

Review of East African Cochylini (Lepidoptera, Tortricidae) with description of new species

LEIF AARVIK

Aarvik, L. 2010. Review of East African Cochylini (Lepidoptera, Tortricidae) with description of new species. *Norwegian Journal of Entomology* 57, 81–108.

The following new species are described: *Phtheochroa lonnvei* sp. n., *P. kenya* sp. n., *Cochylimorpha africana* sp. n., *Eugnosta unifasciana* sp. n., *E. marginana* sp. n., *Actihema jirani* sp. n., *A. msituni* sp. n., *A. fibigeri* sp. n., *A. simpsonae* sp. n., *Diceratura complicana* sp. n. and *Falseuncaria aberdarensis* sp. n. The new genus *Afropoecilia* gen. nov. is established for *Afropoecilia kituloensis* sp. n. Three species are transferred to the genus *Cochylimorpha* Razowski, 1959; *C. cataracta* (Aarvik, 2004) comb. nov., *C. namibiana* (Aarvik, 2004) comb. nov. and *C. exoterica* (Meyrick, 1924) comb. nov.

Key words: Lepidoptera, Tortricidae, Cochylini, *Afropoecilia*, new species, Africa.

Leif Aarvik, Natural History Museum, University of Oslo, P.O. Box 1172 Blindern, NO-0318 Oslo, Norway. E-mail: leif.aarvik@nhm.uio.no

Introduction

In his catalogue of the Afrotropical Cochylini Razowski (1995) listed 25 species. Aarvik (2004) added three species from Namibia, and Razowski (2005) four species from South Africa. The number of species known from Africa until present, 32, is extremely low compared with the number of species occurring for instance in Europe. In his monograph treating the European fauna of the subfamily Tortricinae (Razowski 2002), the author included 171 species in Cochylini. Most of the African Cochylini species described so far are from South Africa. From East Africa less than five species have been recorded. After several collecting trips to the East African countries, the impression is that the tribe is poorly represented in the region. Cochylini are rarely encountered, and most nights not a single specimen appears on the sheet. Most of the species have been collected at high altitude, either in mountain forest or grassland. In spite of the low number of species known today, it is probable that several new species await discovery. The isolated mountain ranges in this part of Africa no doubt

have additional local endemics. In the present paper 12 new species are described, bringing the total number of African Cochylini to 44.

Material and methods

The material was collected during the author's stay in Tanzania in 1991–1993, and on subsequent visits, to Tanzania in 2005, Uganda 2007 and Kenya 2008. A major part of the material was collected in Kenya by David Agassiz in the years 1999–2008 during several collecting trips, and during a long stay in the years 1999–2001. A single new species was collected by entomologists from the Natural History Museum, Oslo (NHMO), on a trip to Ethiopia in 2007. Type material in the collection of The Royal Museum for Central Africa, Tervuren, Belgium (RMCA), Swedish Museum of Natural History, Stockholm, Sweden (RMS), and The Natural History Museum, London, United Kingdom (BMNH) were checked.

Specimens were captured at night by means of light. They were kept alive in glass tubes till next morning and then killed with ammonia

vapour. After a few minutes they were pinned on micro pins in plastic boxes with bottom layer of plastazote or expanded polyethylene, and the wings were spread on the surface of the bottom layer. In this position they were dried and packed.

After maceration male and female genitalia were dissected under a stereoscopic microscope and embedded in euparal on glass slides. Photos of the genitalia were taken using a Leica DFC 420 digital camera. Imagines were photographed using Microoptics photographic system. The digital images were manipulated with Adobe Photoshop. The terminology of genitalia and morphological structures follows Horak (2006), the terminology of wing pattern elements follows Razowski (2002). The colour figures of imagines were obtained by projecting a dias photo on paper, and then the contours of the moth, including wing pattern, were painted on the paper. Subsequently all details were painted by comparing with the specimen under a stereoscopic microscope.

Abbreviations for museums and individuals: BMNH – The Natural History Museum, London, United Kingdom; NHMO – Natural History Museum, University of Oslo, Norway; RMCA – Royal Museum for Central Africa, Tervuren, Belgium; RMS – Swedish Museum of Natural History, Stockholm, Sweden; NMK – National Museums of Kenya, Nairobi, Kenya; DA – David Agassiz, private collection; LAA – Leif Aarvik, private collection; GP LAA – Genital preparation L. Aarvik

Phtheochroa Stephens, 1829

Types species [*Tortrix*] *rugosana* Hübner, [1796–1799]

This is a large and somewhat heterogeneous genus with numerous species in the Palaearctic and Nearctic regions. Razowski (2005) described *Phtheochroa natalica* Razowski, 2005 which is the first representative from the Afrotropical region. In the present work two additional African species are described. The new species are not closely related to *P. natalica*, nor are they closely related to each other.

Phtheochroa lonnvei sp. n. (FIGS 1–3)

Type material. Holotype male, **Ethiopia**, Oromia Reg., Bale zone, 43 km SW Goba, Bale Mts. Nat. Park, Darwin Camp, N 6°42'54,3"; E 39°43'26,7" 2370 m a.s.l., at light, 9.X.2007, leg. O. J. Lønnve, genital slide NHMO 1805, coll. NHMO.

Etymology. Named after Ole J. Lønnve, Nesodden, Norway, who collected the specimen.

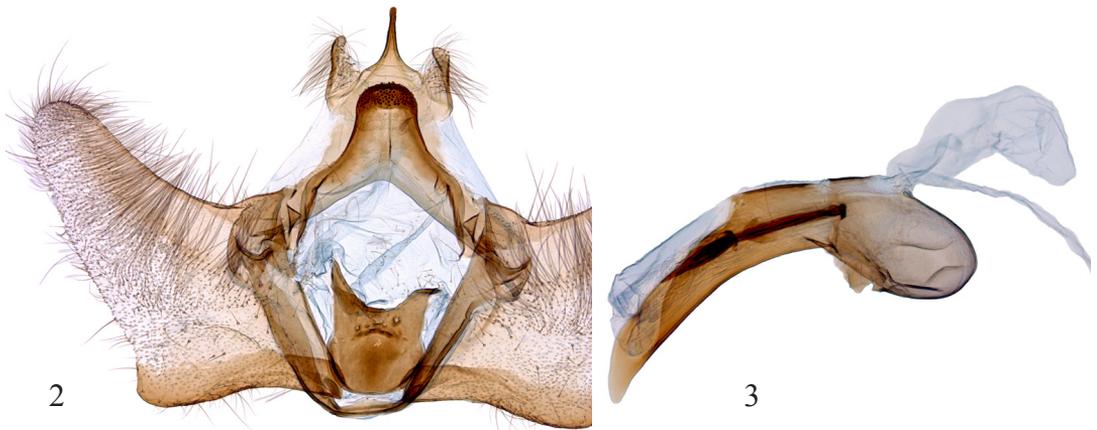
Description. Male (Fig. 1). Wingspan 25 mm. Labial palp 3 times diameter of eye, basally light grey, otherwise white. Antenna fasciculate, setae slightly shorter than width of shaft. Head and thorax white, except grey bases of tegulae. Forewing white, suffused with greyish brown along costa to $\frac{2}{3}$ from base; greyish brown strigulation in fold and along dorsum apart from basal third; greyish brown oblique lines in terminal third; some rufous suffusion in fold and in terminal part, and a distinct rufous discal spot; a distinct white mark from costa at $\frac{2}{3}$, filling the upper part of cell to middle; the basal part of this mark suffused with yellow; cilia rubbed. Hindwing white, with grey transverse striae; cilia white with light grey cilia line. Abdominal tuft dirty yellow.

Male genitalia (Figs 2–3). Uncus well developed, slender; socii triangular, slightly produced distally; median process of transtilla large and broad, distally rounded and with numerous short thorns; valva broad in basal part, gradually becoming more narrow towards distal end; vinculum without ventral split; aedeagus (Fig. 3) evenly curved, becoming more slender towards distal end, with two large cornuti, the shorter one is broader than the longer.

Female. Not known.

Distribution. Ethiopia.

Remarks. This externally characteristic species is only known from one male. According to the genitalia it is a typical member of the genus *Phtheochroa*. However, among the numerous Palaearctic species (Razowski 1970) there does not seem to be any close relative.



FIGURES 1–3. *Phtheochroa lonnvei* sp. n. 1. ♂ holotype. 2. Male genitalia. 3. Aedeagus.

***Phtheochroa kenyana* sp. n.**
(FIGS 4–6 & 41)

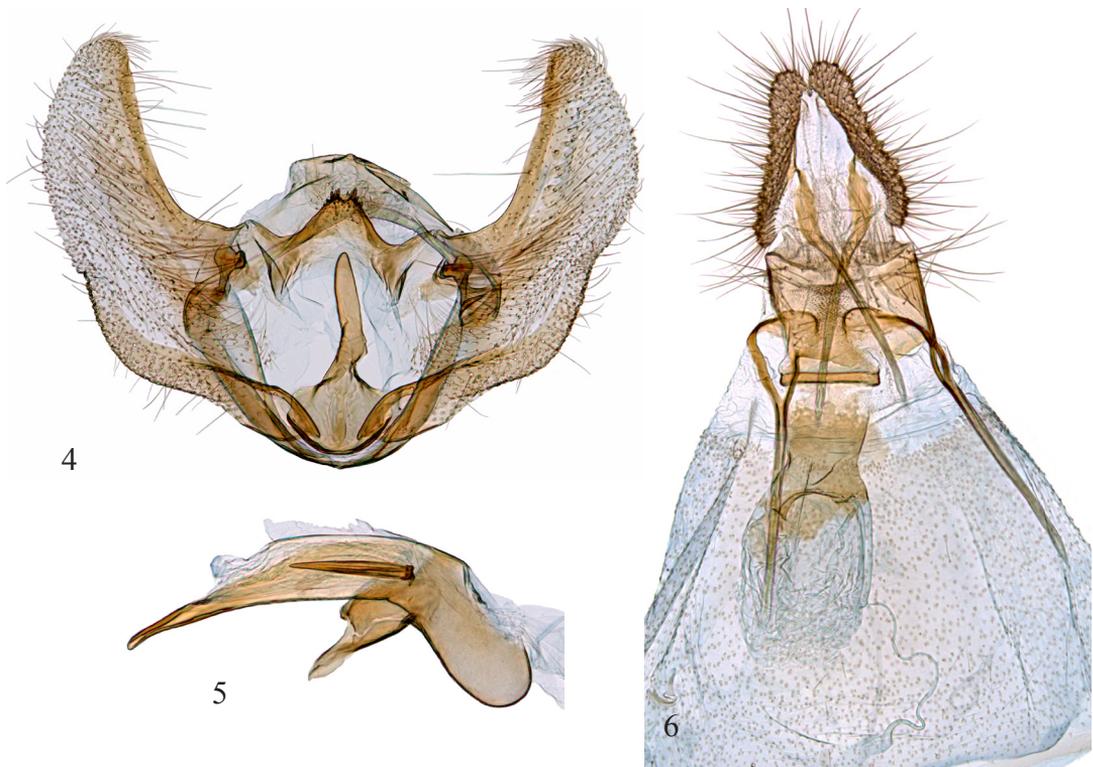
Type material. Holotype male, Kenya, Rift Valley Prov., Turi 8000 ft. 4.XI.1998, leg. D. Agassiz, GP LAA 22012 (to be deposited in BMNH). Paratypes 2♂♂4♀♀ same data as holotype, 1♀ 24.XI.1998, GP LAA 22013, 1♂ 28.XII.1998, 1♀ 1.I.1999, 1♂ 13.I.1999, coll. DA, 1♀ 24.IV.1999, coll. NMK, 1♀ 28.XI.1999, coll. LAA.

Etymology. Named after the country where the species was collected, Kenya.

Description. Male (Fig. 41). Wingspan female 20 mm, male 15 mm. Labial palp 3 times diameter of eye, light grey with dense brown spots laterally.

Frons conical in profile. Antenna ciliate; basal cilia longer than diameter of antenna. Head and thorax with mixture of grey and brown scales. Forewing with dense cover of greyish brown scales; reddish brown scales form an oblique fascia from dorsum before middle towards costa; fascia edged on both sides with some cream-coloured scales; reddish brown scales form an additional ill-defined fascia in subterminal part of wing; cream-coloured scales form indistinct strigulae along costa. Cilia basally fuscous, terminally ochreous with groups of fuscous scales. Hindwing grey, lighter in female, with lighter patches causing darker striae.

Male genitalia (Figs 4–5). Top of tegumen with slight prominence, reduced uncus; socii



FIGURES 4–6. *Phtheochroa kenyana* sp. n. 4. Male genitalia. 5. Aedeagus. 6. Female genitalia.

broad, weak; vinculum without basal split; median process of transtilla large, triangular, with terminal thorns; valva curved, slightly angulate at termination of sacculus; juxta with long rod-like process; aedeagus (Fig. 5) with single strong cornutus.

Female genitalia (Fig. 6). Apophyses anteriores long, nearly reaching anterior end of corpus bursae; antrum formed as a band; ductus bursae wide, of even width, sclerotised; corpus bursa without sclerites, strongly wrinkled.

Distribution. Kenya.

Remarks. Only collected in a single locality in Kenya. In the male genitalia most species of *Phtheochroa* have a fully developed uncus and the vinculum has no ventral split. Most other Cochylini have reduced uncus and have the vinculum split in two separate arms which are connected with a short membrane. *Phtheochroa kenyana* sp. n. shows transitional characters, as it has reduced uncus, but retains vinculum without

split. This associates it with a group of Palearctic species around *P. rugosana* (Hübner, 1799), see figures in Razowski (2002).

The presence of a distal process on juxta could indicate a relationship with species in *Hemiacta* Razowski, 1993. However, other parts of the genitalia, e.g. the teguminal processes, exclude inclusion in *Hemiacta*. A juxta process similar to the one found in *Phtheochroa kenyana* sp. n. is present in the European *Phtheochroa ingridae*, Huemer, 1990 (Razowski 2002, pl. 8, fig. 75), which is a member of the *P. rugosana* group.

***Cochylimorpha* Razowski, 1959**

Type species *Cochylis favillana* Staudinger, 1859 = *Cochylis elongana* Fischer von Röslerstamm, 1839

The two following species are placed in the genus *Cochylimorpha* based on the structure of the socii

in the male genitalia. *Cochylimorpha* generally has broad and weakly sclerotised socii. The species of *Eugnosta* typically have slender and rigid socii with broader bases. Razowski included in *Eugnosta* the South African *E. trimeni* (Felder & Rogenhofer, 1875) which has socii more similar to those found in *Cochylimorpha*, but he stated (op. cit.) that “its systematic position is still unclear”. Aarvik (2004) described three species from Namibia in the genus *Eugnosta* Hübner, 1825. Two of them were included in that genus with doubt as they possess weak and broad socii of the *Cochylimorpha* type. They have, however, numerous small cornuti in the vesica, and lack the large cornuti typical for most species of *Cochylimorpha*. As it turns out that there is great variation in the structure of the aedeagus in *Cochylimorpha*, and these two species do not fit in *Eugnosta*, I herewith transfer them to *Cochylimorpha*: *Cochylimorpha cataracta* (Aarvik, 2004) comb. nov. and *Cochylimorpha namibiana* (Aarvik, 2004) comb. nov.

Cochylimorpha has numerous species in the Palaearctic and Oriental regions, and has not previously been reported from the Afrotropical region.

***Cochylimorpha exoterica* (Meyrick, 1924) comb. nov.**

(FIGS 7–10 & 43)

Euxanthis exoterica Meyrick, 1924: 2.

Material examined. Holotype female, [Rwanda], Birunga, Kariss[imba], Pr. W. Exp. Gyld., GP LAA 2010.001, coll. NRS. **Kenya**, Rift Valley Prov. Molo 1♀ 27.III.1999, GP LAA 2010.010, leg. & coll. D. Agassiz; **Tanzania**, Arumeru Distr.: Mt. Meru For. Res., 9 km NNE Olmotonyi 2500 m, 1♂ 8.II.1992, leg. L. Aarvik, GP LAA 2505, coll. LAA.

Redescription (Fig. 43). Wingspan 20–26,5 mm. Scales on head mainly yellowish white, a few fuscous ones; labial palp, straight, 5 times diameter of eye, segment 2 brownish on external sides, whitish internally, with scale tuft, segment 3 yellowish white. Frons conical in profile. Antenna pale brown, scape and three basal segments

fuscous, fasciculate in male, minutely ciliate in female. Thorax fuscous. Forewing falcate, ground colour cream; fuscous sub-basal fascia reaching from costa to middle of wing; subterminal fascia likewise fuscous, narrowing towards costa, with double external edge; fuscous suffusion present near wing bases and along termen; costal dots present along the whole length of costa. Cilia light brownish grey, basally light. Hindwing cream, transversely striate with brownish grey.

Male genitalia (Figs 8–9). Uncus absent; socii broad; median process of transtilla broad, triangular, with terminal u-shaped excavation, and apical thorns on both sides; saccular sclerotization of valva of even width; vinculum with median split; apex of aedeagus (Fig. 9) produced, forming strong horn; two large cornuti of dissimilar size present.

Female genitalia (Fig. 10). 8th segment short; apophyses anteriores fused with sterigma by boat-shaped, setose sclerite; sterigma large, rectangular, anterior edge shaped as broad v around ostium; ductus bursae broad, membranous in posterior half, with medial band-like sclerite, anteriorly with lateral sclerites; corpus bursae a broad sac, with large sclerite and posterior field of spines, another larger spine field in anterior third, membranous anteriorly, wrinkled sclerite present at entrance of accessory bursae.

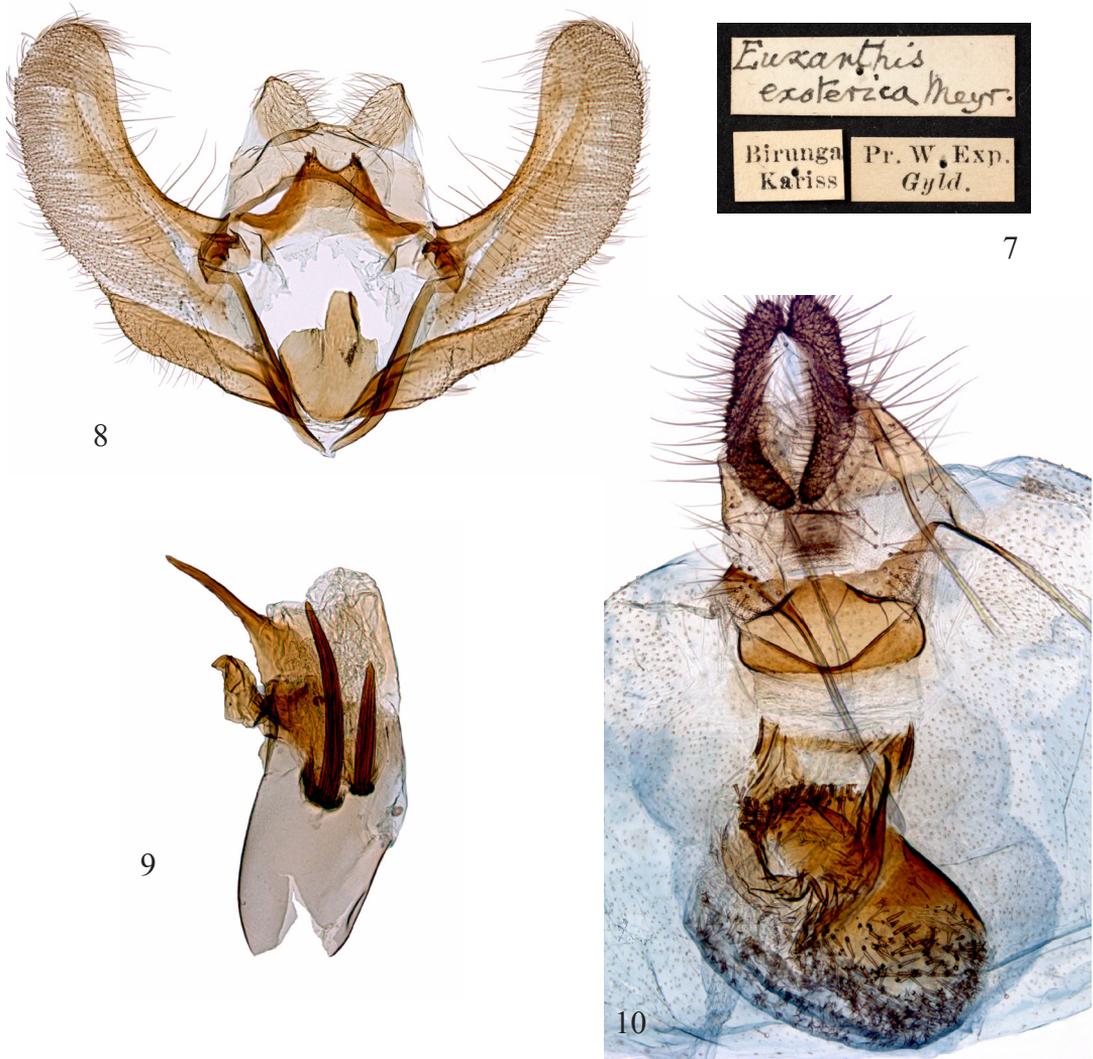
Distribution. Kenya, Rwanda, Tanzania.

Remarks. According to the original description the type was collected in March at 2800 m a.s.l. Due to the relatively narrow forewing and long and straight labial palps, at first sight easily mistaken for a pyralid. Wing pattern characteristic, not resembling any other known species of Tortricidae in Africa.

***Cochylimorpha africana* sp. n.**

(FIGS 11–14 & 44)

Type material. Holotype male, **Tanzania**, Iringa Reg., Mufindi Distr.: Kigogo Forest 1900 m, 23.–25.XI.2005, leg. L. Aarvik, M. Fibiger, A. Kingston, genital slide NHMO 1794, coll. NHMO. Paratypes 4♀♀ same data as holotype, 2♀♀ coll. NHMO, 2♀♀ coll. LAA; Mufindi Distr.: Mufindi



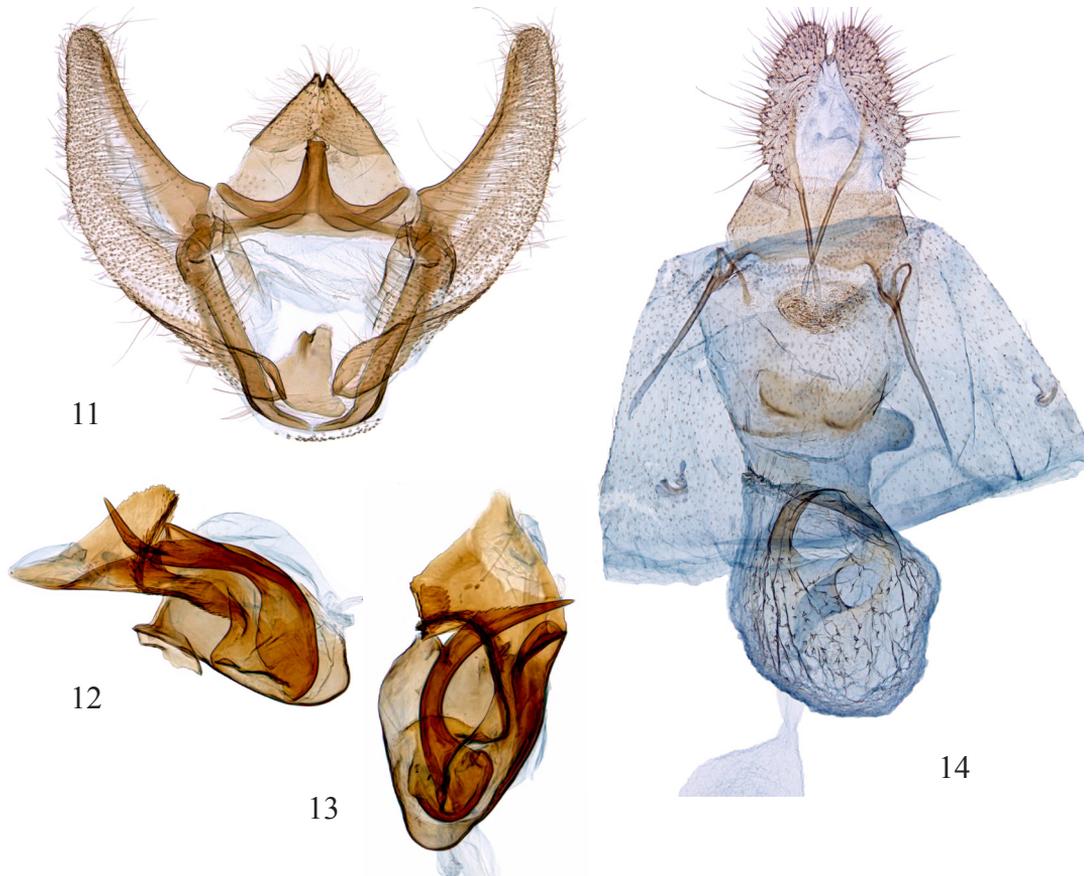
FIGURES 7–10. *Cochylimorpha exoterica* (Meyrick). 7. Labels of holotype. 8. Male genitalia. 9. Aedeagus. 10. Female genitalia of holotype.

1960 m 16.I.1993, leg. L. Aarvik, 1♂ GP LAA 1153, 1♀ GP LAA 1154, coll. NHMO.

Etymology. Named after the continent where the material was collected, Africa.

Description. Male (Fig. 44). Male. Wingspan 14 mm. Head white, with ochreous tinge; labial palp 2,5 times diameter of eye, basal half with brown and reddish scales on external sides; antenna brown, with fuscous scales on upperside, ciliate, length of cilia slightly exceeding diameter of shaft; thorax white, with ochreous tinge, with

double anterior fuscous crest. Forewing white, with ochreous tinge; extensive grey suffusion in basal area, along costa and in apical third; ferruginous scales form a band along termen, a patch near the base reaching from costa to middle, and a subternal fascia; tufts of raised scales on both sides of fold formed mainly by rufous and ochreous scales; cilia chequered grey and ochreous white. Hindwing light grey, becoming darker towards apex, with darker transverse striae; cilia light grey, becoming whitish along hind margin,



FIGURES 11–14. *Cochylimorpha africana* sp. n. 11. Male genitalia. 12. Aedeagus lateral view. 13. Aedeagus ventral view. 14. Female genitalia.

with darker grey cilia line. Abdomen grey, whitish ochreous anal tuft.

Male genitalia (Figs 11–13). Socii shaped as broad triangular folds; median process of transtilla long and relatively slender, gradually becoming narrower, with few distal thorns; valva gradually becoming more narrow towards distal end, slightly curved, no angulation on lower edge; vinculum with basal split; aedeagus (Figs 12–13) with complicated double wall, curved, distally with strong, pointed process.

Female. Wingspan 12–16 mm. Labial palp 3 times diameter of eye, antenna minutely ciliate. Otherwise as in male.

Female genitalia (Fig. 14). 8th segment short; sterigma weakly differentiated from ductus bursae, with broad, rectangular sclerite, with

rounded antrolateral corners; ductus bursae very broad, membranous, with rounded process on right side; corpus bursae small, posterior sclerite forms circular opening, numerous small denticles, entrance of accessory bursae forms funnel-shaped structure.

Distribution. Tanzania.

Remarks. This beautiful species does not resemble any other known African cochyline species. The male genitalia are basically very simple; tegumen has no appendages apart from the broad socii. In this respect it resembles numerous species of *Cochylimorpha*. However, the structure of the aedeagus is special, and the only other species having a similar aedeagus are the Palaearctic *Cochylimorpha alternana* (Stephens, 1834) and *C. diana* (Kennel, 1899),

compare Razowski (1970, pl. 59, figs. 112–113; 2002, pl. 12, fig. 111). This similarity may be indication of common ancestry of these species. All specimens were attracted to light in forest.

***Eugnosta* Hübner, 1825**

Type species [*Tortrix*] *lathoniana* Hübner, [1800]

Members of this genus have long erect socii in the male genitalia. Outside Africa, the genus is distributed in the Holarctic and Neotropical regions. Razowski (1993) described two species of *Eugnosta* from Tanzania; *E. matengana* Razowski, 1993 and *E. uganoa* Razowski, 1993. Both are from the locality “Ugano 15–1700 m. Tanganyika-Terr. Matengo-Hochland WSW v.Songea”. These two species are not treated in the present study, and the reader is referred to Razowski’s (1993) paper for more information about them.

***Eugnosta percnoptila* (Meyrick, 1933)** (FIGS 15–18 & 42)

Phtheochroa percnoptila Meyrick, 1933: 446.

Eugnosta percnoptila, Razowski et al. 2009: 7, figs. 6, 54, 118).

Material examined. Holotype male [**Congo (Zaire)**]: N. E. Kivu: La Mutura, III.1928, Ch. Seydel, GP LAA. 98085, coll. RMCA. **Kenya**, Rift Valley Prov., Turi 8000 ft. 1♂ 13.XI.1998 GP LAA 22009; 1♀ 14.XII.1998 GP LAA 22010; Kenya Central, Nyeri 6000 ft. 1♀ 6.XI.1999 GP LAA 22011; Kenya Central, Nyahururu 8000 ft. 1♂ 14.XI.1998, leg. & coll. D. Agassiz; **Tanzania**, Arumeru Distr.: Mt. Meru For. Res., 9 km NNE Olmotonyi 2500 m, 1♀ 8.II.1992, leg., L. Aarvik GP LAA 2628, coll. LAA.

Redescription (Fig. 42). Wingspan 14–18 mm. Frons white, scaling on frons slightly protruding; neck tufts brown, mixed with white-tipped scales; labial palp 2 times diameter of eye, white, ochreous beneath; antenna brown, scape white on underside. Thorax brown, crest mixed

with ochreous. Forewing brownish grey, with golden sheen; numerous tufts of raised scales; tufts below fold rufous, tuft above fold at ¼ from base fuscous; black dots in middle scattered from sub-basal area to ⅔; apical dot rufous; cilia grey from apex to middle of termen, then light ochreous at tornus, all cilia basally reddish ochreous. Hindwing greyish brown, with weak transverse striae; cilia line present.

Male genitalia (Figs 16–17). Socii curved, basally broad, tapering to middle; medial process of transtilla broad, spiny, distally concave; valva gradually narrowing; aedeagus (Fig. 17) broad, with rather broad, rounded distal process, one strong cornutus with large base.

Female genitalia (Fig. 18). Sterigma a rectangular plate; ostium membranous, ductus bursae broad, membranous; corpus bursae strongly wrinkled in distal half, with large semicircular sclerite.

Distribution. Democratic Republic of Congo, Kenya, Tanzania.

***Eugnosta unifasciana* sp. n.**

(FIGS 19–21 & 45)

Type material. Holotype male, **Tanzania**, Morogoro Distr.: Kitulungalo For. Res. 420–450 m. 27.XI.1992, leg. L. Aarvik, genital slide NHMO 1151, coll. NHMO. Paratypes 2♂♂2♀♀ same data as holotype, 2♀♀ 27.XI.1992, genital slide NHMO 1152, 1♂ 28.II.1993, 1♂ 30.V.1993. The female paratype with genitalia slide 1152 in NHMO, the rest in coll. LAA.

Etymology. Named after the characteristic median fascia in the forewing.

Description. Male (Fig. 45). Wingspan 11–14 mm. Head cream; labial palp 2 times diameter of eye, light ochreous; antenna ciliate, cilia in male of same length as diameter of shaft. Thorax light ochreous; tegulae brown anteriorly. Forewing cream, with extensive ochreous suffusion; median fascia straight, brown, with dots of plumbous and black; subterminal fascia indicated by dark patch in middle between costa and tornus; tufts of raised scales present particularly in basal half of wing; cilia light brown, at tornus cream, at apex grey.



FIGURES 15–18. *Eugnosta percnoptila* (Meyrick). 15. Labels of holotype. 16. Male genitalia. 17. Aedeagus. 18. Female genitalia.

Hindwing light grey.

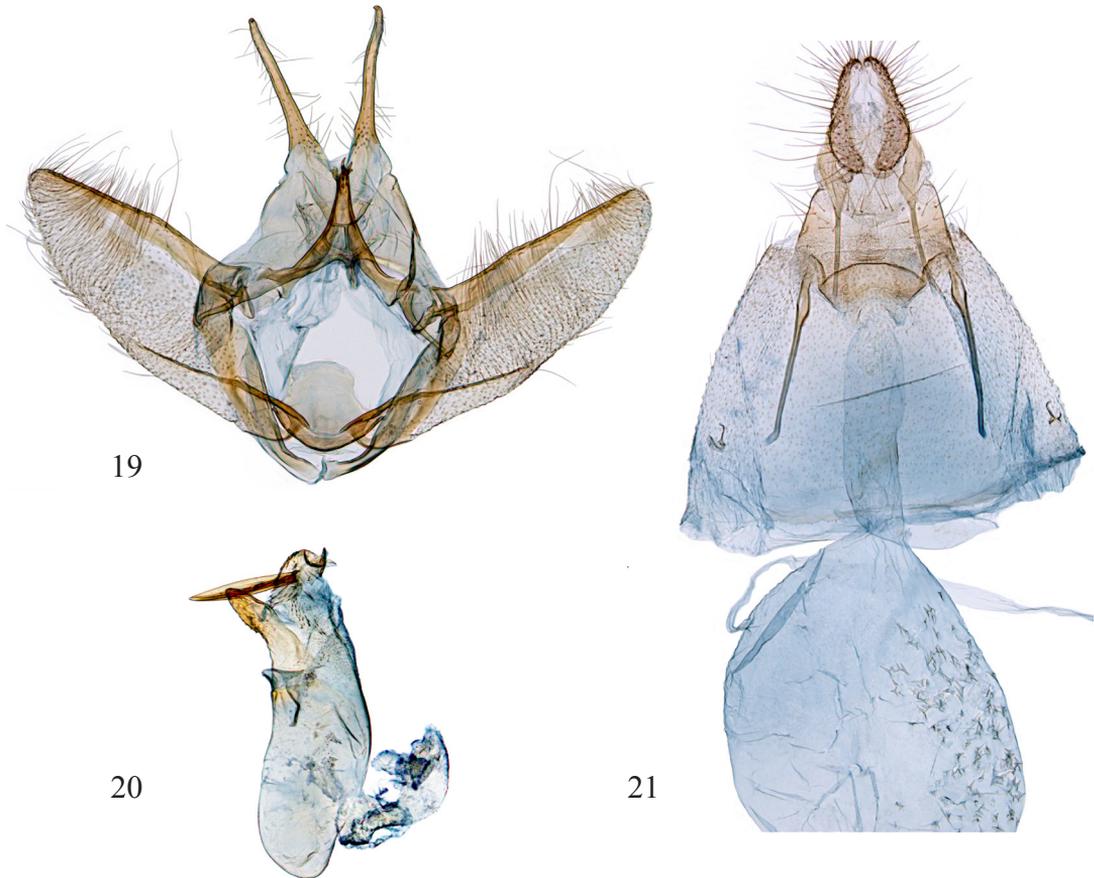
Male genitalia (Figs 19–20). Socii rigid, long and pointed; median process of transtilla triangular, slightly concave on lateral sides, tip with spines; valva rather slender, gradually becoming narrower towards distal end; aedeagus (Fig. 19) broad, slightly curved, with distal process and one strong cornutus.

Female genitalia (Fig. 21). Papillae anales narrowest in distal part; apophyses posteriores and anteriores of moderate length; sterigma a curved

plate; ductus bursae tubular, entirely membranous; corpus bursae membranous, with numerous small thorns on one side.

Distribution. Tanzania.

Remarks. A typical member of the genus, the broad and straight fascia in the forewing is characteristic. Only known from a single locality in Tanzania. The habitat is a mosaic of *Brachystegia*-forest and semi-evergreen coastal forest.



FIGURES 19–21. *Eugnosta unifasciana* sp. n. 19. Male genitalia. 20. Aedeagus. 21. Female genitalia.

***Eugnosta marginana* sp. n.**
(FIGS 22–23 & 46)

Type material. Holotype male, **Uganda** (SW), Kabale Distr.: Ruhija 2330 m. S 01° 03,088'; E 29° 46,703' 4.–7.XI.2007, leg. L. Aarvik & M. Fibiger, genital slide NHMO 1780, coll. NHMO. Paratypes 1♂ same data as holotype, coll. LAA; Kabarole Distr.: Ruwenzori Mts., Nyakelingija 1700 m. N 00° 20,994'; E 30° 01,820', 2♂♂ 11.XI.2007, leg. L. Aarvik & M. Fibiger, coll. NHMO and LAA.

Etymology. Named after the dark edges in the forewing.

Description (Fig. 46). Wingspan 12–14 mm. Head cream, rough scaled; labial palp 2 times diameter of eye, cream, basal scaling light

ochreous; antenna serrate and ciliate, cilia nearly of same length as diameter of shaft. Thorax light ochreous, tegulae light brown anteriorly. Forewing narrow, costa nearly straight; cream, suffused with ochreous in basal half; brown dorsal patch before middle reaching half way to costa; dark brown suffusion on costa from base to beyond middle, in apical area, and on middle of termen; suffusion on mid termen becoming ochreous and narrower towards centre of wing; small dark brown discal dot; cilia grey near apex, becoming lighter towards tornus. Hindwing grey, becoming slightly lighter towards wing base; costa with tuft of modified narrow, dark grey scales; cilia light grey, nearly white along lower edge.

Male genitalia (Figs 22–23). Socii rigid, relatively short, becoming more slender towards



FIGURES 22–23. *Eugnosta marginana* sp. n. 22. Male genitalia. 23. Aedeagus.

tip; median process of transtilla triangular, broad, convex on lateral sides, tip with few spines; valva broad, emarginate at distal end of sacculus; aedeagus (Fig. 23) very broad, with distal process and numerous small cornuti.

Female. Not known.

Distribution. Uganda.

Remarks. The habitat is open space close to mountain rain forest. The long and slender wings are characteristic. Externally it resembles the South African *Eugnosta niveicaput* Razowski, 2005, but this species lacks the distinct dark edge along the forewing costa and termen found in *E. marginana* sp. n.

***Eugnosta misella* Razowski, 1993**
(FIGS 24–26 & 47)

Eugnosta misella Razowski, 1993: 142, fig. 30; 2005: 507, figs. 10, 11, 17, 27; Razowski & Krüger 2007: 106, figs. 4, 269.

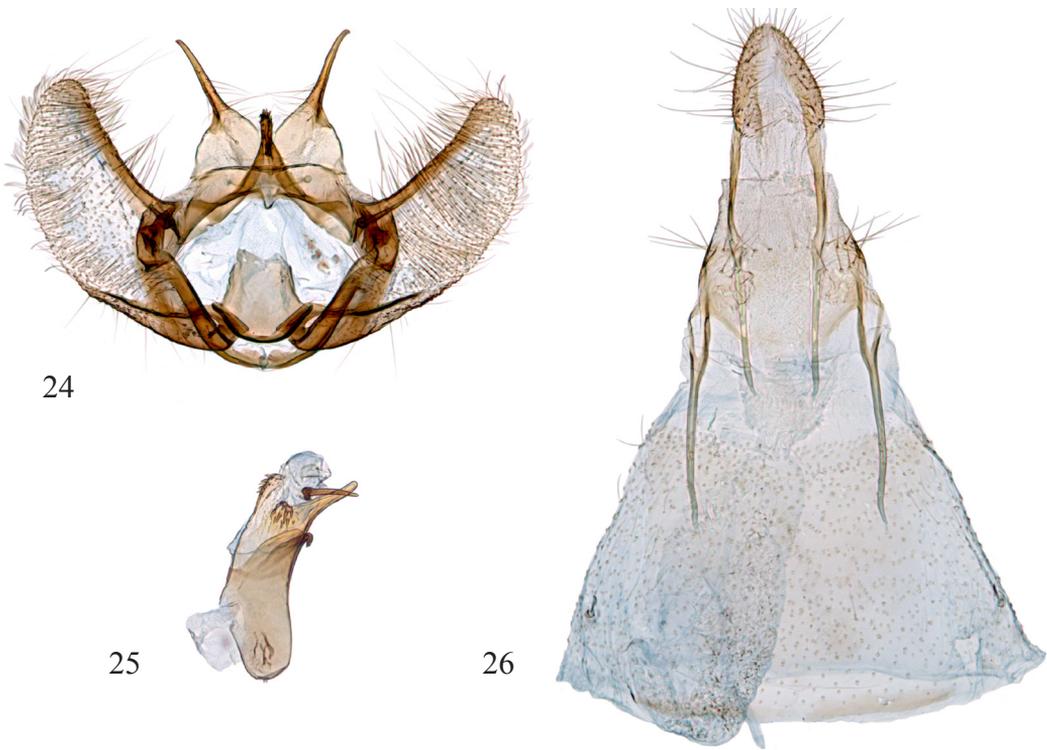
Material examined. Kenya, Rift Valley Province: Lake Naivasha S 1900 m. [UTM:] 37M BV 1394 1596 1♂ 7.XII.2008, leg. L. Aarvik & D. Agassiz, GP LAA 2762, coll. LAA; Tanzania, Arumeru Distr.: Usa River 1170 m 1♂ 28.VII.1991, leg. L. Aarvik GP LAA 2711, coll. LAA; R[epublic] S[outh] A[frica]: Mpumalanga, Waterval-Boven 1♀ 28.–29.X.2002 st. 11, leg. H.W. vd. Wolf, GP LAA 2763, coll. LAA.

Remarks. This species (Fig. 47) differs from other East African *Eugnosta* species by small size, wingspan 9–11 mm., ochreous brown forewing with faint pattern, and dark fuscous hindwing. It was described from South Africa by Razowski (1993) based on a single female. Razowski later (2005) described the male, and also figured the moth in colour. The two East African specimens have the forewing more heavily suffused with brown than South African ones. *Eugnosta matengana* Razowski, 1993, described from two females from Tanzania, is very similar to and closely related to *E. misella*. It differs from *misella* by presence of subterminal black markings in the forewing (Razowski 1993). The male genitalia of *E. misella* are illustrated on figures 24, 25, and the female genitalia on figure 26.

***Actihema* Razowski, 1993**

Type species. *Hysterosia hemiacta* Meyrick, 1920

This genus was proposed by Razowski (1993) for *Hysterosia hemiacta* Meyrick, 1920. In the present work four additional new species are described. In most genitalic characters it resembles *Eugnosta* Hübner, 1825 and *Eupoecilia* Stephens, 1829, but differs by the presence of a large process on distal part of juxta. The teguminal processes are similar to those found in *Eupoecilia*, but that



FIGURES 24–26. *Eugnosta misella* Razowski. 24, 25. Male genitalia. 26. Female genitalia.

genus also lacks the juxta process. Moreover *Eupoecilia* has a broad aedeagus with cornuti. The slender aedeagus in *Hemiacta* has no cornuti. The females of the genus have not been described before. In the genitalia they are characteristic by a tubular ductus bursae, with or without internal sclerite; and by a membranous corpus bursae with a prominent ring-shaped sclerite near the entrance of the ductus bursae. The ring has a smaller coil on which ductus seminalis is inserted.

***Actihema jirani* sp. n.**
(FIGS 27–28, 38 & 48)

Type material. Holotype male, **Uganda** (SW): Kabale Distr.: Ruhija 2330 m. S 01° 03,088'; E 29° 46,703' 4.–7.xi.2007, leg. L. Aarvik & M. Fibiger, genital slide NHMO 1792, coll. NHMO. Paratypes: 3♀♀ same data as holotype, 1♀ with genitalia on slide NHMO 1779 coll. NHMO,

2♀♀ coll. LAA; Kabarole Distr.: Ruwenzori Mts., Nyakalengija 1700 m. N 00° 20,994'; E 30° 01,820' 1♂ 10.–11.XI.2007, leg. L. Aarvik & M. Fibiger, genitalia on slide NHMO 1793, coll. NHMO.

Etymology. The species' name, 'jirani', is the Swahili word for neighbour, indicating that it is closely similar to and related with *Actihema hemiacta* (Meyrick).

Description. Male (Fig. 48). Wingspan 12–15 mm. Head and thorax off white, labial palp 2 times diameter of eye, white, but with some grey and brown scales basally and on tip. Scales on frons protruding. Antenna brown, with whitish scales on upperside and cilia slightly shorter than diameter of shaft. Forewing with costal fold; bicoloured, basal half fuscous, distal half whitish; basal half intermixed with brown scales and with black marks; grey suffusion present along dorsum and along termen; small reddish brown apical spot; cilia light greyish ochreous, with grey cilia line.

Hindwing light fuscous, with darker transverse striae. Abdomen light grey, with anal tuft dirty white.

Male genitalia (Figs 27–28). Socii basally broad, distal halves slender, rod-like, curved inwards; median process of transtilla broad, with terminal thorns; lower edge of valva evenly curved; juxta process narrowest in middle, with two lateral processes, numerous small dents particularly in distal part; aedeagus (Fig. 28) slightly s-shaped, wide basally, distal two fifths narrow, nearly straight, no cornutus.

Female genitalia (Fig. 38). Papillae anales widest is in distal part; ovipositor and both pairs of apophyses of moderate length; sterigma broad; with lateral pointed prominences on each side of ostium; ductus bursae short, membranous, with small internal sclerites, gradually becoming wider anteriorly; corpus bursae membranous, with numerous small spines, sclerotised ring present at entrance of ductus bursae, a smaller coil anterior on ring forms the entrance of ductus seminalis.

Distribution. Uganda.

Remarks. The habitat is open space close to mountain rain forest. Externally inseparable from *Actihema hemiacta* (Meyrick), but differs from it in the male genitalia mainly in the shape of the aedeagus and the juxta process, and in the female genitalia by the distinctly shorter and broader ductus bursae.

***Actihema hemiacta* (Meyrick, 1920)**

(FIGS 29–31, 39 & 49)

Hysterosia hemiacta Meyrick, 1920: 45.

Actihema hemiacta, Razowski 1993: 147.

Material examined. Kenya, Rift Valley Prov., Turi 8000 ft. 1♂ 23.X.1998 GP LAA 22008; 1♀ 17.X.1999 GP LAA 2009.017 leg. & coll. D. Agassiz; Central Prov.: Mt. Kenya S slope, Castle Forest Lodge [UTM]: 37M CV 1188 5789, 2070 m. 1♂ 5.–7.XII.2008 leg. L. Aarvik, D. Agassiz, A. Kingston, coll. LAA; Tanzania, Arumeru Distr.: Mt. Meru For. Res., 9 km NNE Olmotonyi 2500 m, 6♂♂ 8.II.1992, leg. L. Aarvik, GP LAA 2626+2627, coll. LAA.

Diagnosis (Fig. 49). Wingspan 14–18 mm. Externally not separable from previous species, *A. jirani* sp. n. Tanzanian specimens are darker than those from Kenya, with extensive grey suffusion in terminal part of forewing, and the hindwing grey, with darker transverse striae. The specimen illustrated (Fig. 49) is from Tanzania.

Male genitalia (Figs 29–31), differ from those *A. jirani* sp. n. by longer median process of transtilla, more angulate aedeagus (Fig. 31) with distinctly longer distal part. The juxta process shows some variation (Figs 29–30). The genitalia of the lectotype were figured by Razowski (1993).

Female genitalia (Fig. 39), differ from those of congeners by presence of two sclerotised curved, anterior edges on the sterigma; they differ particularly from those of *A. jirani* sp. n. by longer and more slender ductus bursae. For differences from *A. simpsonae* sp. n. described below, see that species.

Distribution. Kenya, Tanzania.

Remarks. The type specimens, two males, were collected on Mt. Kenya in 1912 (Meyrick 1920, Razowski 1993). The types were examined by Razowski who selected a lectotype and figured the male genitalia (Razowski op. cit.). The series from Mt. Meru, Tanzania, is externally different from Kenyan specimens. However, there is no detectable difference in the genitalia. Therefore it was surprising to find that externally similar material from Uganda belongs to a different species. This is described above as *A. jirani* sp. n.

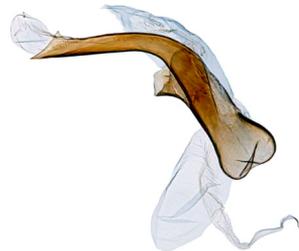
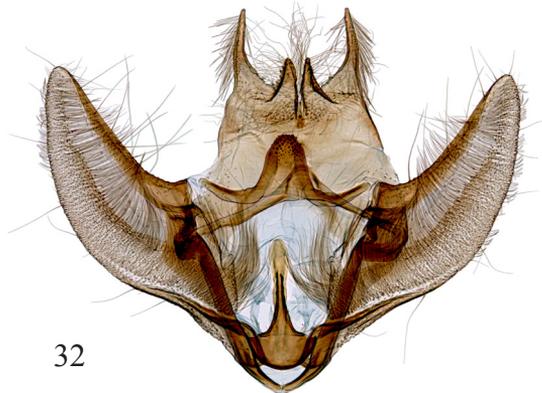
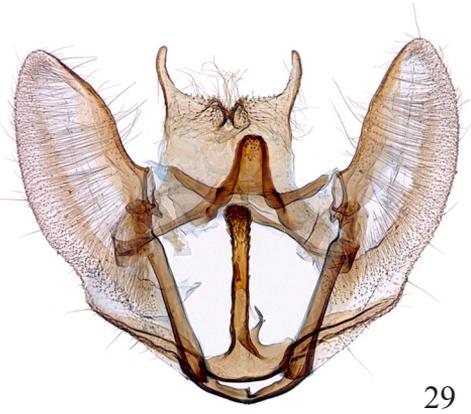
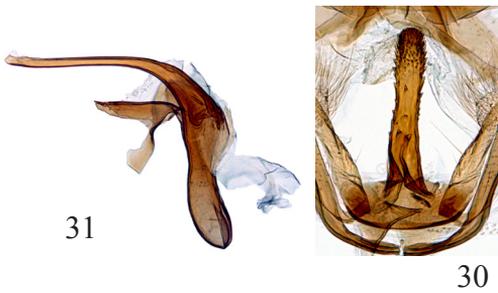
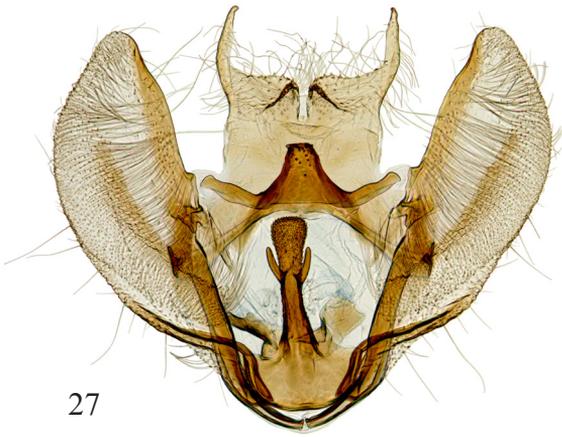
***Actihema msituni* sp. n.**

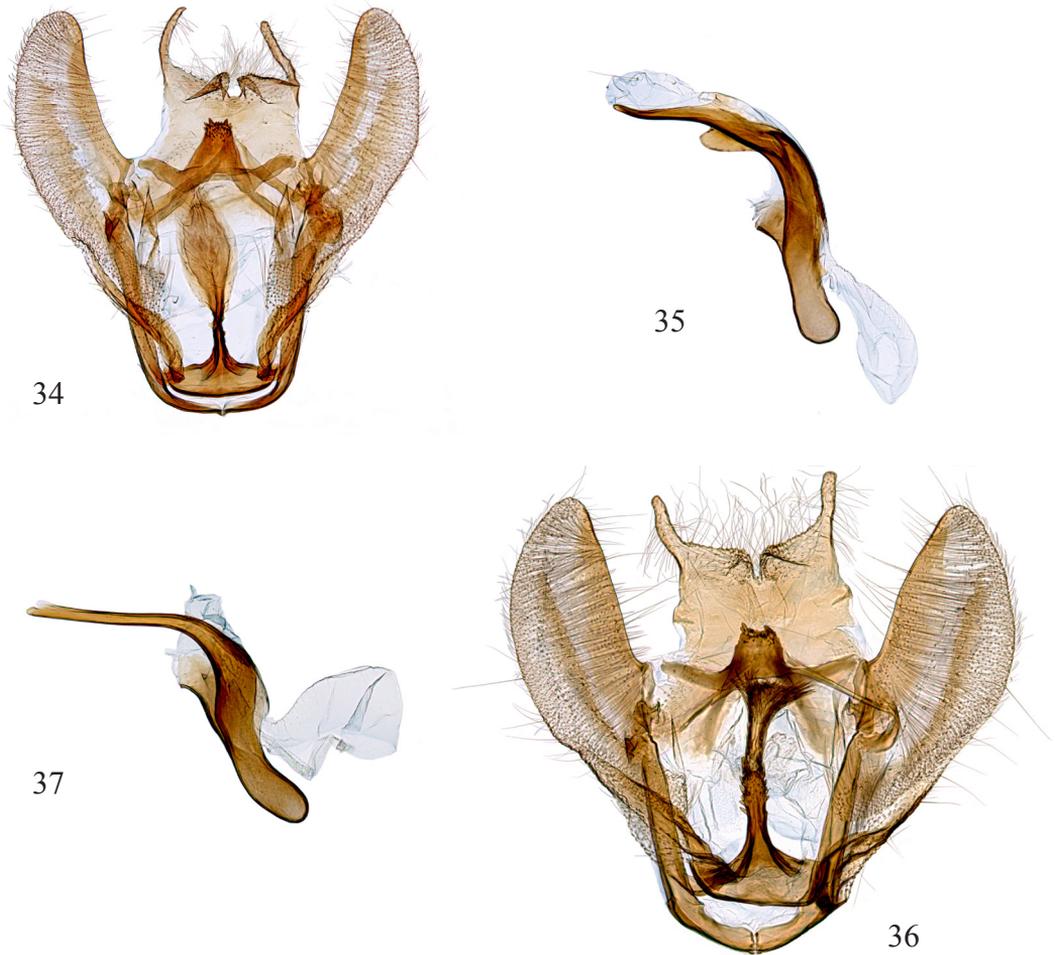
(FIGS 32–33 & 50)

Type material. Holotype male, Kenya, Central Province: Mt. Kenya S slope, Castle Forest Lodge 2070 m. [UTM:] 37M CV 1188 5789, 5.–7. XII.2008, leg. L. Aarvik, D. Agassiz, A. Kingston, genital slide NHMO 1853, coll. NHMO.

Etymology. The word “msituni” in Swahili means “in the forest”, indicating the species’ locality name and habitat.

Description. Male (Fig. 50). Wingspan 14 mm. Head and thorax white, labial palp 2 times diameter of eye, coloured as head and thorax, but





FIGURES 27–37. Male genitalia of *Actihema* Razowski. 27–28. *A. jirani* sp. n. 29–31. *A. hemiacta* (Meyrick). 32–33. *A. msituni* sp. n. 34–35. *A. fibigeri* sp. n. 36–37. *A. simpsonae* sp. n. Figures 28, 31, 33, 35, 37 show aedeagus. Figure 30 show variation in juxta process in *A. hemiacta*.

laterally with admixture of brown scales. Scales on frons protruding. Antenna brown, cilia slightly shorter than diameter of shaft. Tegulae anteriorly suffused with grey. Forewing with distinct costal fold, containing white scales of normal shape as well as white pencil of narrow hair-like scales; blackish patch in costal half reaches to middle of wing, followed by large white patch reaching to grey subterminal fascia; basal fascia fuscous, becoming brown in costal half; dorsum suffused

with grey, particularly in basal half; tufts of raised scales present in basal half of wing; cilia light ochreous, intermixed with white in tornal area. Hindwing light fuscous, with weak transverse striae, costa with pencil of long sex scales.

Male genitalia (Figs 32–33). Socii basally broad, gradually narrowing into slender rods, the median paired processes form two pointed triangles, much more prominent than in other species of the genus; median process of transtilla

broad, slightly narrowing, with terminal thorns; valva relatively slender, evenly curved, distinctly narrowed towards tip; juxta process narrowest at $\frac{2}{3}$, basal $\frac{2}{3}$ with sclerotised edges, distal third oval, broadened; distal half of aedeagus (Fig. 33) relatively broad, straight and with small triangular process near tip, no cornutus.

Remarks. The single specimen was collected in a locality where its congener, *A. hemiacta*, also may occur. *A. msituni* sp. n. can be separated externally by its distinct forewing costal fold and sex scaling on the costa of the hindwing upperside. This also separates it from *A. jirani* sp. n. known from western Uganda.

***Actihema fibigeri* sp. n.**
(FIGS 34–35 & 51)

Type material. Holotype male, **Uganda** (SW): Kabale Distr.: Ruhija 2330 m. S 01° 03,088'; E 29° 46,703' 4.–7.XI.2007, leg. L. Aarvik & M. Fibiger, genital slide NHMO 1781, coll. NHMO.

Etymology. Named after Michael Fibiger, Denmark, who took part in the collecting when the specimen was found.

Description. Male (Fig. 51). Wingspan 14 mm. Head and thorax off white, labial palp 2.5 times diameter of eye, coloured as head and thorax, but with some grey scales laterally. Scales on frons protruding. Antenna brown, with whitish scales and cilia slightly shorter than diameter of shaft. Tegulae anteriorly suffused with grey. Forewing with narrow costal fold; white, suffused with ochreous; grey suffusion dominates along dorsum and in terminal third; a distinct grey triangle medially on costa; in this triangle two interconnected black spots, dark grey dots present along dorsum; cilia grey, near tornus basally rufous; raised scales form transverse, wavy lines. Hindwing light grey with brownish tinge; dark grey scales form transverse lines, especially in terminal part. Abdomen grey, anal tuft greyish ochreous.

Male genitalia (Figs 34–35). Socii long and slender, median paired processes distinct, forming two rounded processes; median process of transtilla with strong distal thorns; valva relative

narrow, nearly parallel-sided; juxta process long, basally narrow, strongly widened in distal two thirds; aedeagus (Fig. 35) with flap-like process beyond angulation, and distal third gradually becoming narrower, no cornutus.

Female. Not known.

Distribution. Uganda.

Remarks. The related *A. jirani* sp. n. occurs in the same locality. *A. fibigeri* sp. n. can be recognised by the distinct grey triangle on the forewing costa. The moth was collected on the edge of a mountain rain forest.

***Actihema simpsonae* sp. n.**
(FIGS 36–37, 40 & 52)

Type material. Holotype male, **Kenya**, Rift Valley Prov.: Gilgil [UTM]: 37MBV 0668 4636, 2110 m. 22.–24.XI.2008, leg. L. Aarvik, D. Agassiz, A. Kingston, genital slide NHMO 1791, coll. NHMO. Paratypes: 2♂♂1♀ same data as holotype, coll. NHMO, 3♀♀ coll. LAA, 2♂♂ coll. DA; 3♂♂1♀ same locality 26.–28.XI.2005, leg. D.J.L. Agassiz, 1♂ GP LAA 2006.023, 1♀ GP LAA 2006.024, coll. DA; 2♂♂ same locality 2.IX.2006, leg. D.J.L. Agassiz, coll. NMK.

Etymology. The type series were collected on the property of Angus and Jill Simpson. The species is named in memory of Mrs. Jill Simpson for her great hospitality to visiting lepidopterists.

Description. Male. (Fig. 52). Wingspan 16–17 mm. Head white; labial palp 2 times diameter of eye, white, but with some brown-tipped scales laterally; scales on frons slightly protruding. Scape of antenna off white, antenna brown, with whitish scales and cilia slightly shorter than diameter of shaft. Thorax white, tegulae whitish ochreous. Forewing off white, densely dotted with ochreous, costa with heavy grey suffusion from base to one third; some weak grey dots present along dorsum and termen, cilia concolorous with wing. Hindwing white, with fuscous transverse striae which are becoming more dense towards apex; cilia white. Abdomen greyish brown, anal tuft whitish ochreous.

Male genitalia (Figs 36–37). Socii relatively short with nearly rectangular bases, median paired



38



39



40

FIGURES 38–40. Female genitalia of *Actihema* Razowski. **38.** *A. jirani* sp. n. **39.** *A. hemiacta* (Meyrick). **40.** *A. simpsonae* sp. n.

processes short, rectangular; median process of transtilla short, distally emarginated; valva slightly wider medially; juxta process of even width except distal part which is strongly widened and spinose; aedeagus (Fig. 37) long and slender, basal three fifths strongly curved, distal two fifths nearly straight and of even width, no cornutus.

Female genitalia (Fig. 40). Both pairs of apophyses heavily built; sterigma weak; anterior edge of ostium forming small, sclerotised arch; ductus bursae long and slender, membranous; corpus bursae with circular sclerite at entrance of ductus bursae, a smaller coil anterior on ring forms the entrance of ductus seminalis, small spines in anterior half.

Distribution. Kenya.

Remarks. The specimens were attracted to light in high altitude grassland and mixed scrub predominantly with leleshwa (*Tarcomanthus camphoratus*) and some *Acacia gerrardii*. With its pale yellow forewing with grey costa, this species does not resemble any other Cochylini species so far described from Africa.

Eupoecilia Stephens, 1829

Type species: [*Tortrix*] *angustana* Hübner, [1796-1799]

In the male genitalia *Eupoecilia* is defined by the presence of two pairs of appendages on the tegumen: The socii and folds from their bases which have developed into separate processes. This character is shared with *Actihema* Razowski, 1993, but the latter genus has a process on distal part of juxta. *Eupoecilia* is distributed in the Palearctic, Oriental and Australian regions. In Africa only two species are known (Razowski 1993).

Eupoecilia kruegeriana Razowski, 1993 (FIGS 53 & 57–59)

Eupoecilia kruegeriana Razowski, 1993: 148, fig. 37; Razowski & Krüger 2007: 106, figs. 5, 270.

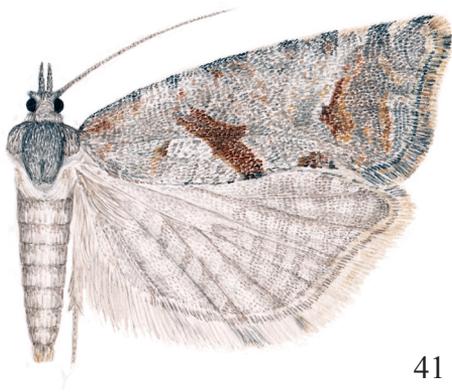
Material examined. Kenya, Central, Nyeri

6000 ft. 1♂ 6.XI.1999, leg. D. Agassiz, GP LAA 24010, coll. DA; Rift Valley Prov. Turi 8000 ft. 1♀ 13.XII.1998, GP LAA 24012, 1♂ 18.I.1999, GP LAA 24011, 1♀ 29.I.1999, 1♀ 14.V.1999, coll. DA, 1♀ 6.v.1999, coll. LAA; Rift Valley Prov.: Gilgil 1♀ 26.IX.2005, leg. D. Agassiz, coll. DA; same locality [UTM]: 37MBV 0668 4636, 2110 m. 1♂1♀ 22.–24.xi.2008, leg. L. Aarvik, D. Agassiz, A. Kingston, GP LAA F 2815, coll. LAA; **Tanzania**, Arusha N.P. Momela Rd. 5300 ft. 9.V.2001, leg. D. Agassiz, coll. DA; Arumeru Distr.: Usa River 1170 m. 1♂ 9.IX.1991, GP LAA 2687, leg. L. Aarvik, coll. LAA; Iringa Reg., Mufindi Distr.: Kigogo Forest 1900 m. 1♂ 23.–25. XI.2005, leg. L. Aarvik, M. Fibiger, A. Kingston, coll. LAA; Mbeya Reg., Rungwe Distr.: 4 km N Mwakelele 1670 m. 1♂ 27.XI.2005, leg. L. Aarvik, M. Fibiger, A. Kingston, coll. LAA; **Uganda** (S), Rakai Distr.: Sango Bay, Malamigambo Forest 1140 m. S 00° 55,796'; E 31° 37,287' 1♂ 1.–2. XI.2007, leg. L. Aarvik & M. Fibiger, coll. LAA.

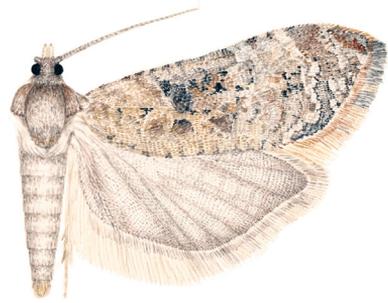
Redescription. Male (Fig. 53). Male. Wingspan 11–12 mm. Labial palp 1,5 times diameter of eye, ochreous, third segment pale. Antenna ciliate; cilia slightly longer than diameter of antenna. Frons cream; head and thorax otherwise pale ochreous. Forewing pale ochreous, with golden sheen; costa to middle with brown suffusion; median fascia slightly narrowed in middle, brown, with admixture of purplish scales, terminal half with light brown suffusion that form faint shadows; a few fuscous dots present along termen in most specimens; underside below fold with patch of modified erect, yellow scales; cilia pale ochreous. Hindwing pale ochreous, with slight fuscous suffusion along termen; scales on basal and median part modified, narrower than normal scales; costa upperside with fringe of long ochreous scales; cilia with same colour as hindwing, with indistinct cilia line.

Male genitalia (Figs 57–58). Socii basally triangular, with slender lateral arm; median process of transtilla dentate and rounded terminally; valva curved from termination of sacculus, sacculus without terminal process; aedeagus (Fig. 58) bottle-shaped, with single long cornutus that becomes gradually pointed.

Female. Wingspan 14–15 mm. Labial palp 2



41



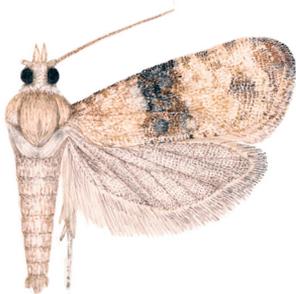
42



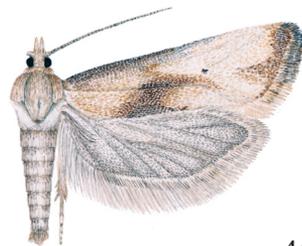
43



44

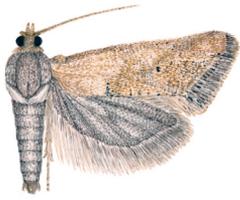


45

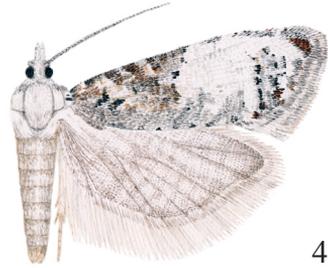


46

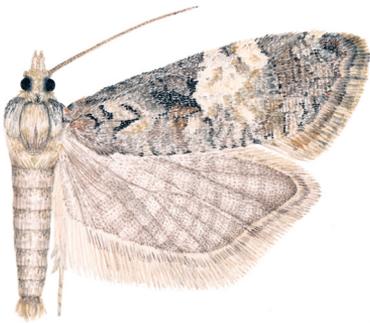
FIGURES 41–46. Adults of *Phtheochroa* Stephens, *Eugnosta* Hübner and *Cochylimorpha* Razowski. 41. *P. kenyana* sp. n. ♀ 42. *E. percnoptila* (Meyrick) ♀ 43. *C. exoterica* (Meyrick) ♂ 44. *C. africana* sp. n. ♀ 45. *E. unifasciana* sp. n. ♂ 46. *E. marginana* sp. n. ♂



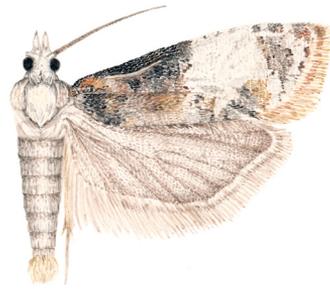
47



48



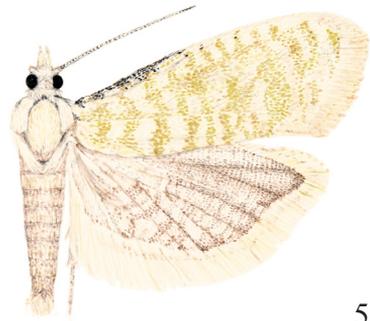
49



50

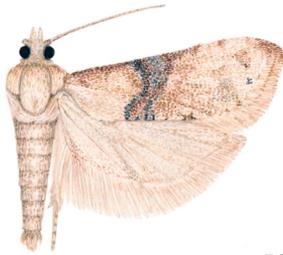


51

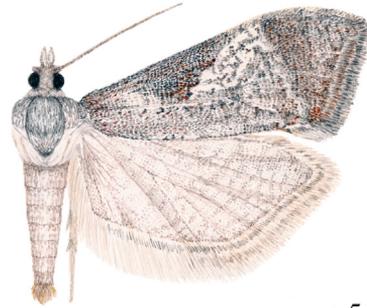


52

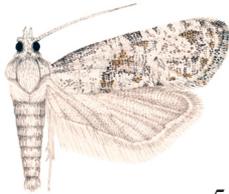
FIGURES 47–52. Adults of *Eugnosta* Hübner and *Actihema* Razowski. 47. *E. misella* Razowski ♂ 48. *A. jirani* sp. n. ♂ 49. *A. hemiacta* (Meyrick) ♂ 50. *A. msituni* sp. n. ♂ holotype. 51. *A. fibigeri* sp. n. ♂ holotype. 52. *A. simpsonae* sp. n. ♂.



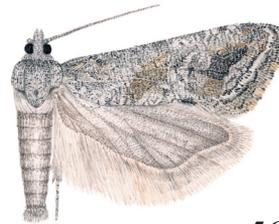
53



54



55



56

FIGURES 53–56. Adults of *Eupoecilia* Stephens, *Afropoecilia* Gen. nov., *Diceratura* Djakonov and *Falseuncaria* Obraztsov & Swatschek. **53.** *E. krugeriana* Razowski ♂ **54.** *A. kituloensis* sp. n. ♂ **55.** *D. complicana* sp. n. ♂ **56.** *F. aberdarensis* sp. n. ♂.

times diameter of eye. Antenna minutely ciliate. Hindwing light greyish. Otherwise as in male.

Female genitalia (Fig. 59). Apophyses anteriores long; antrum formed as a band; ductus bursae wide, of even width, sclerotised; corpus bursae without sclerites, strongly wrinkled.

Distribution. Rep. South Africa (Razowski 1993), Kenya, Tanzania and Uganda.

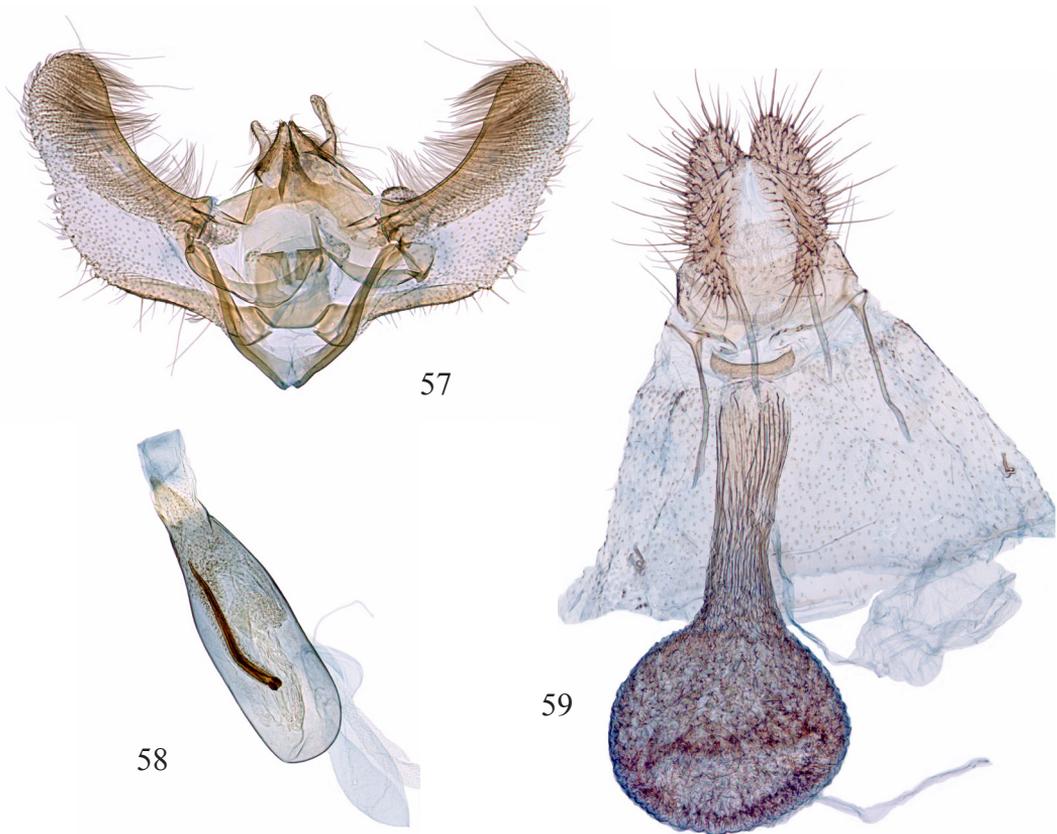
Remarks. Razowski (1993) described this species from South Africa based on a single female. The discovery of the male confirms the generic position of the species. The wing pattern of this African representative of the genus resembles that of Palaearctic members, compare colour plate in Razowski (1970). The species has been collected in a variety of shrub and forest habitats, in Acacia woodland, and on edges of rain forest

***Afropoecilia* Gen. nov.**
(FIGS 60–63)

Type species: *Afropoecilia kituloensis* sp. n.

Description. Head (Fig. 60) with conical frons; labial palp with thick scaling on second segment, nearly concealing third segment, 3 times diameter of eye; haustellum reduced; antenna ciliate, cilia in male as long as diameter of shaft, in female minute. Thorax without crest. Forewing costa straight before apex, termen straight, all veins separate, male with costal fold. In hindwing Rs stalked with M1, M3 stalked with CuA1.

Male genitalia (Figs 61–62). Socii with broad basal part and rod-like distal part, base with triangular process; median process of transtilla



FIGURES 57–59. *Eupoecilia krugeriana* Razowski. 57. Male genitalia. 58. Aedeagus. 59. Female genitalia.

broad, distally rounded and dentate; vinculum with ventral split; valva evenly curved, with short and narrow sacculus; juxta large, distally with two lateral lobes; aedeagus (Fig. 62) short and broad, wall partly membranous, with three processes of dissimilar size, each ending in thin process.

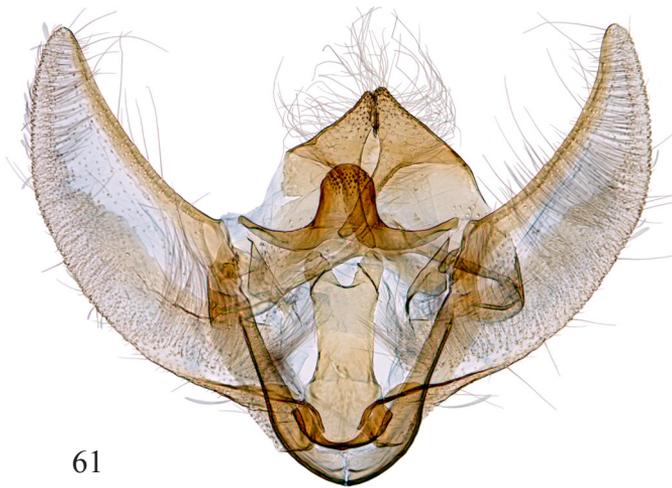
Female genitalia (Fig. 63). Ovipositor triangular; papillae anales narrow; apophyses posteriores short, bases long, broad and triangular; lamella antevaginalis large, semicircular; ostium with small, wavy sclerite; ductus bursae, narrow, membranous; corpus bursae with large round sclerite in posterior part, numerous dents anteriorly.

Remarks. The structure of the socii in the male genitalia is the same as in *Eupoecilia* Stephens and *Hemiacta* Razowski. The ring-shaped sclerite in corpus bursae in the female genitalia is shared

with *Hemiacta*. The latter genus is different from *Afropoecilia* gen. nov. due to its juxta process in the male genitalia. *Afropoecilia* gen. nov. has a unique structure of the aedeagus in the male genitalia, very different from *Eupoecilia* and *Hemiacta*. At present only the type species can be assigned to *Afropoecilia* gen. nov.

***Afropoecilia kituloensis* sp. n.**
(FIGS 54 & 60–63)

Type material. Holotype male, **Tanzania**, Iringa Reg., Makete District: Kitulo Plateau S 2900 m. 30.XI.2005, leg. L. Aarvik, M. Fibiger, A. Kingston, GP LAA 2762, coll. NHMO. Paratypes: 3♀♀ same data as holotype, 2♀♀ coll. LAA, 1♀ with GP LAA 2763, coll. NHMO.



63



FIGURES 60–63. *Afropoecilia kituloensis* sp. n. **60.** Head. **61.** Male genitalia. **62.** Aedeagus. **63.** Female genitalia.

Etymology. Named after Kitulo Plateau, Tanzania, where the moths were collected.

Description (Fig. 54). Wingspan 14–17 mm. Head brownish white; labial palp basally light brown, tip of segments 2 and 3 white; antenna light

brown, with white scales on upperside. Thorax brownish white, anteriorly grey. Forewing greyish white; suffused with fuscous along dorsum below fold, on costa in a large triangular patch, and in terminal area from tornus to costa at one fourth

from apex; all suffused areas with intermixed rufous scales; cilia fuscous, lighter at tornus. Hindwing greyish white, with fuscous transverse striae; cilia greyish white, with darker cilia line.

Genitalia. See genus description.

Distribution. Tanzania.

Remarks. Externally recognisable by the triangular patch on the forewing costa. *Hemiacta fibigeri* sp. n. from Uganda has similar wing pattern, but the apex is more rounded. The locality is mountain grassland with rich herb vegetation.

***Trachybyrsis* Meyrick, 1927**

Type species *Trachybyrsis euglypta* Meyrick, 1927.

The type species was collected in Rwanda (Meyrick 1927, Razowski 1993). The wings and female genitalia was figured by Clarke (1963); the male genitalia were figured by Razowski (1993). Bradley (1965) described *Trachybyrsis hypsitropha* Bradley, 1965 from the Ruwenzori Mountains, and also recorded the type species, *T. euglypta*, from the same area. These two exceptionally large Cochylini species are known from the border area of Uganda and Congo, and they will not be treated further here. A third species of the genus, *T. chionochnaena* Meyrick, 1932, was described from Ethiopia (Meyrick 1932). Wings and genitalia of the single male was figured by Clarke (1965).

***Diceratura* Djakonov, 1929**

Type species *Cochylis purpuratana* Herrich-Schäffer, 1851 = *Eupoecilia ostrinana* Guenée, 1845.

In the male genitalia *Diceratura* is characterised by the presence of a costal arm on the valva. The closely related *Cochylidia* Obratzsov, 1956 also has this character. Both genera are mainly Palaearctic (Razowski 2002). The African species described below possesses spines at the end of the costal arm of the valva which, according to Razowski (1987), places it in *Diceratura* rather than *Cochylidia*. This is the first species of

Diceratura outside the Palaearctic region.

***Diceratura complicana* sp. n.** (FIGS 55 & 64–67)

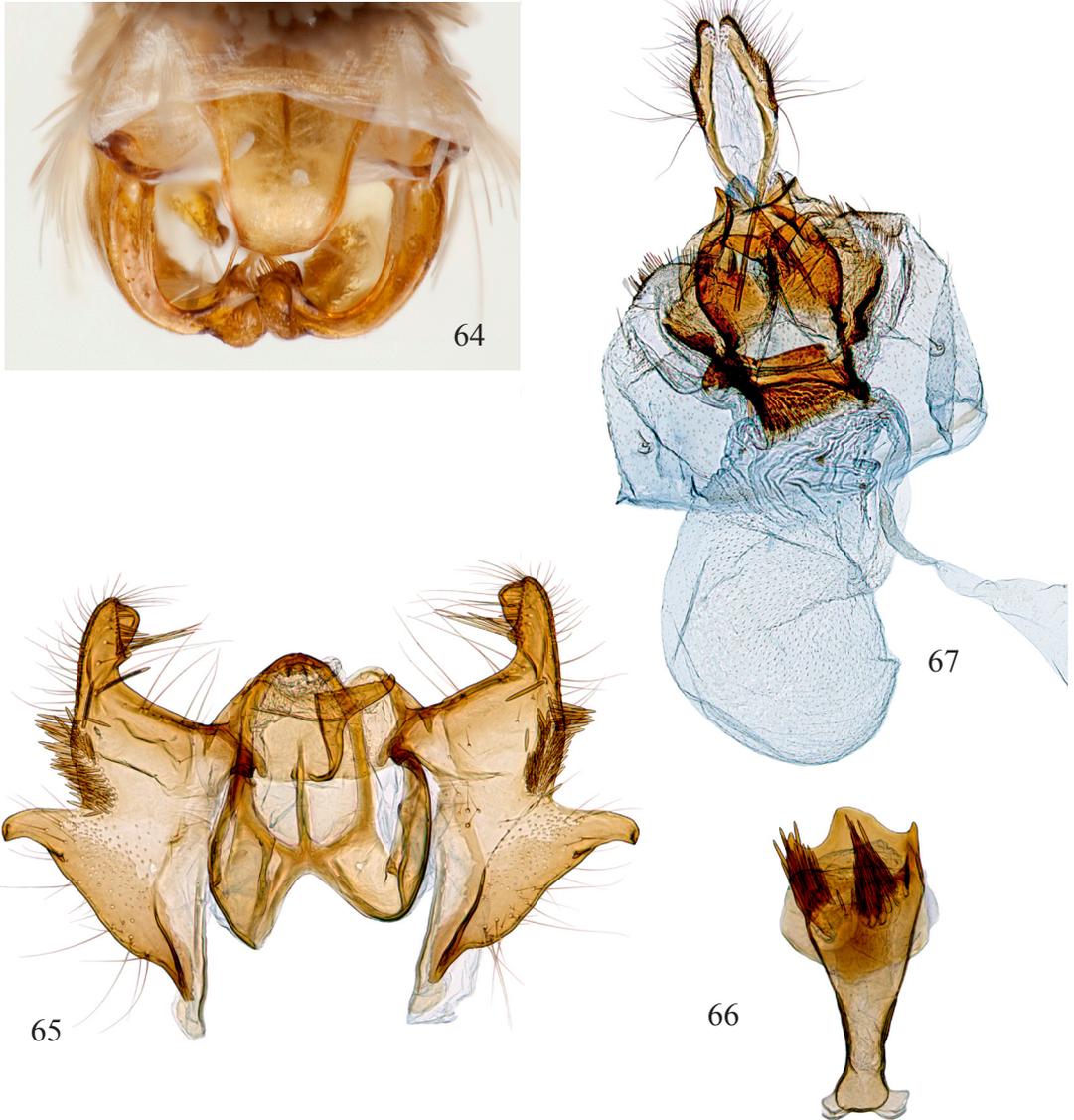
Type material. Holotype male, Uganda (S), Rakai Distr.: Sango Bay, Malamigambo Forest 1140 m. S 00° 55,796'; E 31° 37,287' 1.–2. XI.2007, leg. L. Aarvik & M. Fibiger, genital slide NHMO 1782, coll. NHMO. Paratypes: 1♂ same data as holotype, coll. NHMO; same locality 3700 ft. S: 0° 55'21"; E: 31° 37'58" 1♂ 2.V.2001, leg. & coll. D.J.L. Agassiz; Masindi Distr.: Budongo Forest 3000 ft. 1♂ 17.VII.2000, leg. & coll. D.J.L. Agassiz; same locality 1090 m. N 01° 42,931'; E 31° 28,183' 3♂♂1♀ 14.–16.XI. 2007, leg. M. Fibiger & L. Aarvik, GP LAA ♀ 2812, coll. LAA.

Etymology. The species' name indicates the complicated structure of the valva of the species.

Description. Male (Fig. 55). Male. Wingspan 9–10 mm. Head and thorax white, intermixed with dark-tipped scales; labial palp 1,5 times diameter of eye, light ochreous, second segment flecked with brown; antenna brown, with light scales on upperside, cilia slightly shorter than shaft. Forewing white with numerous fuscous transverse striae, costa suffused with grey to middle; oblique median fascia formed by ochreous and fuscous scales, reaching to two thirds from dorsum, ochreous suffusion present as dots along termen; base of cilia yellowish white, cilia line grey; then chequered white and grey. Hindwing grey, cilia light grey, with grey cilia line.

Male genitalia (Figs 65–66). Vinculum small, with distal process that could be interpreted as uncus; transtilla very broad, median process with broad base, distal end hooked; valva broad, costa with distal, spined process of rectangular shape; lateral edge with row of spines; sacculus prolonged into curved process; juxta heart-shaped; aedeagus (Fig. 66) with broad base, constricted, and then gradually widening to distal end which has a wavy outline, two bundles of spiny cornuti and a few single ones present.

Female genitalia (Fig. 67). Papillae anales slender, edges strongly sclerotised; apophyses posteriores long; eighth tergite strongly



FIGURES 64–67. *Diceratura complicana* sp. n. **64.** Tip of male abdomen (dorsal view) showing genitalia in situ. **65.** Male genitalia. **66.** Aedeagus. **67.** Female genitalia.

sclerotised, with convex lateral sides, moved anteriorly into seventh segment, with reduced anterior apophyses; sterigma with posterior processes pointing laterally, anteriorly forming large lateral plates; ductus bursae broad, with large asymmetric sclerite, sclerite spiny in anterior part; corpus bursae membranous, with numerous tiny denticles.

Distribution. Uganda.

Remarks. The specimens were collected in forest and were attracted to light. There is no other African species of Tortricidae that could be confused with it. Externally it resembles European species of *Cochylidia*, viz. *C. heydeniana* (Herrich-Schäffer, 1851) and *C. implicitana* (Wocke, 1856); compare figures on plate VIII in Razowski (2002).

Palaeartic species of *Diceratura* with their pink and yellow wing pattern look different. In the male genitalia the complex structure of the valva with both costal process and sacculus process, is more in line with several Palaeartic species of *Diceratura*, e.g. *D. diceratops* Razowski, 1967, *D. teheranica* Razowski, 1970 and *D. ostrinana* (Guenée, 1845), compare figures in Razowski (1970). However, the transtilla and its process is more similar to those found in species of *Cochylidia*. The highly modified eighth segment in the female genitalia is unique. Otherwise the female genitalia correspond well with those of *Diceratura* and *Cochylidia*; compare figures in Razowski (1970). *D. complicana* sp. n. has a mix of traits from both *Diceratura* and *Cochylidia*, and this is an indication that the validity of *Cochylidia* needs to be evaluated. If in the future the two genera are lumped, the name *Diceratura* has priority.

***Falseuncaria* Obraztsov & Swatschek, 1960**

Type species *Tortrix ruficiliana* Haworth, [1811]

The male genitalia in *Falseuncaria* are strongly modified. The distal part of tegumen is long and elongate, and its appendages, socii and uncus, are strongly reduced or strongly modified; and the valvae have species specific deviations from the basic cochyline shape. So far five Palaeartic species have been described (Razowski 2002). The genus is new to Africa.

***Falseuncaria aberdarensis* sp. n.** (FIGS 56 & 68–71)

Type material. Holotype male, **Kenya**, Central [Province]: Aberdare C. Club 6000 ft. 30.V.2000, leg. D.J.L. Agassiz, GP LAA 2009.001, coll. DA (to be deposited in BMNH). Paratypes: 1♀ same data as holotype, GP LAA 2009.003, coll. DA, 1♂ same data as holotype, coll. LAA; 1♂ same locality S 0° 20'; E 36° 53', 1750 m. 27.IV.2003, GP LAA 2009.002, coll. DA.

Etymology. Named after the Aberdare Mountains, Kenya, where the type series was collected.

Description. Male (Fig. 56). Male. Wingspan 11–13 mm. Head greyish white, intermixed with dark-tipped scales; labial palp 2 times diameter of eye, white, on external side light ochreous, flecked with brown, distal segment nearly concealed by scaling of second segment. Antenna brown, minutely ciliate. Thorax greyish white, scales brown-tipped, particularly on anterior part. Forewing narrow, costa straight, slightly bent at $\frac{2}{3}$; greyish white, heavily suffused with fuscous; oblique median fascia marked with brown, not reaching costa; sub-terminal fascia marked with brown stripes and dominant black patch in middle; cilia grey, base cream-coloured, cilia line fuscous. Hindwing brownish grey; cilia light grey, cilia line grey. Abdomen brownish grey.

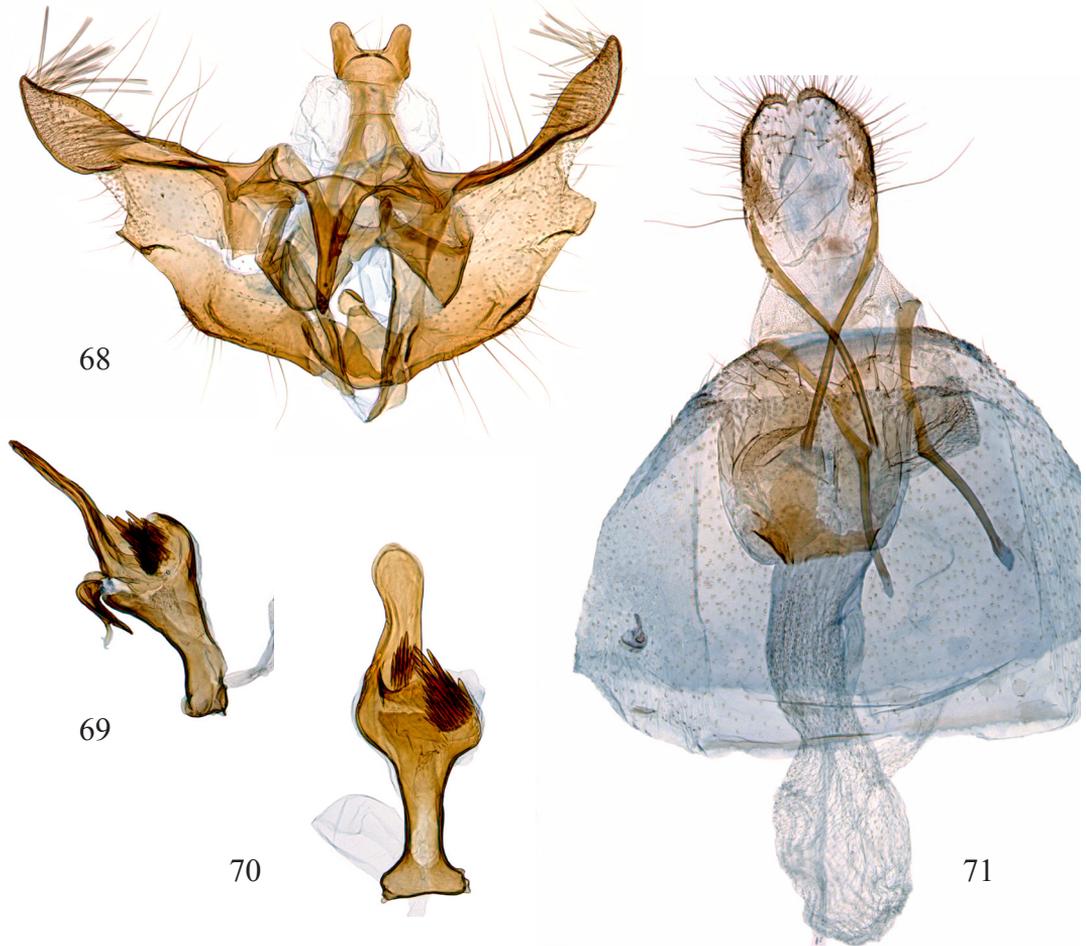
Male genitalia (Figs 68–70). Tegumen prolonged and constricted before distal end; socii erect, “ear”-like; uncus atrophied; median process of transtilla long, slender, becoming narrower distally, armed with 2–3 strong spines; costa of valva strongly sclerotised, distally prolonged into spoon-shaped process; lateral edge of valva with short median process; sacculus well sclerotised, with distal fold; aedeagus (Figs 69–70) with broad distal extension; hammer-shaped base, medially broad, with two bundles of long cornuti, one small and one large, and single strong spine.

Female. Similar to male.

Female genitalia (Fig. 71). Ovipositor broad, papillae anales narrow; apophyses posteriores and anteriores of same length, apophyses anteriores with base strongly sclerotised and of same length as anterior part; sterigma large, sack-like, forming curved, setose pads on each side of ostium, with internal asymmetrical sclerite; ductus bursae membranous, broad, with entrance of ductus seminalis posteriorly on right side; corpus bursae small, membranous, both ductus bursae and corpus bursae with numerous small spines.

Distribution. Kenya.

Remarks. There is no closely related species in Africa with which *F. aberdarensis* sp. n. could be confused. In Palaeartic species of the genus, the socii in the male genitalia are fused (Razowski



FIGURES 68–71. *Falseuncaria abderdarensis* sp. n. **68.** Male genitalia. **69.** Aedeagus lateral view. **70.** Aedeagus ventral view. **71.** Female genitalia.

1970). In the present species they are separate. However, their erect position at the distal end of the prolonged tegumen is unique for the genus *Falseuncaria*, and decisive for the inclusion of *F. abderdarensis* sp. n.

Species incertae sedis

Phalonia illota Meyrick, 1914: 121.

Described from a single male from Lumbwa,

Kenya. The type should be preserved in the National Natural History Museum, Paris, but inquiries to that institution have been fruitless. An English translation of the original French description is given here:

Male 12 millimeters. Head, palps and thorax whitish, strongly suffused with grey. Forewings elongate, whitish ochreous, with greyish transverse striae and some black scales; markings ochreous, scattered with grey; a narrow median band, parallel with termen, extending almost to the dorsal edge above the middle of the wing; a spot near dorsal edge beyond middle; a narrow

subterminal band does not reach the edge; an interrupted terminal line; fringes grey, suffused darker, whitish towards base. Hindwings greyish white; fringes whitish, with two grey lines.

1 ex. Lumbwa, in September.

Acknowledgements. Michael Fibiger, Sorø, Denmark, Anthony Kingston, Wolverhampton, UK, and David Agassiz, Weston-super-Mare, UK, are thanked for enthusiastic participation in field trips to East Africa. Kevin Tuck, The Natural History Museum, London, is thanked for generous help during visits to the museum. I am indebted to Jurate De Prins, Royal Museum for Central Africa, Tervuren, Belgium, for letting me study the holotype of *Phtheochroa percnoptila* Meyrick, and to Kjell Arne Johansson, Swedish Museum of Natural History, Stockholm, Sweden, for arranging the loan of the holotype of *Euxanthia exotérica* Meyrick. I am particularly grateful to David Agassiz, Weston-super-Mare, UK, for making available his Kenyan material of Cochylini, and for arranging the field trip to Kenya in 2008. He also kindly read the manuscript and gave valuable comments. Hugo van der Wolf, Nuenen, Holland, is thanked for the generous gift of Tortricidae specimens he collected in South Africa, and Ole J. Lønne, Nesodden, Norway, is thanked for the efforts to collect Microlepidoptera in Ethiopia in 2007. I thank Karsten Sund, Oslo, for taking photos of specimens. A special thank goes to my wife, Nini Cecilie Roll Aarvik, Ås, for skilfully conducting water paintings of the adult moths. Finally I wish to thank the editor, Øivind Gammelmo, Grua; for much help with the completion of the manuscript.

References

- Aarvik, L. 2004. Tortricidae (Lepidoptera: Tortricoidea). In: Mey, W. (ed.). The Lepidoptera of the Brandberg Massif in Namibia. Part I. *Esperiana Memoir* 1, 189–198.
- Clarke, J.F.G. 1963. *Catalogue of the Type Specimens of Microlepidoptera in the British Museum (Natural History) described by Edward Meyrick*. Vol. IV. Phaloniidae, Carposinidae, Chlidanotidae, Oecophoridae, Blastobasidae, Momphidae, Epermeniidae, Strepsimanidae, Physoptilidae. 1–521.
- Meyrick, E. 1914. Collections recueillies par M. le Baron Maurice de Rothschild dans l'Afrique Orientale. Lépidoptères: Tortricidæ, Tineidæ. *Bulletin du Museum national d'Histoire Naturelle*. 20, 121–122.
- Meyrick, E. 1920. *Voyage de Ch. Alluaud et R. Jeannel en Afrique Orientale (1911–1912)*. Résultats Scientifiques. Insectes Lépidoptères II. Microlepidoptera. 120 pp. Paris.
- Meyrick, E. 1924. Zoological Results of the Swedish Expedition to Central Africa 1921. *Arkiv för zoologi* 16 (14), 1–4.
- Meyrick, E. 1927. *Exotic Microlepidoptera*. 3(12), 353–384.
- Meyrick, E. 1932. Entomological expedition to Abyssinia, 1926–7. Microlepidoptera. *Transactions of the Entomological Society of London* 80, 107–120.
- Meyrick, E. 1933. *Exotic Microlepidoptera*. 4(14), 417–448.
- Razowski, J. 1970. Cochyliidae. In: Amsel, H.-G., Gregor, F., Reisser, H. (Eds.). *Microlepidoptera Palaearctica* 3. IV + 528 pp., 161 pls. Georg Fromme & co., Wien.
- Razowski, J. 1987. The Genera of Tortricidae (Lepidoptera). Part I: Palaearctic Chlidanotinae and Tortricinae. *Acta zoologica cracoviensia* 30 (11), 141–355.
- Razowski, J. 1993. Cochylini (Lepidoptera: Tortricidae) of the Ethiopian Region. *Acta zoologica cracoviensia* 36 (1), 137–159.
- Razowski, J. 1995. Catalogue of the Species of Tortricidae (Lepidoptera). Part III: Afrotropical Chlidanotinae and Tortricinae: Phricanthini, Cochylini and Tortricini. *Acta zoologica cracoviensia* 38 (2), 183–193.
- Razowski, J. 2002. *Tortricidae of Europe*. Vol.1: Tortricinae and Chlidanotinae. Frantisek Slamka, Bratislava. 247 pp.
- Razowski, J. 2005. Tortricidae from South Africa. 1. Tortricini and Cochylini. *Polskie Pismo Entomologiczne* 74, 495–508.
- Razowski, J. & Krüger, M. 2007. An illustrated catalogue of the type specimens of Tortricidae in the Transvaal Museum, Pretoria (Lepidoptera: Tortricidae). *SHILAP Revista de lepidopterologia* 35, 103–179.
- Razowski, J., Aarvik, L. & De Prins, J. 2010. An annotated catalogue of the types of Tortricidae (Lepidoptera) in the collection of the Royal Museum for Central Africa (Tervuren, Belgium) with descriptions of new genera and new species. *Zootaxa* 2469, 1–77.

Received: 17 September 2010

Accepted: 11 October 2010