

## A new Cossid Moth from Western China

(Lep. Cossidae)

By

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(With Plate III)

Among the few palearctic Cossidae in the Carnegie Museum collection there is a single specimen from western China, belonging to the subfamily *Cossinae*, which had defied prior casual attempts at identification. Eventually, in the course of a genitalic survey of the subfamily, it became more than routinely desirable to have its name and a determined search was made, but with no better results than before.

I then appealed to Herr Franz Daniel, of the Zoologische Staatssammlung in Munich, who probably knows the palearctic *Cossidae* better than anyone, for any help he might be able to provide. From a sketch of the distinctive pattern of the specimen and description of some of its structural peculiarities he stated that it was likewise unknown to him and probably new. He pointed out, however, that a considerable number of cossid species, especially of the eastern Palearctic, are known from single specimens only; that these are scattered among numerous, often inaccessible, collections; and that the published descriptions of them frequently are very insufficient; under which circumstances his opinion naturally could not be positive.

In view of the similarity often found between western Chinese Lepidoptera and those from northern India I have extended comparisons to the *Cossinae* known from this region as well. Although the results here were similarly negative, I do have the suspicion that if close relatives of the present form are found it will be in this area.

In recognition of Herr Daniel's valuable work on Palearctic *Cossidae* as well as in thanks for his assistance in the present instance, it is a pleasure to dedicate this new species to him.

### **Sinicossus** new genus

Genotype: *Sinicossus danieli* n. sp.

Male. Antennal shaft composed of about 50 segments,

short bipectinate to tip, the longest rami about as long as three shaft segments; vertex with a long, forward-directed tuft of scales; frons with moderately long, erect scales, longest just below antennal sockets; palpi moderate, slightly ascending, rough scaled ventrally, reaching about as far as frontal vestiture.

Venation typically cossine: fore wing with areole present, rather small, projecting only about one-fourth its length beyond cell-end;  $R_1$  from cell before it;  $R_2$  from its anterior border;  $R_3$  connate with short stalk of  $R_4 + R_5$ ;  $M_1$  from end of chorda;  $M$  present in cell, forked a little before base of areole and origin of  $Cu_2$ , the lower branch ending at origin of  $M_2$ ;  $M_2$ ,  $M_3$  and  $Cu_1$  subequally spaced;  $Cu_2$  distal, about twice as far from  $Cu_1$  as is  $M_3$ ; 1 A free to tornus; 2 A sinuate; 3 A enters 2 A at about one-fourth. Hind wing: frenulum present, engaging a well-developed retinaculum on fore wing; Sc free to apex with no cross-vein to it from cell; Rs and  $M_1$  connate, strongly divergent;  $M$  present, short forked in cell, the lower branch ending between  $M_2 - M_3$ ;  $M_2$ ,  $M_3$  and  $Cu_1$  subequally spaced;  $Cu_2$  about three times as far from  $Cu_1$  as is  $M_3$ ; three anal veins.

Hind tibia with two pairs of spurs; a well developed arolium between claws on tarsi.

Genitalia: uncus entire, rounded; socius as a slight setose inflation of the lateral edge of uncus on each side, just beyond bases of gnathos; gnathos arms stout, flattened, somewhat angular, joined mesially by a slender, transversely elongate scobinate pad; tegumen thin, anterior edge nearly transverse (not deeply V-shaped), the thickened supporting ridges several, the stoutest mesially convergent anteriorly, arcuately divergent posteriorly. Valva elongate, slender, dorsal edge with a single rounded projection at middle, ventral edge with an abrupt small projection at middle and a more gradually produced one a little beyond three-fourths; no basal mesial hook; anellus a pair of flattened, somewhat setose, rounded arms, slightly and gradually broadening distally, arising at base of valvae, where they are conjoined by a slender strap; saccus regularly tapering to a rounded tip, about half as long as valva. Penis about as long as valva, abruptly angled downward at its middle, with a distinct basal caecum, somewhat longer than penis diameter, armed anteriorly with a pair of lateral rounded processes; vesica with a basal patch of minute, slightly sclerotized denticulae and a distal patch of much larger, more strongly sclerotized teeth.

**Sinicossus danieli** n. sp.

(Plate III fig. 1)

Male. Antennae fulvous, scaled dorsally light brown; tuft on vertex light brown; frons and palpi black brown; thorax above as follows: patagia light brown anteriorly, darker along posterior edge, then a transverse whitish line, and finally dark brown, almost black; tegulae small and lateral, medium brown, paler towards sides and front; thorax itself with anterior third light golden brown, mixed anteriorly (just behind patagia) with some whitish scales and posteriorly with some dark brown scales; middle third whitish or pale tan; posterior third golden brown mixed with some whitish and dark brown scales; thorax below dark blackish brown; legs similar but with some sharply contrasting white rings: at apex of all tarsal segments; just beyond base of each basitarsus; and beyond middle of mid and hind tibiae; long scales fringing hind femur paler brown mixed with whitish. Abdomen hairy, gray brown, ventrally with some whitish (description of basal segments only; remainder removed for genitalic preparation).

Upperside. Fore wing shining, slightly purplish gray; at middle of wing a straight black line perpendicular to costa, crossing from anterior edge of cell to 2 A; basad of this line the wing is darker, blackish, from costa to 2 A, chiefly because of a profusion of fine black cross-striae; these as well as the straight delimiting line, are composed of somewhat raised scales, most noticeably so on vein 1 A at about one-third and at the straight line at middle; beyond the latter practically no cross-striae for half the distance to termen, then (especially subapically) some darker gray cross-striae arranged in a line parallel to termen, forking at  $M_3$  to make two lines costad of that vein; along termen a series of inangled internervural dark striae, most with a stria from them diagonally inward and costad; inner margin below 2 A with a few cross-striae, chiefly at and beyond middle; small patches of shining golden brown scales scattered over the wing: one on inner margin at one-fourth; one, slightly larger, just above it along 1 A; scattered along the straight middle line, chiefly distad; and subapically just beyond end of areole; a few similar golden scales along costa, between the dark cross-striae; apically on edge of costa a few white

spots. Fringe brownish with a darker line at middle and another at end; some paler scales between veins. Hind wing brownish gray, unmarked. Fringe as on fore wing but slightly paler.

Underside. Both wings uniform brownish gray with slight hints of darker cross-striae, postmedially on fore wing and over whole of hind wing. Fore wing costa beyond middle with several small whitish spots.

Length of fore wing: 20 mm. (expanse, 41 mm.).

Holotype, male, Omei-Shan, 7000 ft., Szechwan, West China, 31. VII. 1935 (collector unknown; ex coll. Avinoff). Male genitalia, slide no. C-524. Carn Mus. Ent. type series no. 383.

Remarks. The raised fuscous scales, the scattered small patches of golden brown and the lilac gray ground color combine to make this a rather unusual and, for *Cossinae*, unusually handsome species. Its most remarkable aspects, however, are in its less obvious structures. The pulvillus between the tarsal claws sets it immediately apart from all other Palearctic *Cossine* genera known to me. Most remarkable of all, however, are the structures of the penis: the distinct caecum and the denticulate vesica being unique in the subfamily so far as I am aware, and the abruptly angulate shaft likewise exceptional, though not unique.

Anschrift des Verfassers:

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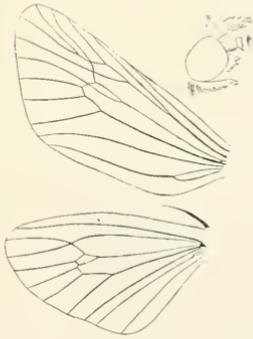
### Explanation of Plate III

- Fig. 1 *Sinicossus danieli*, n. sp.: holotype male.
- Fig. 2 *Sinicossus danieli*, n. sp.: head profile (above); venation.
- Fig. 3 *Sinicossus danieli*, n. sp.: male genitalia, showing uncus tegumen and associated structures in ventral view; left valva anellus and saccus in dorsal view; and penis in lateral view.

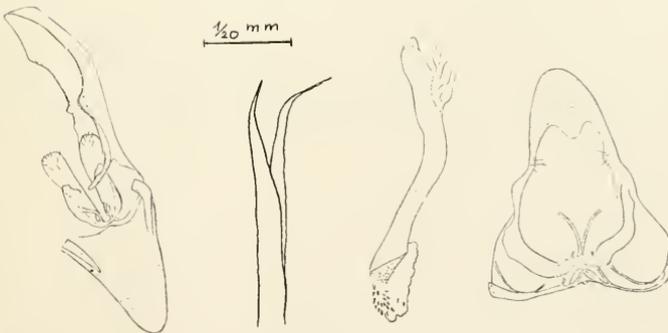
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