

**Tortricidaee (Lepidoptera) from South Africa.  
3: *Hectaphelia* gen.n., *Aphelia* HÜBNER and *Clepsis* GUENÉE**

JÓZEF RAZOWSKI

Institute of Systematics and Evolution of Animals PAS, Sławkowska 17, 31-016 Kraków,  
Poland, e-mail: Razowski@isez.pan.krakow.pl

**ABSTRACT.** One genus (*Hectaphelia* gen.n.) and four species (*Hectaphelia kapakoana* sp.n., *H. periculosa* sp.n., *Clepsis gnathocera* sp.n., *C. monochroa* sp.n.) are described from South Africa. *Tortrix pharetrata* MEYRICK and *T. metapyrrha* MEYRICK are transferred to *Hectaphelia*, *T. corroborata* MEYRICK to *Aphelia* HÜBNER, *Argyrotoxa hectaea* MEYRICK and *Epichorista tortuosa* MEYRICK to *Hectaphelia*, and *Cnephasia finita* MEYRICK to *Aphelia*

**KEY WORDS:** Lepidoptera, Tortricidae, new taxa, Afrotropical

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INTRODUCTION

RAZOWSKI (2002) listed and discussed the genera of Tortricidae common for the Afrotropical and Palaearctic regions. Among the genera treated in this paper only *Clepsis* GUENÉE, 1845 was until now found in Tropical Africa, viz., *Clepsis stenophora* (BRADLEY, 1965) and one was recorded by DIAKONOFF (1960) under the generic name *Siclobola* DIAKONOFF, 1946. The last record is most probably based on a specimen introduced from France. Now two species are described in *Clepsis*. Two South African species (*corroborata* and *finita*) are transferred to *Aphelia*. DIAKONOFF (1973) described from Madagascar new genus *Doridostoma* with two species of which *D. denotata* DIAKONOFF, 1973 is close to *Aphelia* HÜBNER and *D. stenomorpha* DIAKONOFF, 1973 is rather similar to *Clepsis*. The new genus *Hectaphelia* shows some characters common for both *Aphelia* and *Clepsis* (very broad uncus).

The holotypes of the newly described species and the material examined are in the collection of the Transvaal Museum, Cape Town (TM).

### Acknowledgements

The author thanks Dr. M. KRÜGER and the authorities of the Transvaal Museum, Cape Town for providing the material for study, Mr. W. ZAJDA, Kraków for dissection of the specimens and Mr. M. KOPEĆ for digital arrangement of drawings and the photographs.

## SYSTEMATICS

### *Aphelia* HÜBNER, 1826[1825]

*Aphelia* is widely distributed in the Nearctic. Now it is for the first time recorded from the Afrotropical Region. It characterizes by a variety of shapes of wings, colouration and shapes of genitalia. These characters supported a division of the genus into four subgenera (RAZOWSKI 1981). The African species characterize with the very broad uncus (as in Palearctic *A. aglossana* KENNEL, 1899), the presence of thorny lobes of arms of gnathos (as in group of *A. viburniana* (FABRICIUS, 1787) - species group), and slender transtilla (as in *A. paleana* (HÜBNER, [1793]) and several other species). The two Afrotropical species differ from all known *Aphelia* by presence of a subbasal lobe of the arm of gnathos. Females of African species are unknown. *Doridostoma* DIAKONOFF, 1973 described from Madagascar includes two species with very broad unci, one (*D. denotata* DIAKONOFF, 1973, the type-species) resembles *Aphelia* (fully developed thorny transtilla), the other (*D. stenomorpha* DIAKONOFF, 1973 - with transtilla represented by a pair of labides connected with one another by means of thin transverse belt). The two species have pectinate bristles of ventral surface of uncus.

### *Aphelia finita* (MEYRICK, 1924), comb.n.

*Cnephasia finita* MEYRICK, 1924, Exotic Microlepid., 3: 116. Type-locality: Impetyeni Forest, Natal, South Africa.

### Description

Male genitalia characterize with very broad uncus; arm of gnathos with two thorny lobes.

Female genitalia (Fig. 14). Papillae anales rather short; apophyses very slender; sterigma slender; colliculum fused with sclerite of posterior part of ductus bursae; corpus bursae elongate.

**Material examined**

One female from Barberton taken on 6 XII 1910 and one male without locality data.

**Remarks**

Holotype, male described and illustrated by RAZOWSKI & KRÜGER (in press). Female remains unknown.

***Aphelia corroborata* (MEYRICK, 1918), comb. n.**

*Tortrix corroborata* MEYRICK, 1918, Ann. Transv. Mus.,6: 8. Type locality: Nkandhla Forest, KwaZulu, Natal.

**Description**

Male genitalia (Figs 5,6) similar to *finita* but *corroborata* with slenderer uncus and basal lobe of arm of gnathos well separate from the terminal lobe; basal lobe is slender, minutely thorny.

**Material examined**

One male from Umodoni Park, Natal, 30 IV 1982, leg. SCOBLE, LAWRENSON & KROON.

**Remarks**

Holotype, male described and illustrated by RAZOWSKI & KRÜGER (in press; the drawing based on an old genitalia slide is unclear). Female remains unknown.

***Aphelia finita* (MEYRICK, 1924), comb.n.**

(Fig. 3)

*Cnephasia finita* MEYRICK, 1924, Exotic Microlepid.,3: 116. Type locality: Impetyeni Forest, KwaZulu, Natal.

**Material examined**

One male from Kleine Monde, Bathurst District, XII 1949, leg. J. OMER COOPER.

**Remarks**

Holotype, male described and illustrated by RAZOWSKI & KRÜGER (in press).

***Hectaphelia gen.n.***

Type-species: *Hectaphelia periculosa* sp.n.

**Diagnosis**

*Hectaphelia* is closely related with *Aphelia* (the shapes of valvae and transtilla, a tendency of a formation of basal sclerites of transtilla) but *Hectaphelia* has the subdorsal sclerite of valva and the plicate lobe of gnathos.

**Description**

Venation. In forewing all veins separate; R5 to termen beneath apex; CuA2 rather opposite base of R1; chorda preserved as a short vein beyond base of R1 (in *pharetrata*) or absent; M-stem absent. Hindwing: Rr-M1 separate (in *metapyrrha*) or connate (in *pharetrata*); M2 far from base of connate veins M3-CuA1.

Male genitalia. Uncus very broad; socius absent or rudimentary; arm of gnathos with median, triangular process or large plicate lobe; terminal plate of gnathos large; vinculum slender, rather uniform; sclerotized process beneath ill-defined costa of valva; brachiola like terminal lobe of valva broad; sacculus with distinct angle beyond which slender, curved upwards; transtilla weak transverse band or distinct sclerite armed with lateral lobes or processes; juxta proportionally small, simple; edeagus simple, broad.

Female genitalia. Ovipositor short, apophyses slender; sterigma short with short anteostial portion; colliculum with sclerite; ductus seminalis median; signum absent.

**Biology**

No data except for collecting dates of moths.

**Distribution**

South Africa. Six species included.

**Etymology**

The generic epithet refers to the name of the closely related genus *Aphelia* and the name of one of its species (*hectaea*).

**Remarks**

The genus is described on basis of two autapomorphies: presence of subdorsal sclerotic lobe of valva and the plicate lobe attached to the arm of gnathos (absent in two species). Other characters differing *Hectaphelia* and *Aphelia* are the strong reduction of socii, very large uncus similar to that in several species of *Clepsis*, large sclerite of colliculum and long corpus bursae.

***Hectaphelia metapyrrha* (Meyrick, 1918), comb.n.**

*Tortrix metapyrrha* Meyrick, 1918, Ann. Transv. Mus., 6(2): 8. Type locality: Gauteng, Pretoria (South Africa).

**Remarks**

Holotype, male described and illustrated by RAZOWSKI & KRUGER (in press). Female not known.

***Hectaphelia periculosa* sp.n.**

(Fig. 1)

**Diagnosis**

Closely related with *metapyrrha* but *periculosa* with stout lateral processes of transtilla and very broad uncus.

**Description**

Wing span 15 mm. Head white cream, thorax cream; labial palpus 2.2 times longer than diameter of eye, ochreous cream medially, white cream dorsally and terminally. Forewing slender, somewhat expanding terminally; costa straight; termen tolerably straight, moderately oblique. Ground colour whitish, ochreous cream suffusions along costa, dorsum, median area and in terminal third of wing; brown dot at end of median cell; some brownish scales at mid-termen and subapically. Cilia whitish with some yellowish divisions. Hindwing cream, whiter basally; cilia white cream.

Paratype paler than holotype.

Male genitalia (Fig. 7). Uncus very strong, broadest medially, concave apically; arm of gnathos short with large, plicate lateral lobe; terminal plate of gnathos short; valva short; sacculus as long as valva, with angle rounded, extending caudally; transtilla well sclerotized with strong, tapering apically lateral processes; aedeagus long, slender, curved; coecum penis slender; caulis long.

Female unknown.

**Material examined**

Holotype, male: "S.[outh] Afr.[ica] Richtersveld, Stinkfontein, 4 km SSW 128,49 S - 17.13 E; 10.101976; E-Y:1277 UV light collection, leg. ENDRÖDY- YOUNGA", genitalia slide 138 RSA. Paratype, an identically labelled male.

**Etymology**

The specific epithet refers to the extremely large parts of genitalia; Latin: *periculosa* - dangerous.

***Hectaphelia pharetrata* (Meyrick, 1909), comb.n.**

*Tortrix pharetrata* Meyrick, 1909, Ann. Transv. Mus.,2(1): 6, pl.2, fig. 7. Type locality: Gauteng, Pretoria (South Africa).

**Description**

Female genitalia (Fig. 4). Ovipositor short; papilla analis short, rounded terminally; apophyses slender; anteostial sterigma short; sclerite of colliculum fused with sclerite of distal part of ductus bursae; corpus bursae elongate.

**Remarks**

Holotype, male redescribed and illustrated by RAZOWSKI & KRÜGER (in press).

***Hectaphelia hectaea* (MEYRICK, 1911), comb.n.**

*Argyrotoxa hectaea* MEYRICK, 1911, Ann. Transv. Mus.,2(4): 224. Type locality: Gauteng, Pretoria (South Africa).

**Description**

Male genitalia (Fig. 5). Uncus broad, slightly constricted proximally, concave apically; arm of gnathos with median, triangular lobe; terminal plate of gnathos large; valva rather short with distinct subdorsal sclerite; angle of sacculus postmedian; transtilla ill-defined; aedeagus stout; coecum penis reduced; caulis short.

**Material examined**

Two specimens from Pretoria (23 X 1968, leg. L. VARI), same locality 21 IX 1911, leg. A.T.J. JANSE).

**Remarks**

Holotype, female described and illustrated by RAZOWSKI & KRÜGER (in press).

***Hectaphelia kapakoana* sp.n.**

(Fig. 2)

**Diagnosis**

Similar and very closely related with *hectaea* but *kopakoana* with uncus long, uniformly broad, indistinctly concave apically, sacculus with ill-defined angle and hindwing cilia whitish.

**Description**

Wing span 16 mm. Head and thorax cream, tegula slightly tinged with ochreous. Forewing slender; costa hardly convex submedially, termen distinctly oblique, straight. Ground colour cream with some groups of orange scales submedially beyond indistinct median mark. Markings orange consisting of slender median fascia atrophying at tornus, fusing with broad fascia extending from its dorsal part to apex. Cilia cream, rust before apex and at tornus. Hindwing brownish; cilia cream with weak basal line.

Male genitalia (Fig. 9). Uncus broad with almost straight lateral edges; sacculus rounded ventrally, without angulation; aedeagus large, somewhat tapering terminally; coecum penis absent.

Female unknown.

**Material examines**

Holotype male: "Kapako Camp, Okavango W.A., 7 II 1956, de WINTERS & MARAI", genitalia slide 144 RSA.

***Hectaphelia tortuosa* (MEYRICK, 1912), comb.n.**

*Epichorista tortuosa* MEYRICK, 1912, Exotic. Microlepid., 1: 8. Type locality: Transvaal, Pretoria (South Africa).

**Material examined**

Holotype, female .

### Remarks

This species is transferred to *Hectaphelia* on basis of the similarity of its female genitalia with *hectaea*. The shape of wings and colouration are also somewhat similar. The type is described and illustrated by RAZOWSKI & KRÜGER (in press).

### *Clepsis* GUENÉE, 1845

Two species described below little differ from the Holarctic species. Both have very broad unci and well developed labides. In one of them (*gnathocera*) arm of gnathos with thorny lobes known in Palaearctic *C. rolandriana* (LINNAUS, 1758) and several other species, the other (*monochroa*) the transtilla resembles *Doridostoma stenomorpha*. This genus was revised by RAZOWSKI (1979) and its occurrence in Tropical Africa was confirmed by same author (RAZOWSKI 2002).

### *Clepsis gnathocera* sp.n.

(Fig. 4)

### Diagnosis

This species has a separate position within the Afrotropical *Clepsis* male genitalia rather similar to those in *D. stenomorpha*. Uncus and to some degree the gnathos remind those of Palaearctic *C. rogana* (GUENÉE, 1845) and its allies. From another Afrotropical species, *monochroa*, *gnathocera* differs chiefly in shapes of the unci and gnathos; their aedeagi are similar.

### Description

Wing span 22 mm. Head pale ochreous cream, thorax a little darker proximally; labial palpus 3 times longer than diameter of eye. Forewing broad, somewhat expanding posteriorly; costa distinctly curved basally; apex short; termen weakly oblique, somewhat concave medially. Ground colour cream slightly suffused with ochreous, scaled with orange; some strigulae brownish. Markings pale brownish cream edged with blackish brown, rather distinct in costal part of wing, atrophying dorsally. Cilia pale orange basally, grey beyond middle. Hindwing cream with slight grey suffusions; cilia cream.

Male genitalia (Figs 10,11). Uncus rather uniformly broad throughout, slightly concave apically; socius moderate in size; arm of gnathos with large subterminal thorny lobe followed by a few thorns on base of terminal plate; valva almost elliptic; sacculus slender with long, thorny terminal process; labides broad, armed with a few strong thorns, connected with one another by a slender sclerite; aedeagus slender, curved ventrad terminally; coecum penis long; two slender, long cornuti in vesica.

Female not known.



**Material examined**

Holotype, male: "Swaziland, Malolotja, 2/01/95, J. DUJE"; genitalia slide 190 RSA.

***Clepsis monochroa* sp.n.****Diagnosis**

Allied with *gnathocera* but *monochroa* distinguished by strongly expanding terminal portion of uncus, the shape of gnathos, and the presence of ventroterminal thorn of aedeagus.

**Description**

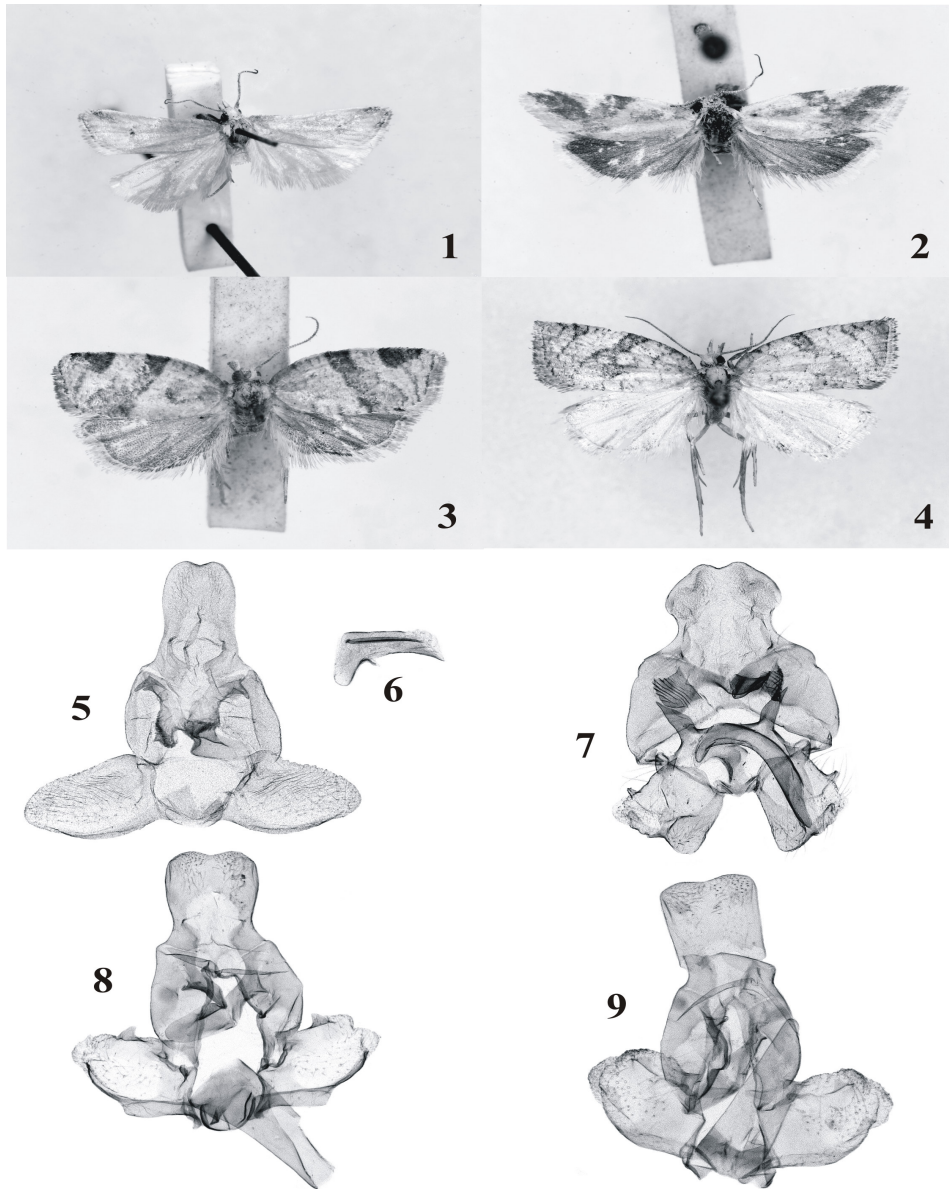
Wing span 11.5 mm. Head cream brownish, labial palpus ca 2, concolorous with head; thorax brownish to middle, ochreous cream posteriorly. Forewing slender, not expanding posteriorly; costa slightly convex in basal part; termen oblique, straight. Wing cream, veins in dorsal half of wing tinged orange; costal third mixed ochreous, costa with brown; some brown scales in torn part of dorsum. Cilia cream, ochreous in apex portion. Hindwing cream; cilia similar.

Male genitalia (Figs 12, 13). Uncus strong with terminal portion strongly expanding, sharp laterally; arm of gnathos rather broad; valva broadest medially; sacculus slender, convexly rounded; labis slightly elongate, armed with heavy thorns; aedeagus slender with subterminal ventral thorn; coecum penis long, slender.

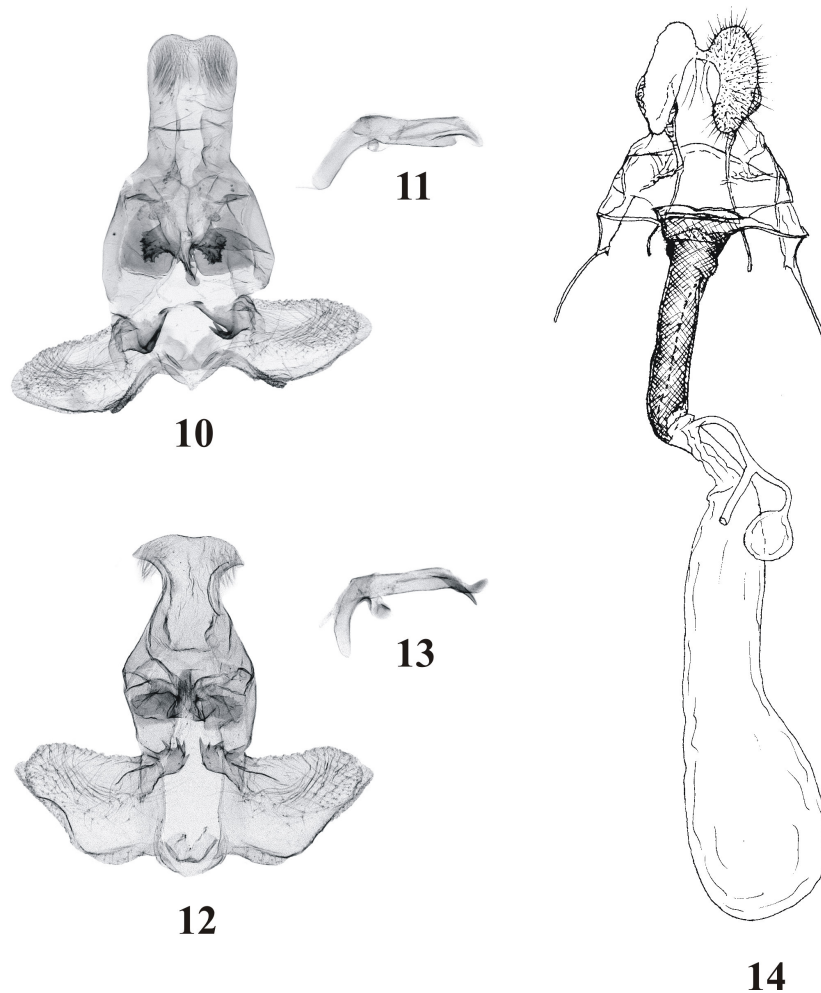
Female unknown.

**Material examined**

Holotype male: "nr. Mt. Fletcher, 27 III 1954, L. VARI", genitalia slide 152 RSA.



**Figs 1-9.** Adults (Figs 1-4) and male genitalia (Figs 5-9). 1 - *Hectaphelia periculosa* sp.n., holotype, 2 - *Hectaphelia kopakoana* sp.n., holotype, 3 - *Aphelia finita* (Meyrick), Worcester, 4 - *Clepsis gnathocera* sp.n., holotype, 5,6 - *Aphelia corroborata* (MEYRICK), Umodoni Park, Natal, 7 - *Hectaphelia periculosa* sp.n., holotype, 8 - *Hectaphelia hectaea* (MEYRICK), Entabeni Forest, 9 - *Hectaphelia kopakoana* sp.n., holotype.



**Figs 10-14.** Male and female genitalia. 10, 11 - *Clepsis gnathocera* sp.n., holotype, 12, 13 - *Clepsis monochroa* sp.n., holotype, 14 - *Hectaphelia pharetrata* (MEYRICK), Barberton.

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Received: July 24, 2006

Accepted: August 15, 2006