

ON SOME INDIAN TORTRICIDAE (LEPIDOPTERA).

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By the courtesy of Mr. J. C. M. Gardner, Systematic Entomologist of the Forest Research Institute, Dehra Dun, I received a small collection of Tortricidae from that Institute, for identification. As all specimens have been bred and bear notes on the foodplants, I think it worth while to give a list of them. The species concerned show striking polyphagous habits.

***Epagoge retractana* Wlk.**

U. P. Dehra Dun, New Forest. 12 and 26. viii. 1933 ; 24. ix. 1934. Larvae on *Chrysanthemum* and *Acacia arabica* (R. N. Mathur). 3 ♀.

***Adoxophyes privatana* Wlk.**

Madras, Nilambur, Amarampalam R. 29. iv. 1933. Larvae on *Glycomis pentaphylla* (C. F. C. Beeson). 1 ♀.

***Homona coffearia* Nietn.**

U. P. Dehra Dun, New Forest ; Madras, Nilambur, Nilambur Range. 16. iv. 1933 ; 12. xi. 1936. Larvae on *Eugenia jambolana* (R. N. Mathur, C. F. C. Beeson). 2 ♀.

***Cacoecia micacaeana* Wlk.**

This is a difficult species to deal with, because of its variability in colouring, especially in the male and of a certain plasticity in the wing-shape. Meyrick used the shape of the forewings as a specific character and described some species, which prove to be simply varieties of one and the same species, *C. micacaeana* Wlk. In the present lot three forms are represented, rather differing in colouring and wing shape. Nevertheless I regard them as belonging to the same species, because the genital apparatus is identical and the shape and markings in forewings show gradual transitions from one to another. The extremes, however, lie so far from each other, that a description of these varieties is justified.

***C. micacaeana* Wlk. *obscura*, var. nov.**

♂. 18 mm. Head and palpi dark brown. Thorax dark greyish-brown. Abdomen greyish, with anal tuft ochreous. Forewings rather elongate, with narrow base, distinctly dilated posteriorly, costa anteriorly gradually arched, posteriorly gradually sinuate, prominent. Costal fold from base to nearly 2/5. Dark-brown towards costa and base, suffused brownish-pink on dorsum before tornus. Central fascia ill-defined,

except for its narrow origin below costal fold, dark ferrugineous-brown, its lower $\frac{2}{3}$ represented by rounded brownish-pink suffusion in disc and in the middle of dorsum, being light lilac-brownish, its tornal $\frac{1}{5}$ lighter, ochreous, with a lilac tinge. Basal marking and costal patch dark ferrugineous-brown, the latter very elongate, reaching from $\frac{2}{5}$ to $\frac{5}{6}$ of wing. The curved transverse streak from beneath costal patch before termen often connected with the lower end of a streak from apex along termen, in this way a dark ferrugineous-brown y-shaped figure being formed before termen. Hindwings light-ochreous, with dorsum and apex grey.

U. P., Dehra Dun, New Forest, Kandauli; Haripur Haldwani. 6, 10 and 19. ii; 4 and 27. iv; 3. xii; 1934-1937. (A. K. Sharma, R. N. Mathur, N. C. Chatterjee). Larvae on *Eugenia jambolana*, *Lantana* fruits and seeds, *Millettia auriculata*. 6 ♂.

Type in British Museum. Paratypes in the Forest Institute and in the author's collection.

C. micacaeana Wlk. forma **typica**.

U. P., Dehra Dun, New Forest; Bindal; Dharampur; Kandauli; near Rispana, Kandauli. 27. iv., 16 and 31. v, 19 and 28. vi, 22 and 31. vii, 17, 22 and 31. viii, 17, 22, 24-25. ix, 12. x., 30. xi, 8. xii 1930-1937. Larvae on *Acacia arabica*, *Albizia procera*, *Aster*, *Cosmos*, *Gmelina arborea*, *Lantana* flowers, fruits, leaves, *Michelia champaca*, *Santalum album*, *Terminalia tomentosa*. (R. N. Mathur, N. C. Chatterjee, G. D. Bhasin). 3 ♂, 16 ♀.

The typical *micacaeana*-male (of which *C. epicyrta* Meyr. is a synonym) is the intermediate form, of which an elaborate description is given in the *Journal of Bombay Nat. Hist. Society*, Vol. XVI, p. 589 (1905), after specimens from Ceylon. I have seen this form also from Sumatra and Java.

Cacoecia micacaeana Wlk. var. **compacta** (Meyr.) Diak.

U. P., Dehra Dun, New Forest; Bindal. 21-22. vi, 10 and 30. vii, 3, 12, 14 and 26. viii, 3, xii. 1933-36. Larvae on *Aster*, *Cassia fistula*, *Chrysanthemum*, *Lantana* fruits, *Mallotus philippinensis*, *Mangifera indica*, *Morus alba*, *Santalum album*. 9 ♂.

The following is a description of the female of this variety.

♀. 17 mm. Head ochreous, suffusedly mixed with ferrugineous. Palpi ochreous. Thorax ochreous mixed with ferrugineous. Abdomen brownish-ochreous. Forewings scarcely expanded posteriorly, costa anteriorly strongly but gradually arched, posteriorly slightly sinuate, with apex curved and prominent towards termen, termen sharply sinuate below apex, rounded and prominent beneath. Light ochreous-brownish with a pink-lilac shine. A few irregular ill-defined transverse striae, becoming darker before termen and elongate-semioval costal patch dark ferrugineous. Cilia dark ferrugineous along termen, blackish-brown at apex and light ochreous around termen. Hindwings ochreous-orange, with dorsal third greyish.

U. P., Dehra Dun, New Forest, 5. v. 1937 (R. N. Mathur). 1 ♀. Type in British Museum.

The three forms above-mentioned may be distinguished as follows : colouring : var. *obscura* : dark-violet tinged, pink suffusion in disc and base, very long and narrow costal patch ; forma *typica* : ochreous, with brownish markings, costal patch much shorter and broader ; var. *compacta* : light reddish-ferrugineous, costal patch moderate ; form of forewings : var. *obscura* : forewings narrow and elongate, costa sinuate apex projecting ; forma *typica* : forewings moderate, costa sinuate apex projecting ; var. *compacta* : ♂ forewings short, truncate, costa little sinuate, apex rounded-prominent, ♀ forewings with costa little sinuate.

***Cacoecia micacaeana* Wlk. var. *machlopiis* (Meyr.) Diak.**

U. P. Dehra Dun, Bindal. 19. i. 1937. Larvae on *Lantana* fruits (N. C. Chatterjee). 1 ♀.

In his description Meyrick says : " Allied to *epicyrta* but with all curves of forewings exaggerated " ; *machlopiis* was described after ♀ specimens from Assam, Khasi Hills and Java (Bandong) ; this variety is larger than the typical form of *micacaeana*.

***Cacoecia micacaeana* Wlk. var.**

U. P., Haripur, Haldwani, Dehra Dun, New Forest, 12. ii., 3. v., 21. viii. 1936-1937. Larvae on *Mangifera indica*, *Morus Indica*, *Lantana* fruits (N. C. Chatterjee, R. N. Mathur). 1 ♂, 2 ♀.

It was not possible to state with certainty to which variety these three specimens belong, because of their bad condition.

NOTE.—I have dealt with the synonymy of several species of *Cacoecia* in my paper " The Genera of Indo-Malayan and Papuan Tortricidae ", now in press in *Zoologische Mededeelingen Mus., Leiden* (1939).

***Cacoecia pomivora* Meyr.**

U. P., Dehra Dun, New Forest. 14. viii. 1933. Larvae on *Acacia arabica* (R. N. Mathur).

***Ulodemis trigrapha* Meyr.**

U. P., Dehra Dun, Dharampur. 9. x. 1933 ; 21. vii. 1937. Larvae on *Lantana* leaves and flowers (N. C. Chatterjee). 1 ♂, 1 ♀.

SUMMARY.

The foodplants and localities are given for 6 species of Indian Tortricidae. Five varieties of *Cacoecia micacaeana* Wlk. are characterised including *obscura*, var. nov.