Meyrick's types of Tortricidae from Madagascar in the Vienna Museum

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(With 4 figures on the plate 10 and 8 textfigures)

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Descriptions of African Tortricidae are scattered in literature and their types are in various museums. These older descriptions mostly are superficial and lack any information on the genital characters. At present, however, it is generally understood that these characters are indispensable for the recognition of species, which makes close revision of the old types necessary.

In 1933-34 Meyrick described four species of Tortricidae from Madagascar, the types of which are preserved in the Vienna Museum. Owing to the kindness of that Museum, I was enabled to study these types and to dissect their genitalia.

Redescriptions and photographs of the species with descriptions and figures of the genitalia follow here. All the specimens bear a printed label with "Sikora, Madagasc.", a written name label with printed "det. Meyrick", and a red label with "Type".

Capua crocograpta Meyrick 1933

Exot. Microlep., v. 4. p. 422, 1933. - Clarke, Catal. Meyrick's types, v. 1, p. 104, 1955.

The following may be added to the description of the male holotype. Palpus rather long, sinuate, median segment slender at base, moderately dilated towards apex, which is tinged deeper ochreous; terminal segment moderate, exposed, slightly pointed, deep ochreous. Thorax rather short, rounded, tegulae narrow and long, somewhat projecting posteriorly. Abdomen yellowish.

Fore wing with termen rather distinctly sinuate (not straight, as described); light yellow, reticulated with orange (not with ferruginous), markings orange-fulvous, edged and more or less suffused with lilac, distinctly contrasting with ground colour and retination. Basal patch distinct on costa as far as vein 12, obliterate below this vein except edge, indicated by a straight, oblique orange stria. Central fascia oblique, constricted at $\frac{1}{3}$, both portions wedgeshaped, but upper twice as high and broad as lower, anterior edge of fascia being angulate above middle, almost vertical below this, posterior edge only gently sinuate (concave above middle); costal patch fasciate, wedge-shaped, actually touching termen below middle. Cilia fulvous with a whitish-leaden gloss. Hind wing light ochreous-orange, rather dull (without a trace of grey, as stated in the original description); tip of wing with a hardly traceable dark marbling; cilia yellowish-white, a subbasal ferruginous line, becoming orange below end of vein 3. 410

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Fig. 1-8. Genitalia of Meyrick's types of Tortricidae from Madagascar
Fig. 1. Capua crocograpta, male, holotype. - Fig. 2. The same, aedoeagus and
juxta. - Fig. 3. Batodes euryplaca, male, paratype. - Fig. 4. The same, aedoeagus. Fig. 5. Goniotorna chersopis, male, lectotype. - Fig. 6. The same, aedoeagus. - Fig. 7.
Argyroploce astrogenes, female, monotype. - Fig. 8. The same, bursa copulatrix.

Male genitalia. Tegumen triangular. Uncus rather long, elongate-spoonshaped, pointed. Socius very long, pending, not exceeding top of gnathos. Gnathos rather slender, with a moderate hook. Valva rounded, less broad than high; pulvinus developed, but small; valva articulating with tegumen by distinct and large rounded lobes; sacculus moderate, attenuated. Transtilla complete, moderate, with triangularly dilated bases. Juxta rounded (severed and figured together with the aedoeagus). Aedoeagus rather short, pistolshaped. Cornuti, a sheaf of rather long, blade-like spines with slender bases. (Genitalia slide no. 2246, monotype.)

The species is characteristic by its yellow colouring. It does not belong to *Capua* but to a group which will be described as new genus in due course. A second specimen, a male paratype, is in the British Museum.

Batodes euryplaca Meyrick 1933

Exot. Microlep., v. 4, p. 422-423, 1933. - Clarke, Catal. Meyrick's types, v. 1, p. 136, 1955.

The description of this species is based upon two male syntypes; Meyrick did not designate the type. I regard the specimen in the British Museum as lectotype; this specimen was cited by Clarke as type (loc. cit.) and will be designated as lectotype in vol. 3 of his "Catalogue" which is now in press.

Fortunately the two syntypes are indeed conspecific. Mr. D. Bradley of the British Museum kindly compared my figures of the genitalia of the present specimen with the genitalia of the lectotype; they appear to be indentical.

The male paratype specimen at hand is rather rubbed and with traces of damage by Psocoptera (excrements!). It may be redescribed as follows. Crown of head hardly mixed with brown. Thorax pale (faded ?), without the dark spot on shoulder (mentioned in the original description). Abdomen brownish-ochreous.

Costa of the fore wing rather strongly arched anteriorly, apex prominentobtuse, termen clearly sinuate. Basal patch extending from costa to fold, its edge almost vertical, with a small dentation above vein 12, prominent in fold, concave between prominences. Central fascia with the short, inwards-oblique lobe of the description distinctly truncate; anterior edge of fascia deeply sinuate, posterior tolerably straight, serrulate in the right wing, not serrulate, gently concave, in left; central fascia occupying rather less than the median third of costa; the "two small spots on termen above tornus" distinct only in left wing obscured in right (they are fragments of more extended, but rubbed tornal markings); costal patch indicated by a short, little oblique, dark brown curved strigula from before $\frac{3}{4}$ of costa, forming the anterior edge of a faint semicircular costal patch; cilia rather dark brown.

Hind wing pale brown, faintly suffused with orange towards apex, veins narrowly streaked with deep ferruginous; dorsal area pale greyish, irrorated with brown only. Cilia grey-whitish, slightly mixed with brown.

Male genitalia of the paratype. Tegumen rather high. Uncus very long and slender, gradually curved (in figure slightly foreshortened). Socius voluminous, pending, exceeding gnathos. Gnathos moderate, angularly bent. Valva roundedoval, longer than high; sacculus long, rather slender, gradually attenuated; pulvinus well-developed. Transtilla slender in middle, with strongly dilated and thickened bases which are extended mediad into long slender erect labides. Aedoeagus moderate, with oblique top and base (top possibly broken off), indistinctly bent twice. Two cornuti (ejected). (Genitalia slide no. 2245, paratype).

The species is characterised by distinct dark brown markings, limited to the costal half of wing, upon glossy light grey ground. It does not belong to *Batodes*, but to a remarkable group with blunt wings, short palpi, and modified transtilla.

Goniotorna chersopis Meyrick 1933

Exot. Microlep., v. 4, p. 423, 1933. — Clarke, Catal. Meyrick's types, v. 1, p. 84, 1955. This species is described after six specimens. Four of them, among which the type (as is indicated in the original description), from the Vienna Museum, I was able to study; two specimens are in the British Museum. The four male specimens before me are all males and are all similarly labelled ("Sikora, Madagascar", and "type"). I selected the best mounted specimen and designate it hereby as lectotype. The specimen is labelled accordingly, and bears also my label of the genitalia slide (no. 2247). The lectotype may be redescribed as follows.

Head, thorax creamy, irrorated with dark fuscous. Abdomen sordid ivorywhitish. Fore wing narrow, its shape described correctly. Creamy, markings formed by fuscous suffusion touched with lilac in certain lights, transversely irrorated throughout with blackish. Basal patch much less than $\frac{1}{3}$ of wing, edge gently oblique, vertical and straight above, with a small dentation below upper edge of cell; with a broad, triangular incision on lower half. Central fascia oblique, constricted below upper edge of cell, upper portion from before middle of costa gently narrowed; lower portion more than twice as broad, suboval, with a rounded prominence anteriorly in middle of disc, downwards, and along posterior edge ill-defined; costal patch rather elongate-semioval, than "flattenedtriangular", as in description; an ill-defined subtriangular terminal area, occupied by coarse, slightly oblique transverse irroration. Cilia creamy, densely irrorated with dark fuscous.

Hind wing creamy, densely irrorated with fuscous, except along costa. Cilia creamy-whitish, with a subbasal fuscous fascia. Dorsal lobe of wing with its cilia rather dark fuscous.

Male genitalia of the lectotype. Tegumen rather broad. Uncus curved, moderate, not dilated, top rounded. Socius broad and long, but not exceeding top of gnathos. Gnathos robust, rectangularly bent above middle. Valve much higher than broad (5:3); pulvinus developed; sacculus rather short, strongly sclerotized, rounded-prominent before top. Transtilla rather short and slender; labis moderate, conical, crowned with some 5 or 6 teeth. Aedoeagus rather slender and long, rectangularly bent at its basal third, caulis rather long. Cornuti, two rather long, slender blades. (Genitalia slide no. 2247, lectotype.)

Meyrick founded a distinct genus, *Goniotorna*, for the reception of this species with its remarkably modified hind wings. However, study of an extensive

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3, paratype. - Fig. 3. Goniotorna chersopis Meyr., 3, lectotype. - Fig. 4. Argyrophoce Fig. 1. Capua crocograpta Meyr., 5, holotype. - Fig. 2. Batodes euryplaca Meyr., astrogenes Meyr., 2, monotype. ©Naturhistorisches Museum Wien, download unter www.biologiezentrum.at

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material revealed to me that the shape of the wing is subject to considerable variation within the genus, and is rather a specific character, due to sexual dimorphism. Nevertheless *Goniotorna* indeed represents a natural group of species and is a "good" genus.

The present species is readily recognized among its numerous congeners by the small size and the rather narrow wings.

Argyroploce astrogenes Meyrick 1934

Exot. Microlep., v. 4, p. 485, 1934. - Clarke, Catal. Meyrick's types, v. 1, p. 57, 1955.

The monotype may be redescribed thus. Top of the scape of antenna whitish. Thorax strewn with bluish-white dots. Termen of the fore wing straight little oblique. Deep dull reddish-brown, fuscous only along dorsum and termen, end of cell with a rather faint and suffused ochreous-tawny patch; $^{2}/_{5}$ of costal edge with some five minute white points; white markings on $\frac{3}{4}$ of costa are better described thus: a strongly oblique, outward-curved, wedge-shaped mark formed by crowded roundish more or less coalescent white dots; leaden-blue metallic spots, not thickened nor raised, but peculiarly flat, appearing blackishblue-purple in certain lights; they are arranged thus: an irregular, more or less confluent group on base above fold; a series of some five large round distant spots along and just below fold; a series of four similar, but more approximated dots, below fold, and an irregular series of small dots below these; a triangular, coalescent group below $\frac{1}{3}$ of costa; an oval large spot across closing vein preceded by a small round dot, and with some three irregular spots halfway between cell and tornus; a continuous, strongly excurved (outwards concave) series of slightly elongate, approximated spots, from below costa well beyond middle to tornus, a similar series from beyond $\frac{3}{4}$ of costa towards termen before apex, thence marginal to tornus; some minute metallic spots in apex. Cilia dark brown.

Hind wing rather dark brown; cilia pale fuscous, with a dark brown subbasal line.

Female genitalia. Lobi anales moderate, oval. Sterigma little developed, a weak, erect-oval aciculate plate representing lamella antevaginalis. Ventral rim of ostium bursae emarginate. Ductus bursae moderately long, sclerotized throughout. Corpus bursae ovoid. Signum, a small reticulate concave plate, with two blunt projections. (Genitalia slide no. 2248, monotype.)

The type specimen is rather rubbed. An elegant insect, readily recognizable. *Argyroploce cassiterastra* Meyrick 1931, from Uganda, must be the same species.

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