

Bucculatrix formosa sp.n., a remarkable species
from the Kugitangtau Mountains (Central Asia)
(Lepidoptera : Bucculatricidae)

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Summary

The new species *Bucculatrix formosa* is described from the Kugitangtau Mountains, Turkmenistan (Central Asia). It has several very clear apomorphic features, though such characters as the presence of a gnathos, the shape of the vinculum, a well-developed tegumen and especially the presence of two pairs of apophyses in the female genitalia suggest an archaic position of this species. Illustrations of the imago, wing venation and genitalia are provided.

Résumé

Description d'une nouvelle espèce : *Bucculatrix formosa*, des Monts Kugitangtau, Turkmenistan (Asie Centrale). Cette espèce présente des caractères très clairement apomorphiques, bien que plusieurs d'entre eux fassent penser à une position archaïque de l'espèce : présence d'un gnathos, forme du vinculum, tegumen bien développé, et tout spécialement la présence de deux paires d'apophyses dans les genitalia femelles. Sont figurés : l'imago, la nervulation alaire et les genitalia.

Zusammenfassung

Neu beschrieben wird *Bucculatrix formosa* von Turkmenistan (Kugitangtau). Die Art zeigt verschiedene, klar apomorphe Kennzeichen. Hingegen deuten andere Merkmale, wie das Vorhandensein eines Gnathos, die Form der Vincula, ein gut entwickeltes Tegumen und insbesondere die Anwesenheit von zwei Paar Apophysen in den weiblichen Genitalien auf eine frühe Entstehung der Art hin. Abbildungen der Imagines und der männlichen und weiblichen Fortpflanzungsorgane sind hinzugefügt.

While collecting in the Kugitangtau Mountains, Turkmenistan, a species of *Bucculatrix* was found which differs considerably from all other

known species. Some characters are shared by only a few species of the Bucculatricidae (BRAUN, 1963 ; SEKSJAEVA, 1981 ; 1989).

***Bucculatrix formosa* PUPLESIS & SEKSJAEVA sp.n.**

HOLOTYPE : ♂, Turkmeniya, Kugitangtau Mountains, env. Svintsovyi Rudnik (loc. Sayat), 12.VIII.1989, leg. R. PUPLESIS.

PARATYPES : 106 ♂♂, 13 ♀♀, same locality as holotype, 11-13.VIII.1989, leg. R. PUPLESIS, V. SRUOGA, R. NOREIKA ; 95 ♂♂, 10 ♀♀, same locality, 29.VIII - 4.IX.1990, leg. R. PUPLESIS, J. PUPLESIENE, V. SRUOGA, R. NOREIKA.

DIAGNOSIS : It is unique by its genital characteristics and forewing venation (Fig. 2). It can easily be distinguished from all other species by the form of the gnathos and very long, tapered vinculum with strongly sclerotized central ridge.

MALE (Fig. 1) : Forewing length 2.1 - 2.7 mm. Frontal tuft almost white with slight brownish admixture ; eye-caps creamy at centre and slightly brownish at edges ; each segment of antenna creamy at base and brown at apex. Thorax and forewing covered by mixture of creamish white and brown or brownish scales ; forewing with two (sometimes three) dark brown, irregular spots (basal, dorsal, sometimes apical) and some irregular, creamish white areas. Cilia and hindwing creamish white.

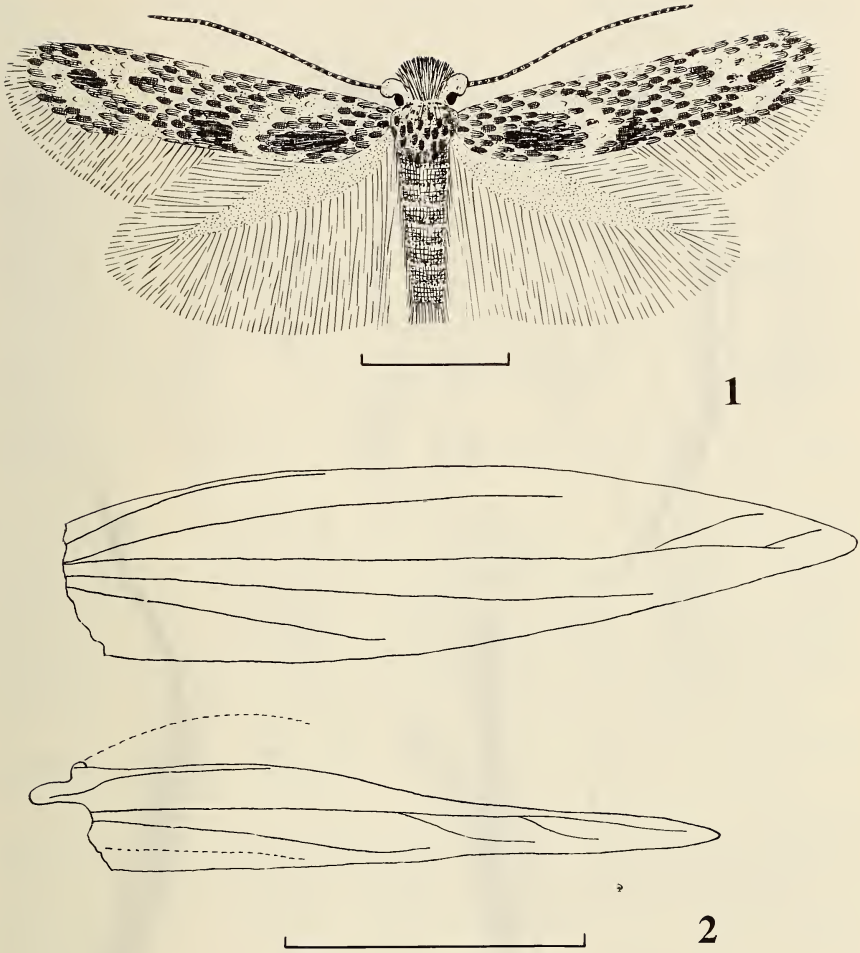
FEMALE : Similar to male.

MALE GENITALIA (Figs 3-6) : Tegumen well-developed with large terminal lobes. Vinculum very long and pointed with strongly sclerotized central ridge and with large anterior lobe-like extension. Gnathos present, conical. Valva slender with more or less triangular sclerotization (in ventral view). Aedeagus long with single cornutus up to about 2/3 length of tube.

FEMALE GENITALIA (Fig. 7) : Unlike most species of the genus, there are two pairs of well-developed apophyses present. Bursa copulatrix oval with typical signum.

BIOLOGY : Adults fly in August and September. Foodplant not known.

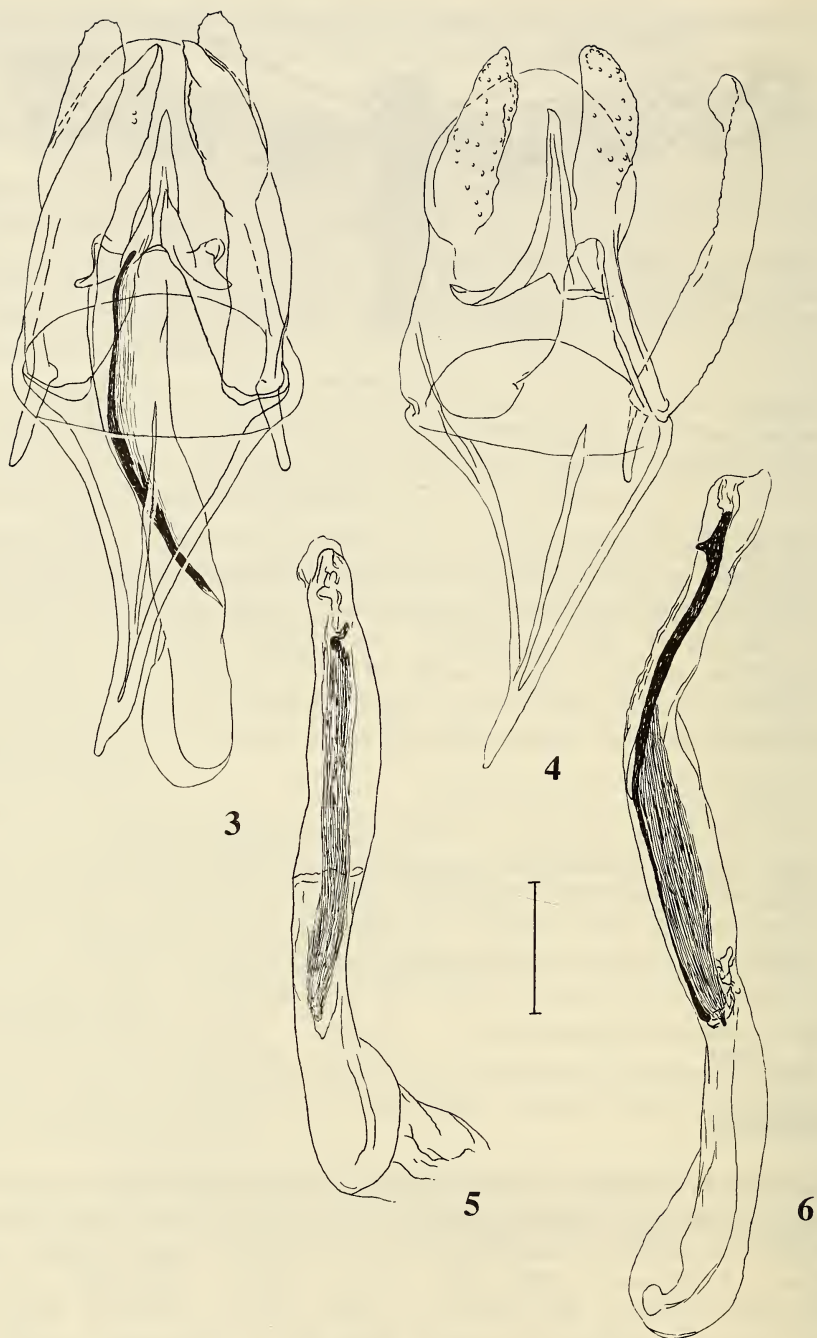
DISTRIBUTION : Known only from Kugitangtau Mountains (Turkmenistan, Central Asia).



Figs 1-2. *Bucculatrix formosa* sp.n.: 1 — Imago; 2 — Wing venation. (Scale bar 1 mm)

Discussion

The gnathos is usually absent in this group, being present only in several species of the North American fauna and one species from South Africa which is regarded as belonging to a new subgenus, *Leucoedemia*, by SCOBLE & SCHOLTZ (1984). The vinculum differs considerably from the typical shape in *Bucculatrix* Z., being strongly elongated distally and having a strongly sclerotized ridge and a lobe-shaped anterior



Figs 3-6. Male genitalia of *Bucculatrix formosa* sp.n. : 3 — Holotype ; 4 — Paratype, 11.VIII.1989, env. Svintsovy Rudnik, Turkmenistan ; 5 — Aedeagus same paratype ; 6 — Aedeagus paratype 13.VIII.1989, env. Svintsovy Rudnik, Turkmenistan. (Scale bar 0.1 mm)

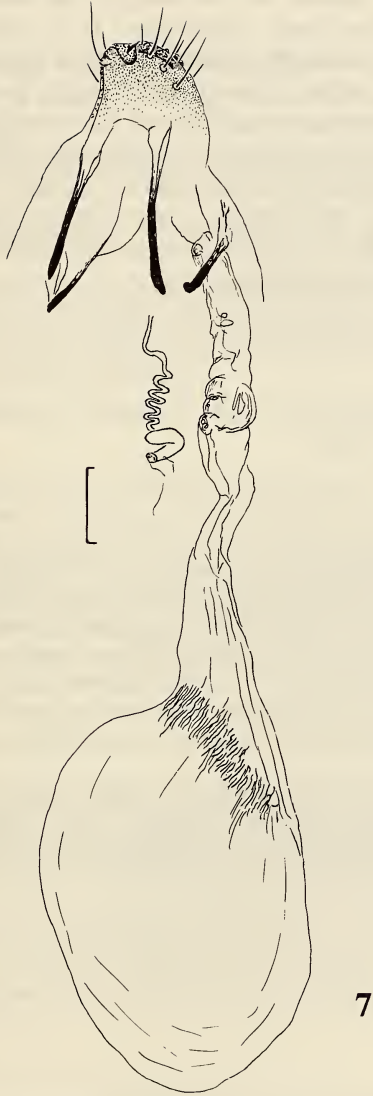


Fig. 7. Female genitalia of *Bucculatix formosa* sp.n., paratype. (Scale bar 0.1 mm)

extension. Furthermore, the aedeagus has a single band-like cornutus. In contrast to most species of the family, the female genitalia have two pairs of well-developed apophyses. It is remarkable that the forewing venation is strongly reduced and, in contrast to all Bucculatricidae studied, it lacks a closed cell. Thus it is difficult at present to determine the systematic position of the species or to propose a separate, supraspecific taxon for it. Undoubtedly, *B. formosa* possesses several very clear apomorphic characters, though the presence of a gnathos, the shape of the vinculum, the well-developed tegumen and especially the two pairs of apophyses in the female genitalia suggest a relatively low position of this species.

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