# A New Species of *Nepticula* v. Heyden and Redescription of *Trifurcula clinomochla* (Meyrick) from Sri Lanka (Lep., Nepticulidae)

BERT GUSTAFSSON

Section of Entomology, Swedish Museum of Natural History,
S-104 05 Stockholm, Sweden

## Abstract

GUSTAFSSON, B. A new species of *Nepticula* v. Heyden and redescription of *Trifurcula clinomochla* (Meyrick) from Sri Lanka (Lep., Nepticulidae). — Ent. Tidskr. 97: 45—49, 1976.

The new species *Nepticula ipomoeella* and *Trifurcula clinomochla* (Meyrick) from Sri Lanka, reared from leafmines on *Ipomoea* sp. and *Bridelia retusa,* are described and reproduced.

At a visit to Sri Lanka February 14th to February 27th 1974 I collected some Nepticulidae leafmines on different plants. The leafs were put in plastic jars and the larvae left the mines and spun the cocoons inside the plastic jars. The adults emerged from the cocoons between March 7th and March 14th.

The present material comprises a new species and *Trifurcula clinomochla* Meyrick which are described below.

The photographs of leafmines are taken by the author, the illustrations are drawn by the author.

## **Nepticula ipomoeella** sp.n. (Fig. 5)

Alar exp. ♂♀ 2.8—3.0 mm. Head ferrugineous. Eye-caps glossy yellowish. Collar blackish brown. Antennae blackish with yellow basal joints. Middle legs pale greyish yellow. Hindlegs pale greyish yellow on coxa, tibia and tarsus suffused with dark brown above. Front legs dark brown above, pale greyish yellow beneath. Forewings blackish brown, at two thirds of wings a silvery transverse fascia, cilia grey. Hindwings and cilia dark grey.

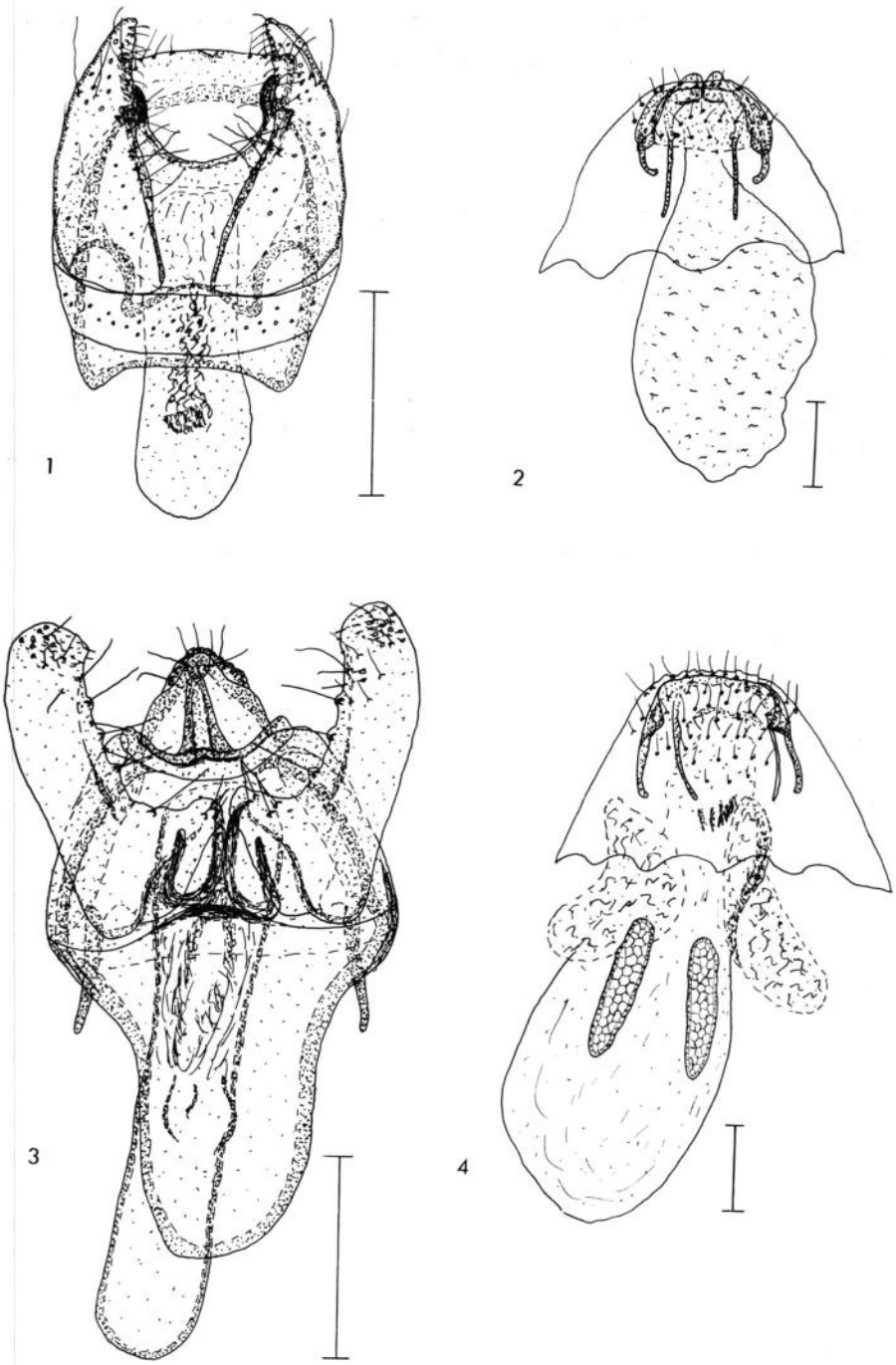
♂ Genitalia, Fig. 1, tegumen narrow, uncus truncate with rounded edges, gnathos arms widely separate, curved outwardly, ventral arms of transtillae rather short, curved outwardly, transverse bar present, valvae subtriangular, tapering to a bluntly pointed apex, ventral margin with fine bristles, aedoeagus three times longer than wide, vesica with some indefinite, irregular sclerotization, no cornuti, vinculum narrow, excavated and rounded at apex. Slide no: 5662, holotype.

♀ Genitalia, Fig. 2, papillae anales rounded, apophyses very slender, straight, antapophyses shorter, curved towards apex, bursa with a fine granulation, no signum. Slide no: 5850, allotype.

The species is similar to the European *Nepticula betulicola* group, especially the male genitalia.

Leaf mine, Figs. 7—8, a long narrow, upper side waved gallery, gradually widening. The excrements are black and the frass is deposited in a thin line along the middle. The larva leaves the mine through upper epidermis. The egg is deposited on the upper side of the leaf. The cocoon is white.

Food plant, *Ipomoea* sp., Convolvulaceae, collected in Timbolketiya, Sabaragamuwa



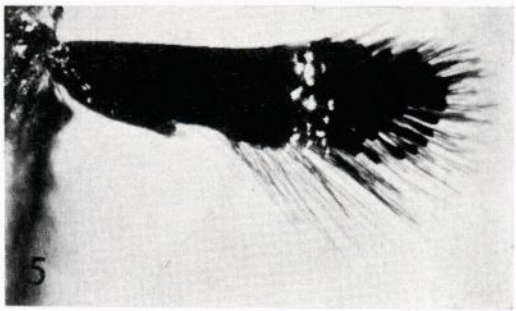

Figs. 1—4. Male and female genitalia. — 1—2. *Nepticula ipomoeella* sp.n. 3—4. *Trifurcula clinomochla* (Meyrick). Scale line=0.1 mm.

Province 23.II.1974 and Minneriya Tank, Central Province 20.II.1974.

The adults emerged from the cocoons between 8.III and 14.III.1974.

Type-material, holotype ♂ ex. larva 23.II.1974, Timbolketiya, emerged 9.III.1974, allotype ♀ ex. larva 20.II.1974, Minneriya Tank, emerged 10.III.1974, paratype ♂ ex. larva 23.II. 1974, Timbolketiya, emerged 14.III.1974, paratype ♂ ex. larva 20.II.1974, Minneriya Tank, emerged 8.III.1974, paratype ♀ ex. larva 23.II. 1974, Timbolketiya, emerged 10.III.1974.

The type specimens are preserved in the collection of the Swedish Museum of Natural history, Stockholm.

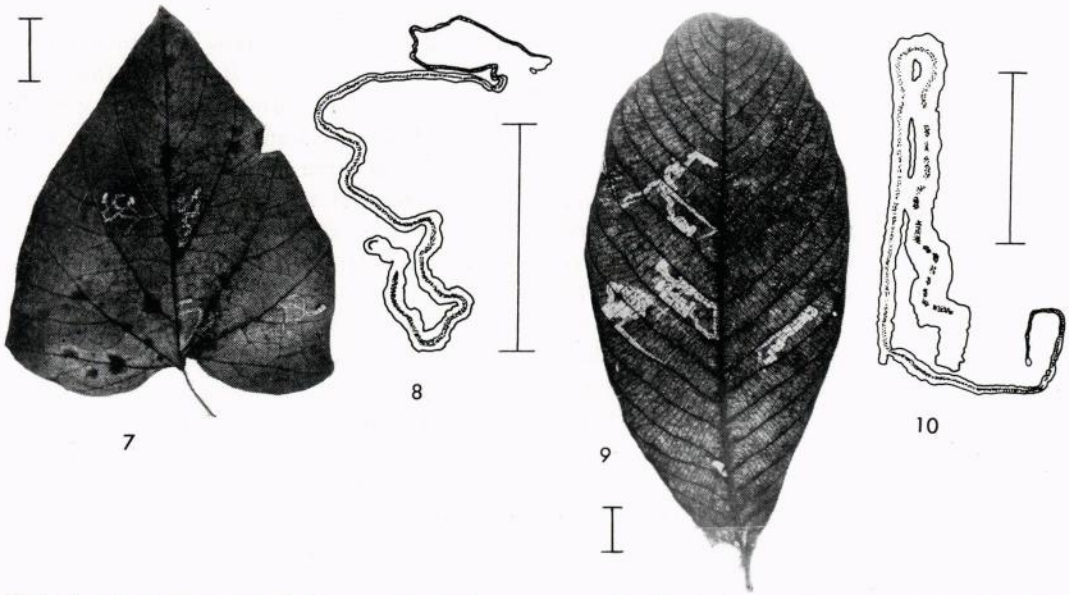




## **Trifurcula clinomochla** (Meyrick, 1934) (Fig. 6)

Alar exp. ♂♀ 3.2—3.4 mm. Head straw yellow with fuscous hairs intermixed. Eyecaps and collar straw yellow with fuscous scales intermixed. Antennae dark fuscous

Figs. 5—6. Right forewings. — 5. *Nepticula ipomoeella* sp.n. 6. *Trifurcula clinomochla* (Meyrick).




Figs. 7—10. Leaf and leafmines. — 7—8. *Ipomoea* sp., *Nepticula ipomoeella* sp.n. 9—10. *Bridelia retusa* (L.) Spreng., *Trifurcula clinomochla* (Meyrick). Scale line=1 cm.

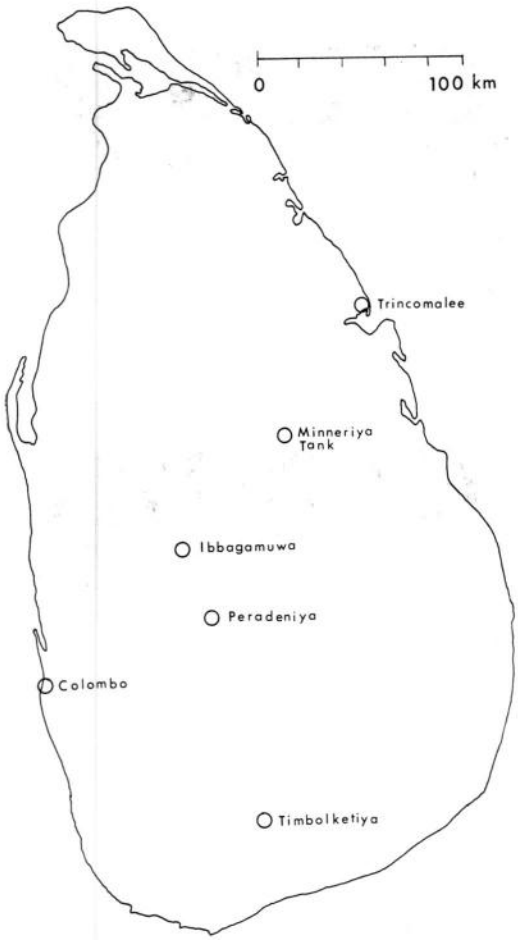



Fig. 11. Outline map of Sri Lanka.

grey above, straw yellow beneath. Legs pale greyish yellow on coxa, tibia and tarsus suffused with dark fuscous above. Hindlegs with long yellow bristles on the tibia. Forewings straw yellow with scattered dark fuscous scales. From two thirds of costa a semicircular dark fuscous patch who run out in the apex, cilia silvery grey. Hindwings and cilia silvery grey.

♂ Genitalia, Fig. 3, tegumen tapering to a rounded pseuduncus, uncus tapering to a round apex, gnathos-arms stout, merging into a single median projection, forming a rather stout tongue, ventral arms of transtillae slender and fairly long, transverse bar absent, valvae subtriangular tapering to a curved pointed apex, ventral margin with fine bristles, style gently tapering to an inwardly curved point, cuiller rounded, aedoeagus six times longer than wide, provided with four pointed projections, vesica with some indefinite, irregular sclerotization, no cornuti, vinculum broad with a median incision, merging into a rounded tongue. Slide no: 5661.

♀ Genitalia, Fig. 4, papillae anales broadly rounded, apophyses very slender, gently curved inwardly at apex, antapophyses gently curved inwardly at apex, bursa with a fine granulation, with two oblong signa, each with a regular honeycomb-like network. Slide no: 5660.

Leaf mine, Figs. 9—10, a long upper side gallery, gradually increasing. The excrements are black and the frass is deposited in a line along the middle. The egg is deposited on the upper side of the leaf. The larva leaves the mine through upper epidermis. The cocoon is yellowish white.

Food plant, *Bridelia retusa* (L.) Spreng., Euphorbiaceae, collected in Ibbagamuwa, North Western Province, 20.II.1974. The adults emerged from the cocoons 7.III.1974.

*Trifurcula clinomochla* was described by Meyrick (1934) on a male specimen reared from a leaf mine on *Bridelia retusa* (L.) Spreng. taken by Mrs. M. L. Maxwell in Indian, Bombay, Matheran, 2500 feet, bred in June from larva mining in May.

I was refused to loan the Meyrick's type of "*Nepticula*" *clinomochla* from the British Museum but Dr. K. Sattler, British Museum, London have compared a photo of my specimens. In a letter he says: "As far as I can see, your photograph agrees reasonably well with Meyrick's type specimen of clinomochla".

Meyrick's description of "*Nepticula*" *clinomochla* agrees with my specimens bred from the same plant as Meyrick's type specimen but about 1500 kilometers further to the south. To be really certain about the species it is necessary to make a genitalia preparation of the Meyrick's type and compare this with my own specimens.

## Acknowledgements

I wish to express my warmest thanks to Dr. Hans-Erik Wanntorp, University of Stockholm, for determination of foodplants. I am also most grateful to Mr. Uno Samuelsson for the photographs of the wings.

## References

MEYRICK, E. 1910. Notes and Descriptions of Indian Micro-Lepidoptera. — Rec. Indian Mus. 5: 217—232.

— 1911. Descriptions of Indian Micro-Lepidoptera. J. Bombay nat. Hist. Soc. 21: 104—131.

— 1916—21. Nepticulidae. Exotic Microlepidoptera 2: 6—7, 181—182 (1916); 410 (1921).

— 1928. Nepticulidae. Exotic Microlepidoptera 3: 295—296, 462.

— 1932—34. Nepticulidae. Exotic Microlepidoptera 4: 312, 467—468.