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Two New Species of *Coleophora* (Lepidoptera, Coleophoridae) Feeding on *Artemisia* in Japan

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Synopsis Two closely related case-bearers of *Coleophora* are described as new species. One of them is found on *Artemisia* in northern Japan, and another feeds on *Artemisia* and introduced *Chrysanthemum* in southwestern Japan.

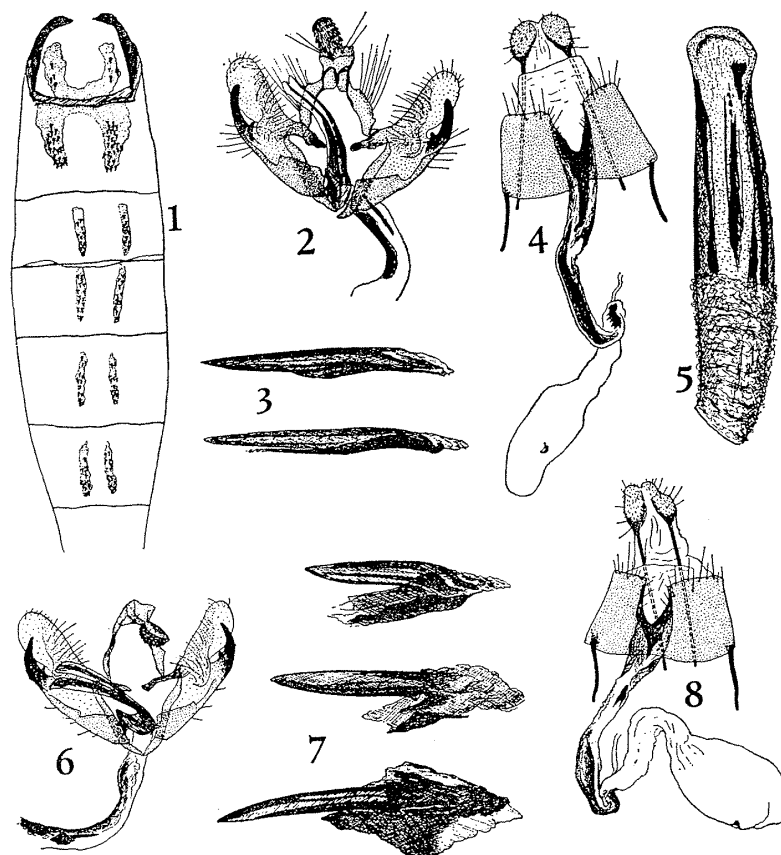
In Japan there occur two closely related forms of the genus *Coleophora* feeding on *Artemisia*. After careful examination I have come to the conclusion that these two forms may be distinctive. In this article these two forms are described as new species.

Before going further I wish to express my thanks to Dr. H. KUROKO for his kind suggestion and offer of material. Thanks are also due to Dr. S. ISSIKI, Dr. I. CĂPUSE, Dr. T. YASUDA, Dr. K. HONMA, Mr. Y. ARITA, and Mr. T. KODAMA for their kindness in providing me all facilities they could afford for the study.

Coleophora yomogiella sp. nov.

(Figs. 1-5)

♂, ♀. Expanse, 10-12 mm. Antenna creamy-white, annulated with ochreous brown, the annulation being often faded towards apical end. Palpus creamy-white, streaked longitudinally with ochreous brown, the median joint being about twice as long as diameter of eye; ventro-apical hair-tuft of median joint reaching about half of apical joint and shorter than half of median joint. Head and thorax ochreous brown; upper margin of eye and tip of tegula whitish. Fore wing ochreous brown in ground, in ♀ often paler towards base of wing, more or less tinged with grey, streaked with creamy-white along costa, veins, lower margin of discal cell, fold of wing, and dorsum; costal streak distinct on its basal 2/3; first radial streak confluent with costal streak at about basal 2/3 of costa; 3 radial streaks remote at base; medial streak extinguished on its basal 1/4, and often faded towards apex of wing; streak along fold broadest among whitish streaks, not reaching narrow dorsal streak on its distal end; often some indistinct greyish scales scattered on terminal half of wing particularly on its subcostal part; cilia whitish ochreous, tinged with grey around tornus. Hind wing cinereous grey or brownish grey. Fore and mid legs greyish brown externally; hind leg ochreous white, with a longitudinal greyish brown streak externally on tibia and tarsi. Abdomen (Fig. 1) pale brownish grey; U-shaped chitinized sclerite of first tergite set with several spines on each arm; sclerite on second tergite reversedly U-shaped, set with about 20 spines on each



Figs. 1-8. *Coleophora yomogiella* sp. nov. (1-5) and *C. kurokoi* sp. nov. (6-8). — 1. Abdominal tergites of ♂ adult. — 2 & 6. ♂ genitalia. — 3 & 7. Some examples of cornutus. — 4 & 8. ♀ genitalia. — 5. Mature larval case.

arm; 3rd to 6th tergites furnished with a pair of narrow chitinized patches, each of which has ten or more spines; 7th tergite usually without spined sclerite and only rarely furnished with very few spines.

Male genitalia (Fig. 2): valva narrowed towards base, about twice as long as wide; caudal end of sacculus produced into a curved process, which projects over half of valva, terminating bluntly or rarely acutely, with a small subcostal tooth at base; aedeagus divided, without any projections on its prongs; cornutus thorn-like, simple or rarely with a very narrow lateral lobe (Fig. 3). Female genitalia (Fig. 4): ovipositor retractile; ostium bursae V-shaped, opening on a concavity of caudal margin of sterigma; introrius vaginae wide and heavily chitinized; ductus bursae not spiculate, chitinized on its terminal 2/3, convoluted at anterior end of chitinized part, and curved at terminal 1/3, where the chitinization is somewhat weaker; a small dentate plate present at convolution of ductus bursae, its shape and size being variable; bursa copulatrix elongate, with a signum of scobinate patch.

Larval case (Fig. 5): tubular case light greyish ochreous, longitudinally streaked with dark greyish brown, clothed with minute felt especially on basal 2/5 of case,

not narrowed apically, about 7.5 mm in length; mouth 2 to 3.*

Holotype (♂): Honshu: Morioka, VI 18, 1973, bred by T. OKU (host: *Artemisia princeps*). Paratypes: Hokkaido: Shimamatsu, 1 ♂, 1 ♀, VII 1-3, 1963, bred by T. OKU (host: *A. montana*), Yamabe, 1 ♂, 1 ♀, VI 24, 1959, bred by T. KODAMA (host: *A. montana*); Honshu: Morioka, 1 ♀, VII 26, 1965, 2 ♂, 3 ♀, VIII 18-23, 1966, 1 ♂, VI 21, 1968, 1 ♂, 1 ♀, VI 17-26, 1969, 1 ♂, 1 ♀, VI 21, 1973, bred by T. OKU (host: *A. princeps*), Mt. Hayachine, 1 ♂, 3 ♀, VII 12-23, 1966, 1 ♀, VII 13, 1970, bred by T. OKU (host: *A. montana*).

Remarks. This species is somewhat similar to *C. maenicella* STAINTON (= *suaedivora* DURRANT), but is easily separated from the latter by the absence of projections on prongs of aedeagus and by the difference in chitinization of ductus bursae. This species is found in Hokkaido and Tohoku district, northern Honshu. The larva appears from May to early June and again from late July to early August on plains of northern Honshu.

Coleophora kurokoi sp. nov.

This species is very much similar to the preceding species and could be separated from *C. yomogiella* only by the following characters:—

	<i>C. yomogiella</i> sp. nov.	<i>C. kurokoi</i> sp. nov.
Expanse	10-12 mm	9-11 mm
Cornutus	simple or rarely with a very narrow lateral lobe (Fig. 3)	set on an irregular flattened sclerite (Fig. 7)
Sacculus	produced into a caudal process terminating bluntly or rarely acutely (Fig. 2)	produced into a caudal process terminating more acutely (Fig. 6)
Ductus bursae	chitinized on its terminal 2/3, with a small dentate plate at convolution of it (Fig. 4)	chitinized on its terminal 1/5 and on central 1/5, with a small narrow plate nearby anterior end of terminal chitinized part (Fig. 8)
Larval case	about 7.5 mm in length (Fig. 5)	6 to 7 mm in length

Holotype (♂): Honshu: Sakai, Osaka-fu, VII 18, 1967, bred by H. KUROKO (host: *Chrysanthemum morifolium* var. *sinense*). Paratypes: Honshu: Sakai, Osaka-fu, 2 ♂, 3 ♀, IX 12-15, 1955, bred by S. ISSIKI (host: *Artemisia princeps*), 4 ♂, 2 ♀, VII 15-25, 1967, 1 ♀, IX 11, 1967, 2 ♂, 3 ♀, VI 3-5, 1968, bred by H. KUROKO (host: *C. morifolium* var. *sinense*), 1 ♀, IX 15, 1955, bred by H. KUROKO

* See E. M. HERING (1951): Biology of the leaf miners, p. 102.

(host: *A. princeps*), 9 ♂, 4 ♀, V 24-30, 1971, bred by Y. ARITA (host: *A. princeps*), Tarui, Osaka-fu, 2 ♂, 1 ♀, V 28-VI 4, 1956, bred by T. KODAMA (host: *C. morifolium* var. *sinense*).

Remarks. The adult of this species is somewhat smaller than *C. yomogiella* sp. nov., but they could not be clearly separated by size, as there are considerable individual variations in size. No clear difference in colour is recognized between them, either. Decisive distinctions are observed only in some characters of genitalia as shown above. There might be slight difference in host preference. *C. kurokoi* works often severe injury to *Chrysanthemum* introduced from continental Asia and widely planted in Japan including northern districts, whereas *C. yomogiella* is found only on wild *Artemisia* and not on the introduced *Chrysanthemum*. In Nagoya, central Honshu, I have found many larvae of *Coleophora* on *Artemisia princeps* in September. Although I could not obtain adults from these larvae, they may possibly belong to *C. kurokoi* because of the smaller size of their larval cases. KUROKO (1966) has described the larva of *C. kurokoi* as *Coleophora* sp. in 'Early stages of Japanese moths', vol. 2, Hoikusha, and also stated that this species is trivoltine in the Kinki district, western Honshu.

昆虫学雑誌紹介

雑誌 *Acrida* と, *Acridological Abstracts* のゆくえ

本誌 40 巻 1 号にすでに紹介したように、パリの Association d'Acridologie から "*Acrida*" というバッタ類に関する報文のみを扱う国際誌が 1972 年より発刊されている。本年で 3 巻目を迎えたが、この巻から、従来ロンドンの Anti-Locust Research Centre より出され、この Centre が発展的解消してできた Centre for Overseas Pest Research によってひき続き出されていた独立誌の "*Acridological Abstracts*" を、本雑誌に併合し、new series として各号の巻末に付すこととなったので紹介する (この Abstracts には全世界のバッタ関係の論文が英文で抄録されます)。したがってこれまで *Abstracts* の配付を受けていて、この継続を希望する人 (または機関) は、本雑誌を新たに購読されることをおすすめします。申し込み先は私あてに、または *Acrida*, Association d'Acridologie, 105, boulevard Raspail, 75-Paris (6^e) France へ。年間会費は団体会員 200 フラン、個人会員で 100 フラン (入会金 10 フラン)。ご多分にもれずこの会も資金難で悩んでいるので、研究機関・図書館などでの購読をとくに希望しています。

なおバッタ関係の論文で、本雑誌に寄稿希望の方があれば、私あてにお問合せ下さい。

(山崎柄根)