

TWO *BEMBECIA* CLEARWING MOTHS FROM NORTHWEST CHINA (LEPIDOPTERA: SESIIDAE)

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ABSTRACT.— Two species of clearwing moths in the genus *Bembecia* are described from northwest China: the new species *Bembecia ningxiaensis* Xu & Liu n.sp., from Ningxia District, Qinghai Prov., and *Bembecia insidiosa* (Le Cerf), n. comb., from Qinghai Prov., the latter a new record for Qinghai Prov.

KEY WORDS: Asia, distribution, Oriental, hostplants, Palearctic, *Bembecia ningxiaensis* n.sp., Leguminosae, taxonomy.

In recent years, continuing study of the Chinese sesiid fauna suggests that some species of sesiids remain to be discovered, especially in northern and northwest China. In the present paper, two species of the Sesiidae are described from material at hand from northwest China, belonging to the genus *Bembecia* Hübner, 1819. Among them are one species new to science and the other one, *Bembecia insidiosa* (Le Cerf), is newly combined in *Bembecia* and described more fully.

Bembecia insidiosa (Le Cerf), 1911, n. comb.

(Fig. 1, 3-5)

Synanthedon insidiosa Le Cerf, 1911:93; Gaede, 1933:232; Heppner & Duckworth, 1981:31.

Diagnosis.— Wing expanse 18-21mm; forewings blackish-brown. Abdomen black; the hind margins of 2nd, 4th and 6th segments each with sharply marked white belt, continuous, with broader belt on 2nd segment; anal tuft black. *Male genitalia:* scopula androconalis moderately developed, covered with bifurcate hairs; gnathos flap, round; ear-shaped valve with terminally and costally bifurcate hairs, apex blunt, truncate; crista sacculi high, very prominent with strong setae dorsally, and tip with setae tuft. Saccus rather long, slightly dilated in middle, apex truncation. Aedeagus bulbous at base, upwards slender and somewhat curved, some granules at apex. *Female genitalia:* papilla analis densely bristled. Postapophysis moderately long, longer than antapophysis. Distal 1/3 of ductus bursae sclerotized, hemisclerotized in medial 1/3.

Specimens examined.— CHINA.— *Qinghai Prov.:* Maixiu Forest, Zeku Co., ca. 200 km S. of Xining City, 3000m, 16 Jul 1982, 1 ♀; 21 Aug 1981, 1 ♂.

Hostplant.— Unknown.

Type locality.— Nanshan, Gansu Prov., China.

Distribution.— China (Zeku Co., Qinghai Prov., and Nanshan, Gansu Prov.

Remarks.— This species is newly recorded for Qinghai Province.

Bembecia ningxiaensis Xu & Liu, new sp.

(Fig. 2, 6-7)

Description.— **MALE:** wing expanse 21mm. *Head:* frons white; vertex, occipital cilia black. Antenna pectunculated, blackish brown. Labial palpus pale brown, 1st and 2nd joints with long black hairs at outside; 3rd joint scales removed and porrected, laterally and dorsally black. *Thorax:* dorsoventrally blackish-brown, almost no other maculation, only with greyish white long hairs laterally near the base of forewings. Hindleg scales removed, pale brown; hind tibiae grayish-white except at base; basal joint of tarsus grayish-white, and another joints grayish-brown. *Forewing:* the costa, discal spot,

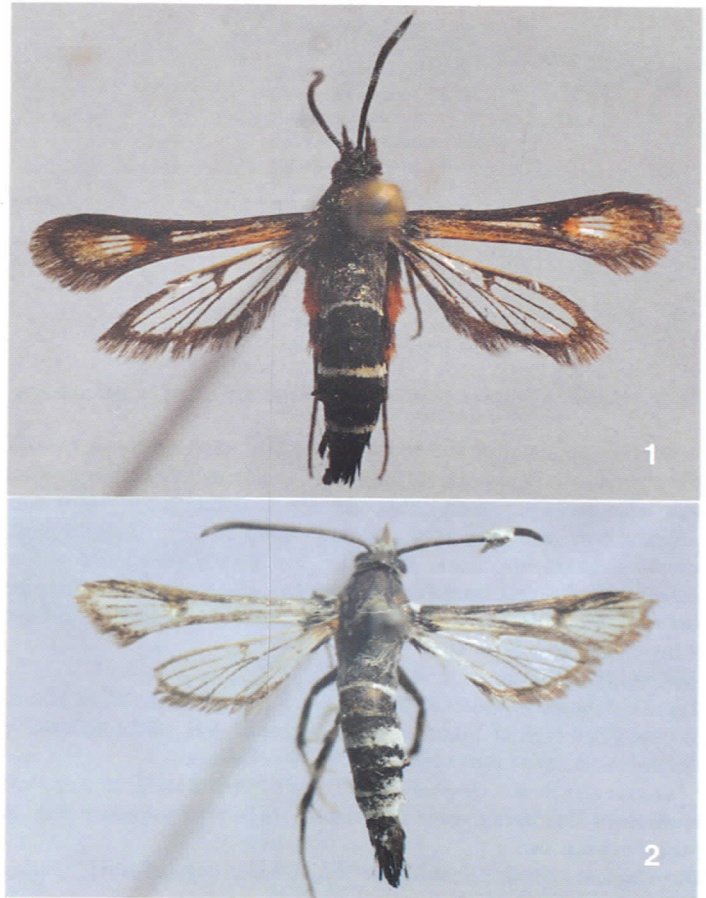


Fig. 1. *Bembecia insidiosa* (Le Cerf) ♀, Xining, Qinghai, China.

Fig. 2. *Bembecia ningxiaensis* Xu & Liu, n. sp. ♂, Yinchuan, Qinghai, China.

fringes and veins blackish brown, the rest of area grayish-white, the discal spot being bordered with grey on outside, and a small white spot at base; ATA present, no vestigial vein in cell, PTA almost absent and replaced by scaling dusted with greyish-white; apical area semi-transparent, covered with pale scaling being thinner; ETA about square, composed of 4 spots. *Hindwing:* hyaline, veins and fringes blackish brown, cross vein terminally with a small triangular spot. *Abdomen:* dark brown, hind margin of 2nd segment with a slightly white belt above; 4th, 6th, 7th segments almost entirely white at dorsum and beneath (another male has a broadly white belt

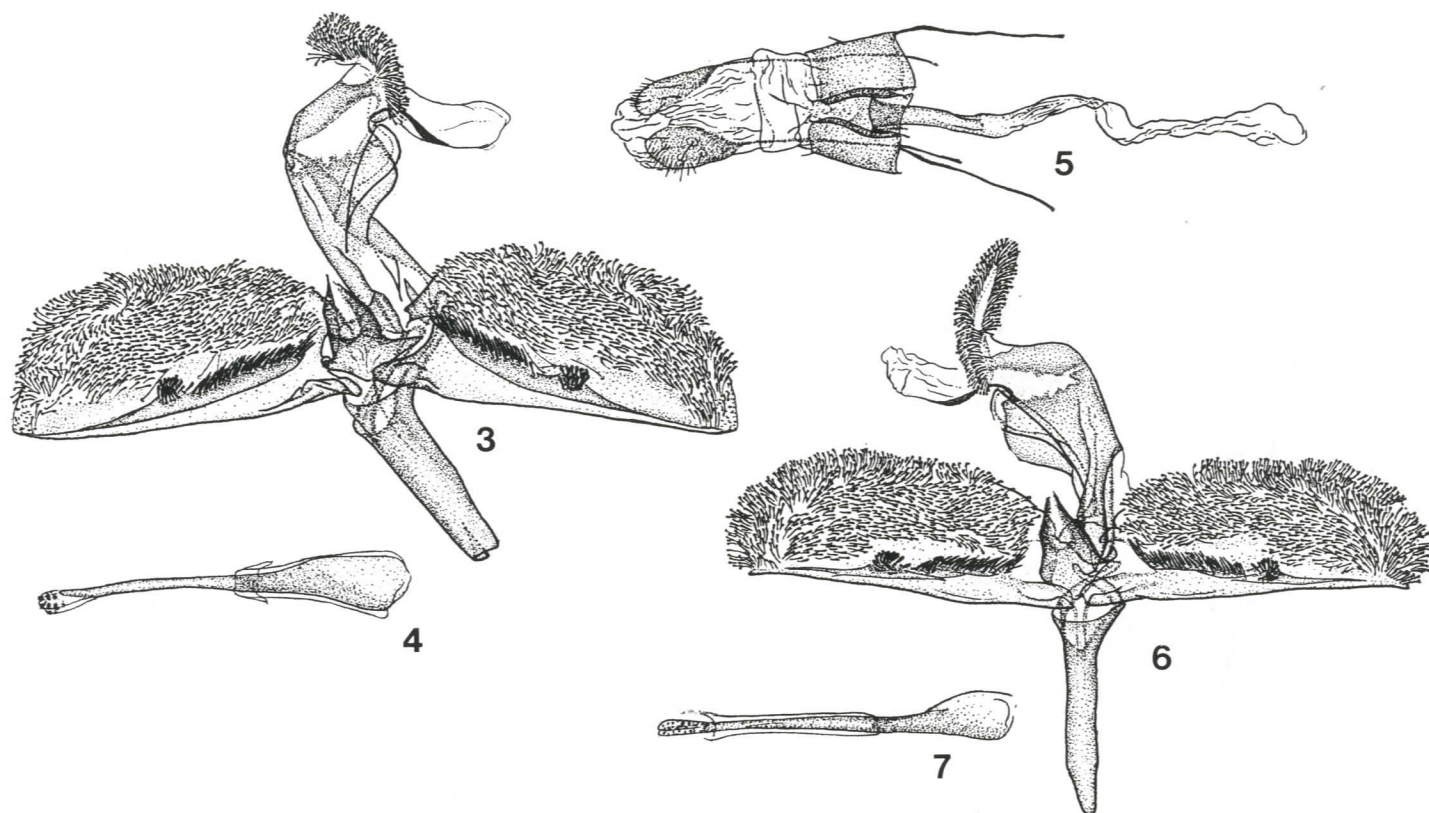


Fig. 3-7. *Bembecia* genitalia: 3-5) *Bembecia insidiosa* Le Cerf, ♂ and aedeagus (3-4) and ♀ (5); 6-7) *Bembecia ningxiaensis* Xu & Liu, n.sp., ♂ and aedeagus.

on 5th segment dorsally); and anal tuft developed, blackish-brown, beneath grayish-white. *Genitalia*: scapula androcanalis moderately developed, covered with bifurcate hairs; gnathos flap, ear-shaped, dorsal 2/3 of valve with bifurcate hairs, and apex blunt, truncate; crista sacculi lower, diagonal, somewhat curved and clothed with setae, which gradually become shorter toward extremity, the extremity with larger hair process curved downwards; saccus very long, slender at base. Aedeagus straight and very long, bulbous at base, some granules at apex.

FEMALE: unknown.

Types.— *Holotype* ♂: CHINA.— *Qinghai Prov.*: Ningxia Dist. (W. of Heluan Mt., ca. 80km NW. of Yinchuan City, 3500m, 11 Aug 1982 (deposited at Qinghai Academy of Agriculture and Forestry, Xining).

Paratype ♂: CHINA.— *Qinghai Prov.*: Ningxia (Baiji Beach), 16 Aug 1976.

Hostplant.— The larva lives in the roots of *Hedysarum scoparium* Fish. & Mey (Leguminosae).

Distribution.— China: Beluan Mt. and Baiji Beach, Ningxia District, Qinghai Prov.

Remarks.— We describe this species as a new species because the characters present are sufficient to distinguish the insect from all other known species of the genus *Bembecia* having white belts on the abdominal dorsum, as follows: 4th, 6th, 7th segments of abdominal dorsum almost entirely white, and crista sacculi with particular setae row. The new species cannot be confused with any other species.

ACKNOWLEDGEMENTS

The authors wish to express their hearty thanks to the State Committee of Natural Science Fund, P. R. China, for their support.

LITERATURE CITED

- Gaede, M.**
1933. Familie: Aegeriidae. In A. Seitz (ed.), *Die Gross-Schmetterlinge Der Erde. Die palaearktische Spinner und Schwärmer. Teil 2. Supplement*, 229-240, pl. 16. Stuttgart: A. Kernen.
- Heppner, J. B., and W. D. Duckworth**
1981. Classification of the superfamily Sesiioidea (Lepidoptera: Ditrysia). *Smithson. Contr. Zool.* (Washington), 314:1-144.
- Le Cerf, F.**
1911. Descriptions d'espèces nouvelles de Aegeriidae (Lep. Heterocera). *Bull. Soc. Ent. Fr.* (Paris), 1911:92-94.

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