen", "Type/10448" and "*C. cerata*/Hagen". It agrees well with the description. I have therefore designated it as lectotype of *Coniopteryx cerata* Hagen, 1858, and have labelled it accordingly.

The type species of *Spiloconis* is *S. sexguttata* Enderl., 1907, based on 5 ♀♀ from Japan. I have not been able to examine this species for comparison with *cerata* and it is therefore with some hesitation I am now dealing with *cerata* as a *Spiloconis*. The lectotype of *cerata* has very long 1st and 2nd antennal segments; the wings are unspotted.

Spiloconis cerata (Hagen, 1858)

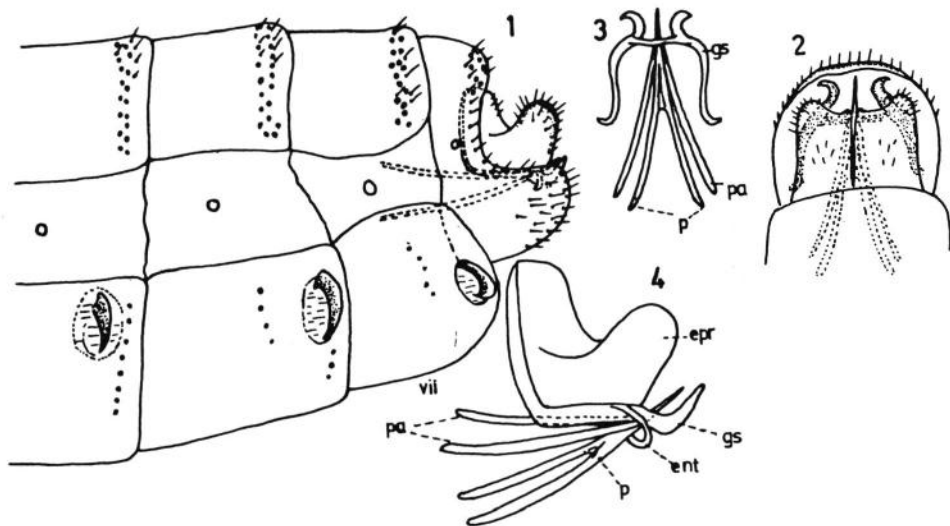
(Figs. 1-4)

Synonymy

Coniopteryx cerata Hagen, 1858. Verh. zool.-bot. Ges. Wien, 8, p. 484 (nec Enderlein, 1906; nec Withycombe, 1925).

Spiloconis cerata: Banks, 1939. Bull. Mus. Comp. Zool., 85, p. 474, figs. 2, 3.

Entomol. Ts. Arg. 89. H. 3-4, 1968



Figs. 1—4. *Spiloconis cerata* (Hag.) (lectotype ♂). — 1. Apex of abdomen, lateral. — 2. Ditto, dorsal. — 3. Gonarcus and aedeagus, ventral. — 4. Ectoproct, gonarcus and aedeagus, lateral. — Abbreviations: ent=entoprocessus; epr=ectoproct; gs=gonarcus; p=penis; pa=parameres; vii=sternite 7.

Type locality: Rambodde, Ceylon. — Lectotype: a male in the collections of the Museum of Comparative Zoology, Cambridge, Mass.

Redescription

Lectotype ♂ (pinned; in good condition, only lacking the left hindwing).

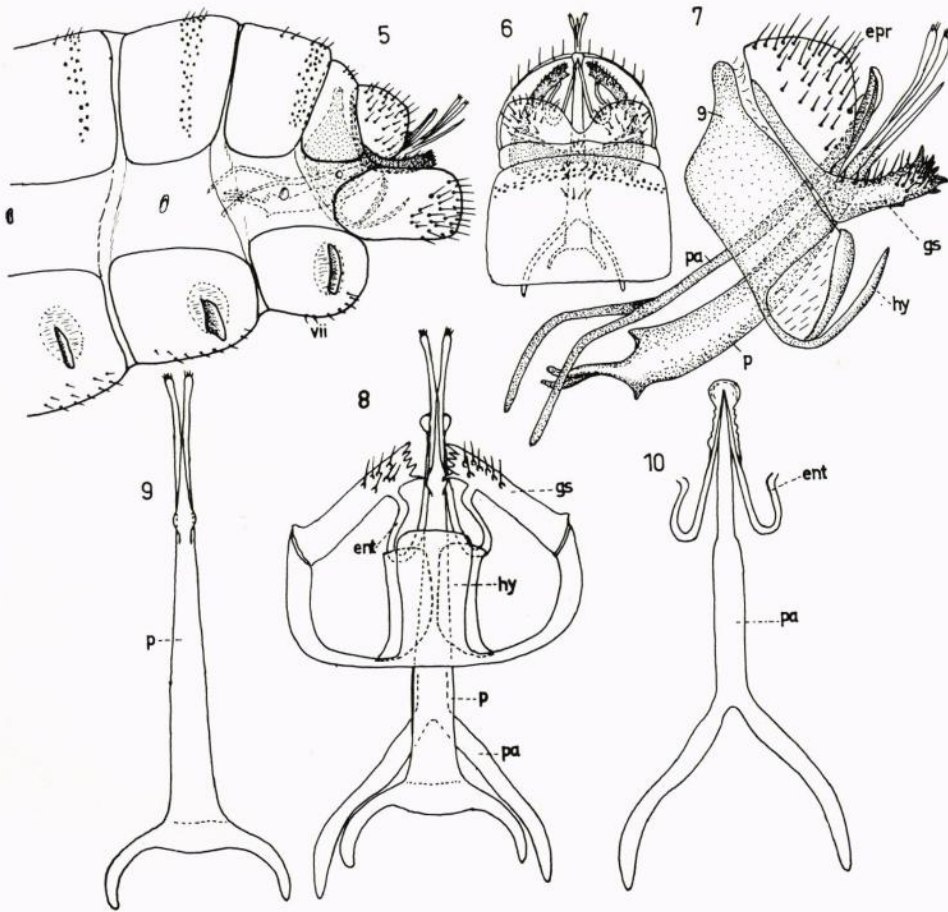
The head, body and wings agree with Hagen's description and Banks's figures 2 and 3.

Abdomen. Plicaturae present on sternites 3—7 (fig. 1). Segment 8 synscleritous, its sternal part scoop-like with reflexed hind-margin as shown in fig. 2. Ectoprocts (*epr*) large, forming a pair of rounded, upwards directed projections as shown in figs. 1 and 4. Gonarcus (*gs*) divided into a pair of slender rod-like structures, fused with the ectoprocts as illustrated in fig. 4. Each rod is produced apically into an outwards curved hook (fig. 3). Entoprocessus curved downwards-inwards and fused below the apex of the aedeagus as shown in fig. 4. The aedeagus is composed by two pairs of long and slender rod-like structures. The lower pair is presumably the penis (figs. 3 and 4, *p*). The rods of this pair fuse distally with one another into a tubular, very acute apex. The rods of the upper pair, parameres (*pa*), meet close before the apex of the penis.

Female unknown.

Geographical distribution

Ceylon: Rambodde, lectotype ♂, leg. Nietner, in the Museum of Comparative Zoology, Cambridge, Mass. (ex Hagen collection).



Figs. 5—10. "*Helicoconis*" *maculata* Enderl. (♂ from N.S.W., Palm Beach). — 5. Apex of abdomen, lateral. — 6. Ditto, dorsal. — 7. Segment 9, ectoprocts with gonarcus, parameres and penis, lateral. — 8. Ditto, ventral. — 9. Penis, ventral. — 10. Parameres and entoprocus, ventral. — Abbreviations as in figs. 1—4 and: hy=hypandrium.

Note 1

The genitalia of one more species of this genus, *S. picticornis* Banks, 1939, have been described by Carpenter in 1955. The terminal and genital structures of the ♂ of *picticornis* are of the same general pattern as that of *cerata* but there are some differences to be noted. *S. picticornis* lacks plicaturae on the 7th segment. The 8th segment of *picticornis* ♂ is divided into tergite and sternite (synscleritous in *cerata*). The aedeagus of *picticornis* is formed as a large cylindrical body with a pair of divergent arm-like processes dorsally, which processes perhaps are homologous with the parameres of *cerata*. Carpenter states that the 9th segment is reduced in the *picticornis* ♂ and this is also the case in the *cerata* ♂.

Note 2

For comparison with the mentioned two species I have examined the genital structures of a pair of *Spiloconis maculata* (Enderl., 1906) from Australia: New South Wales, Palm Beach, 23.X.1917, leg. and det. R. J. Tillyard (my collection; don. A. Tonnoir). These specimens agree well with Enderlein's description and figure of the wings and antennae and they may be supposed to be correctly determined. An examination of the type specimen, a ♀ from New South Wales, Springwood, is, however, desirable. Enderlein described the species as a *Helicoconis* but in 1907 he transferred it to *Spiloconis* because of the long 1st and 2nd antennal segments and the spotted wings. The pattern of the ♂ genitalia of this species (figs. 5—10) is of quite another type than that of *picticornis* and *cerata*, having among other things a large 9th segment, telescopically indrawn in the 8th segment (figs. 5 and 7). The pattern resembles very much that of *Helicoconis* but there are some differences. Entoprocessus are absent in *Helicoconis* but are present in *maculata*, apically fused to the parameres as illustrated in figs. 8 and 10 (*ent*). The parameres are free in *Helicoconis*, fused with one another in *maculata* (fig. 10). The hypandrium is of similar type in *Helicoconis* as in *maculata* but in the latter species a pair of additional plates is present, situated dorsally of the hypandrium. The penis of *maculata* is a large tubular organ which ends in a pair of dorsal prongs, tipped with a few setae, and an acute ventral prong, cf. figs 7—9.

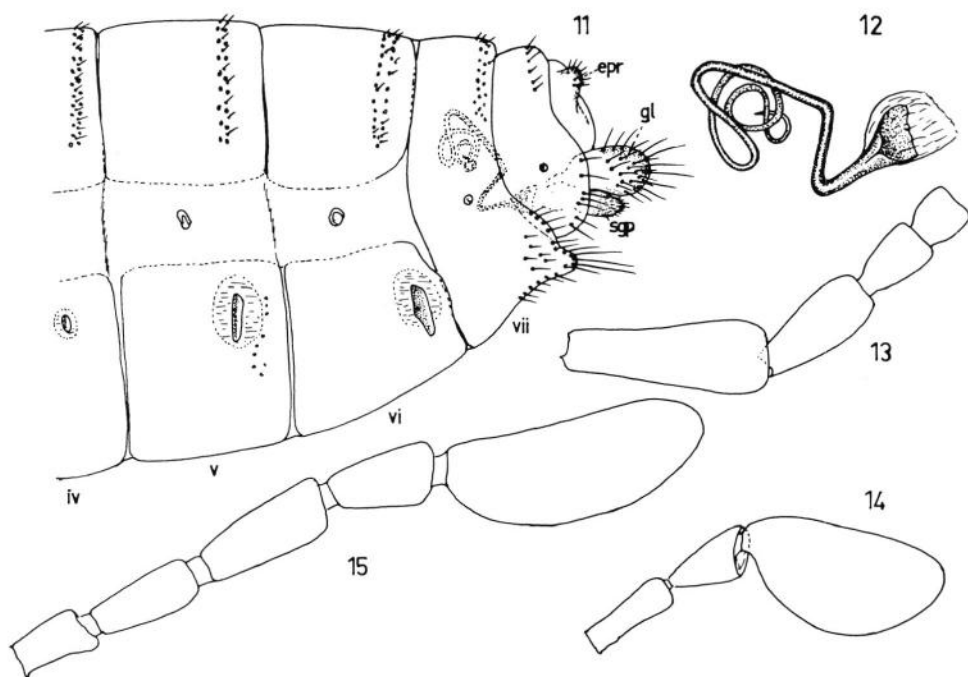
The terminal abdominal structures of the ♀ of *maculata* are of quite another pattern than those of *Spiloconis picticornis*, figured by Carpenter. In *maculata* the gonapophyses laterales (*gl*) are not fused with one another as in *picticornis* and they are supported ventrally by a small projecting subgenital plate (fig. 11, *sgp*). The pattern in *maculata* is indeed very like that of *Helicoconis* (cf. Tjeder, 1957, p. 103, f. 10). The bursa copulatrix (fig. 12) is much longer and has a more coiled distal part than observed in any of the described *Helicoconis* females. The plicaturae of segments 3—4 are much smaller than are those of *Helicoconis*.

S. maculata is distinguished from *Helicoconis* also in the shape of the antennae and the palpi (figs. 13—15). The two basal segments of the antennae are much longer in *maculata* than in the *Helicoconis*-species and the tip segments of the palpi are much broader than in that genus, the tip segment of the labial palpus of *maculata* being almost axe-like (fig. 14).

It appears, from this comparison, that the species *cerata* Hag. and *picticornis* Banks do not belong to the same genus as *maculata* Enderl. An examination of the genital structures of the type species of *Spiloconis*, the Japanese *S. sexguttata* Enderl., is accordingly necessary in order to settle this matter of classification.

Note 3

The *Coniopteryx*-species described by Withycombe in 1925 as *C. cerata* Hag. has proved not to belong to this species. It is consequently necessary to rename the species, and I propose the name



Figs. 11—15. "*Helicoconis*" *maculata* Enderl. (♀ from N.S.W., Palm Beach). — 11. Apex of abdomen, lateral. — 12. Bursa copulatrix, lateral. — 13. Base of antenna. — 14. Labial palpus. — 15. Maxillary palpus. — Abbreviations: epr=ectoproct; gl=gonapophyses laterales; sgp=subgenitale; iv—vii=sternites 4—7.

Coniopteryx withycombei n. nom.

Synonymy

Coniopteryx cerata: Withycombe, 1925. Mem. Dep. Agr. India, Ent. Ser. 9, p. 15, f. 13. (Nec Hagen)

Locus typicus: Nuwara Eliya, Ceylon. — Type: a male in the collections of the Agricultural Research Institute, Pusa, India.

I have not examined the specimen. Withycombe's thorough description and figure of the ♂ genitalia will make it possible to identify the species.

It is possible that the ♀ recorded from Ceylon by Enderlein, 1906, is conspecific with the ♂ described by Withycombe but this cannot for the present be proved. Enderlein's specimen was collected in Pattipola.

Banks (1931) has recorded specimens of *Malacomyza* (i.e. *Coniopteryx*) *cerata* Hag. from Pahang and Selangor, Malay Peninsula. The identity of these specimens is at present unknown.

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