

A study on the genus *Homonopsis* from China (Lepidoptera: Tortricidae: Tortricinae)*

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Abstract. Four species of the genus *Homonopsis* are reported in this paper. *Homonopsis mutilata* sp. n. is described from Hebei, Henan, Sichuan and Guizhou provinces, China. Keys to the determination of the species of *Homonopsis* are provided.

Key words: Lepidoptera, Tortricidae, *Homonopsis*, new species, China.

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I. INTRODUCTION

Homonopsis is a small genus belonging to Archipini, Tortricinae. It was erected by KUZNETZOV in 1964 to contain *Dichelia illotana* KENNEL, 1901. OBRAZTSOV (1967) redescribed the genus and discussed the taxonomic status of *H. foederatana* (KENNEL). Then KUZNETZOV (1976) added a new species, *H. rubens* KUZNETZOV. So, altogether, three species have been recorded. YASUDA (1972, 1975) and KAWABE (1982) recorded the occurrence of *H. illotana* (KENNEL) and *H. foederatana* (KENNEL) in Japan; BYUN (1998) reported the distribution of the three species from Korean Peninsula; KUZNETZOV (2001) listed again those three species from Far East of Russia; finally, LIU (2002) recorded *H. illotana* (KENNEL) from China. The genus was redescribed by RAZOWSKI (1987) and the species were catalogized by the same author (RAZOWSKI 1993).

In the present paper four species are discussed, of which *Homonopsis mutilata* sp. n. is described as new to science.

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According to KUZNETZOV (2001), YASUDA (1975), BYUN (1998) and LIU (2002), host plants of the genus in question include 17 plant families, namely, Rosaceae, Ericaceae, Fagaceae, Salicaceae, Aceraceae, Elaeagnaceae, Polygonaceae, Liliaceae, Betulaceae, Menispermaceae, Pinaceae, Taxaceae, Actinidiaceae, Saxifragaceae, Rhamnaceae, Leguminosae and Ebenaceae.

The occurrence of all the species of *Homonopsis* was ascertained in Korean Peninsula, Japan and Far East of Russia (Fig. 1). There are no distinct natural barriers between North East China and the above mentioned countries, thus it seems most probable that all these species can diffuse into this country. However, *H. rubens* KUZNETZOV and *H. foederatana* (KENNEL) have not been recorded from China. Their distribution is limited to rather small areas. We suppose that the polyphagy of *H. illotana* (KENNEL) (list of its plants includes 21 species of 12 families) may be one of the reasons of its wide repartition. Judging on the fact that all specimens were collected in the mountains at the altitudes of 1200 m, 1700 m, and 2700 m a.s.l., *H. mutilata* sp. n. might be a montane species bound with higher altitudes.

All the studied specimens, including the types, are deposited in the Department of Biology, Nankai University, Tianjin, China except one pair of paratypes (female slide no. WXP02499) that are deposited in the Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Krakow, Poland.

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II. SYSTEMATIC PART

Homonopsis KUZNETZOV, 1964

Homonopsis KUZNETZOV, 1964, *Entom. Obozr.* **43**(4): 873, figs. 1-5.

Type-species: *Dichelia illotana* KENNEL, 1901 – by original designation.

D i a g n o s t i c c h a r a c t e r s. Forewing rather broad, apex slightly rounded, termen fairly concave between R₅ and M₃, tornus broadly rounded. Uncus very broad, bilobed, rounded apically, provided with large scales or thorns; valva broad, densely spined in distal part and convex dorsally. Sterigma with broad and convex lateral lobes. Signum long, with small basal plate.

D i s t r i b u t i o n. China, Korea, Japan and Far East of Russia (Fig. 1).

List of species

1. *Homonopsis illotana* (KENNEL, 1901)

Dichelia illotana KENNEL, 1901, *Dt. Ent. Z. Iris*, **12**: 210.

D i s t r i b u t i o n. China (Anhui, Fujian, Sichuan, Guizhou, Shaanxi), Korea, Japan, Russia (Primorye, Ussuri, Amur).

2. *Homonopsis foederatana* (KENNEL, 1901)

Dichelia foederatana KENNEL, 1901, *Dt. Ent. Z. Iris*, **12**: 211.

D i s t r i b u t i o n. Korea, Japan, Russia (Ussuri).

3. *Homonopsis rubens* KUZNETZOV, 1976

Homonopsis rubens KUZNETZOV, 1976, *Trudy zool. Inst.*, **54**: 6.

D i s t r i b u t i o n. Korea, Russia (Ussuri).

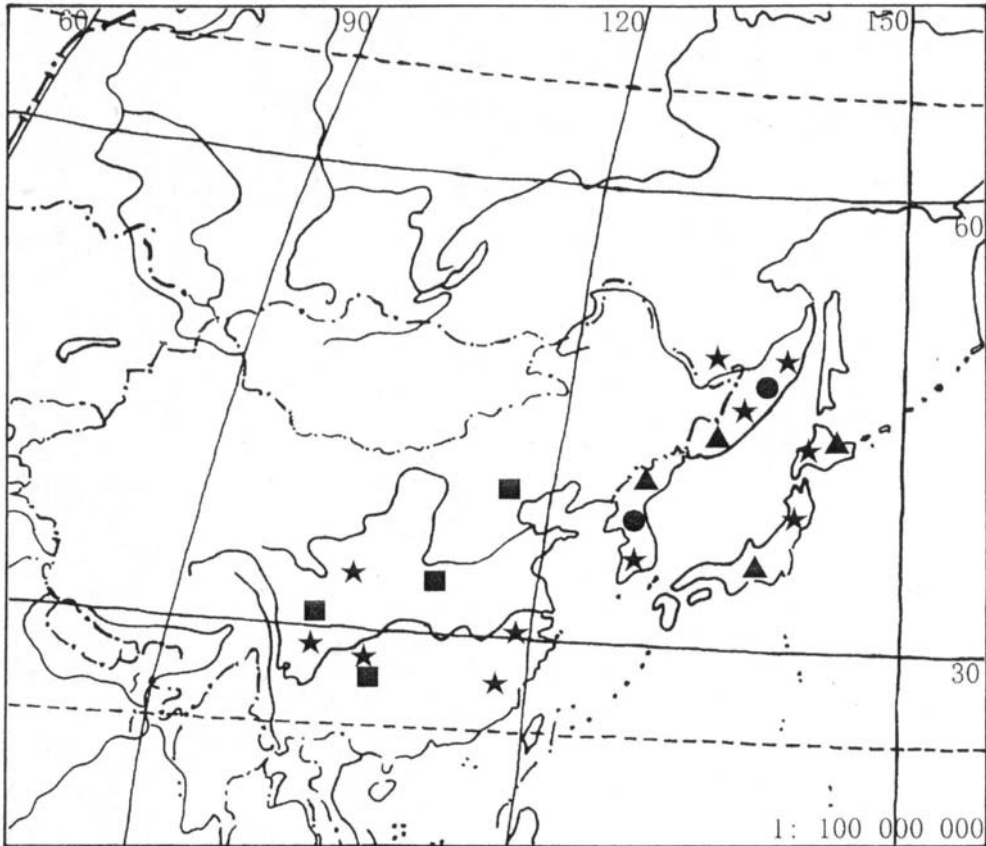


Fig. 1. Distribution of *Homonopsis*. Legend: *H. mutilata* sp. n.; *H. illotana* (KENNEL); *H. foederatana* (KENNEL); *H. rubens* KUZNETSOV.

4. *Homonopsis mutilata* sp. n.

D i s t r i b u t i o n. China (Hebei, Henan, Sichuan, Guizhou).

Key to species of the genus *Homonopsis* based on the external characters

- 1. Forewing with metallic spots, median fascia ambiguous, ground colour of forewing cream brownish; wingspan 14.0-18.0 mm in male, 18.0-21.0 mm in female. *H. illotana* (KENNEL)
- . Forewing without metallic spots, median fascia distinct 2

2. Ground colour of forewing pale brown, median fascia short, extending from 1/3 of costa to distal part of cubital arm of discal cell; wingspan 14.5-16.5 mm in male, 19.5-21.0 mm in female
 *H. mutilata* sp. n.
- Ground colour of forewing dark brown, median fascia long, from 1/3 of costa to dorsum 3
3. Median fascia slender, colour of forewing pale rufous; wingspan 11.0-15.0 mm in male, 16.0-19.0 mm in female *H. rubens* KUZNETZOV
- Median fascia broad, colour of forewing pale yellowish brown; wingspan 16.0-21.0 mm in male, 20.0-23.0 mm in female *H. foederatana* (KENNEL)

Key to species based on the male genital characters

1. Aedeagus stout, truncate apically, with a sharp process situated on left side *H. mutilata* sp. n.
- Aedeagus slender, long, pointed apically 2
2. Distal part of sacculus with sclerotized hook 3
- Distal part of sacculus without sclerotized hook *H. illotana* (KENNEL)
3. Uncus slender, deeply concave terminally *H. foederatana* (KENNEL)
- Uncus very broad, with a shallow terminal concavity *H. rubens* KUZNETZOV

Homonopsis mutilata sp. n.

(Figs 2-4)

D e s c r i p t i o n. Male (Fig. 2): Wingspan 14.5-16.5 mm. Vertex with rough dark brown scales. Labial palpus brown, 1.5 times shorter than diameter of compound eye, ascending upward, but not exceeding vertex; second segment slender; third segment small. Antenna thick, with dense cilia. Thorax dark brown. Costa of forewing convex in basal third, then straight. Apex sharp. Termen convex, sinuate beyond apex. Ground colour pale brown; basal blotch ambiguous; median fascia dark brown, from 1/3 of costa to distal part of cubital arm of discal cell; subapical blotch dark brown, extending from 2/3 of costa almost to apex, stretching nearly to end of termen. Cilia dark brown. Hindwing grey, apex dark grey, cilia pale grey. Outer side of fore-leg and mid-leg blackish, inner side white; tibia of hind-leg whitish. Abdomen gray.

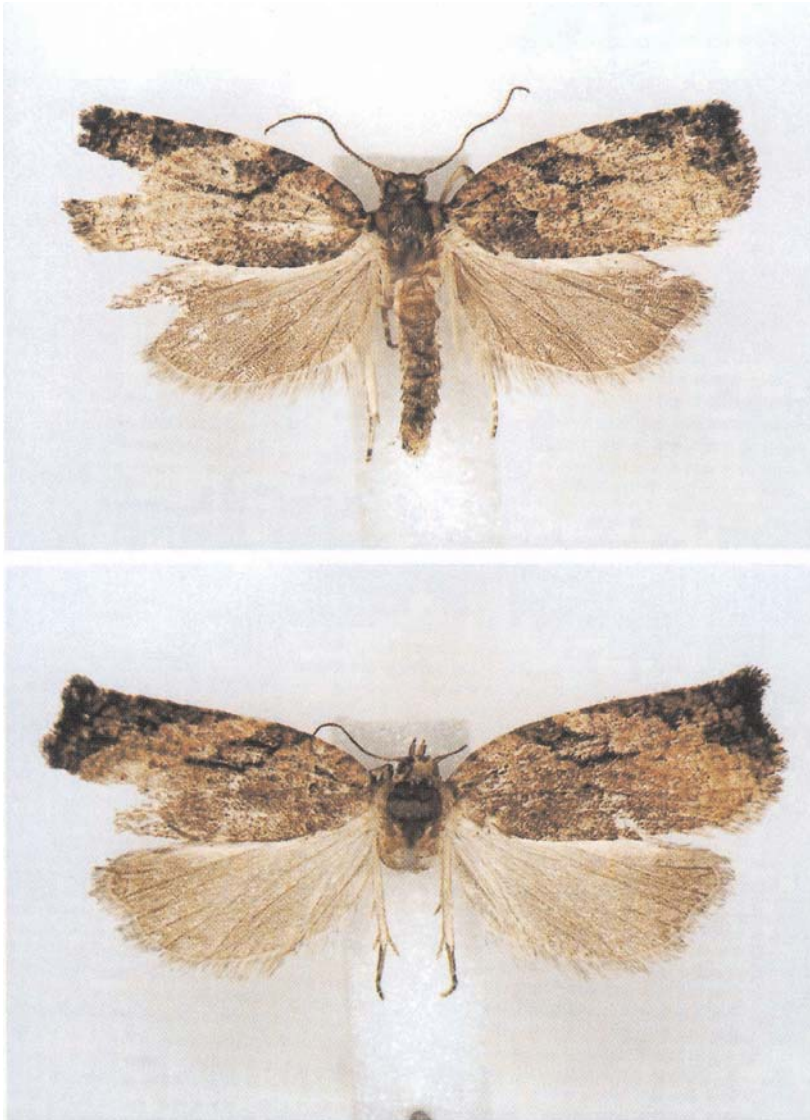
Female: Wingspan 19.5-21.0 mm. Ground color darker than in male. Apex of forewing sharp.

Male genitalia (Fig. 3): Tegumen broad. Uncus broad at base, apex rounded. Gnathos slender, weakly sclerotized. Valva rounded, with densely spined distal part and dorsal convexity. Sacculus reaching end of valva, with a strongly sclerotized hook at terminal. Transtilla broad, weakly sclerotized, somewhat convex medially. Vinculum broad. Juxta broad. Aedeagus cylindrate, stout, truncate apically, provided with a sharp process on left side; coecum penis and caulis small; no cornuti in vesica.

Female genitalia (Fig. 4): Lateral portion of sterigma broad, lateral portion convex. Colliculum short, broader than ductus bursae, with distal portion heavily sclerotized, otherwise membranous. Signum elongate, bent.

Holotype: ♂, Song County (34.08°N, 112.05°E), Henan Province, altitude of 1580 m, 25.VII.2002, leg. Xin Pu WANG. (Slide no. WXP02484)

Paratypes: 1 ♂, same data as holotype; 4 ♂♂, 1 ♀, Xinglong County (40.24°N 117.30°E), Hebei Province, alt. 1200 m, 1.VIII.2000, leg. Yan Li DU and Zhen Dong LI; 5 ♂♂, 1 ♀ Jiuzhaigou (33.17°N, 103.54°E), Songpan County, Sichuan Province, alt. 2700 m, 13-15.VIII.2002, leg. Shu Lian HAO; 2 ♂♂, Mt. Fanjingshan (27.55°N, 108.41°E), Jiangkou County, Guizhou Province, alt. 1700 m, 29.VII.2001, leg. Hou Hun LI and Xin Pu WANG.



Figs 2-3. Adults of *Homonopsis mutilata* sp. n. 2 – male; 3 – female.

D i a g n o s i s. This new species is similar to *H. foederatana* (KENNEL), but differs from the latter in the following characters: forewing ground color pale brown; median fascia dark brown, short, extending from 1/3 of costa to distal part of cubital arm of discal cell; aedeagus with a sharp process on left side, truncate apically; distal portion of colliculum heavily sclerotized, proximal portion weakly sclerotized.

Host plants: Unknown.

E t y m o l o g y. The species name is derived from the Latin *mutilatus* = disconnected, indicating the shape of median fascia of the forewing.

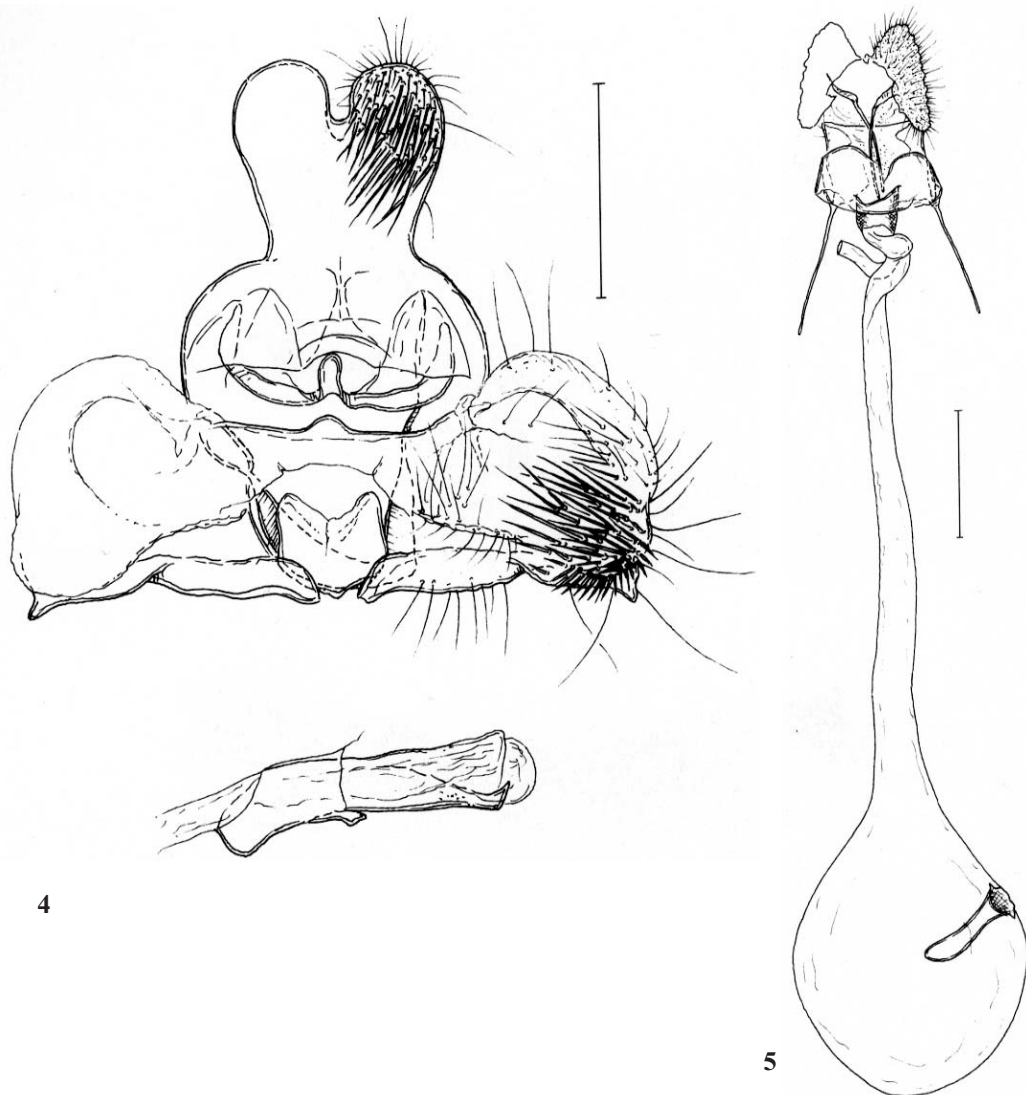


Fig. 4-5. *Homonopsis mutilata* sp. n.: 4 – male genitalia; 5 – female genitalia.

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