

Studies on African Crambidae II: On the identity of *Asopia onychinalis* Guenée, 1954, its synonyms, generic placement and related species (Pyraloidea: Crambidae: Spilomelinae)

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Abstract: The identity of *Asopia onychinalis* Guenée, 1854 and its synonyms were studied based on type material and additional specimens from various locations. *Lepyrodes astomalis* Felder & Rogenhofer, 1875 is considered as a valid species and *Nausinoe gueyraudi* Guillermet, 2004 from Réunion is considered a junior subjective synonym of *astomalis*. The genus *Chabulina* Shaffer & Munroe, 2007 is discussed and is considered to consist of the following species: *C. albinalis* (Hampson, 1912) (*Bocchoris*) comb. nov.; *C. amphipeda* (Meyrick, 1939) (*Margaronia*) comb. nov.; with its synonym *Glyphodes cadeti* Guillermet, 1996 syn. nov.; *C. astomalis* (Felder & Rogenhofer, 1875) (*Lepyrodes*) comb. nov., with its synonym *Nausinoe gueyraudi* Guillermet, 2004 syn. nov.; *C. bleusei* (Oberthür, 1887) (*Synclera*) comb. nov.; *C. cineralis* (de Joannis, 1932) (*Margaronia*) comb. nov.; *C. labarinthalis* (Hampson, 1912) (*Bocchoris*) comb. nov., with *Bocchoris labyrinthialis* Klima, 1939 as a misspelling; *C. nuclealis* (de Joannis, 1927) (*Bocchoris*) comb. nov.; *C. onychinalis* (Guenée, 1854) (*Asopia*) comb. nov., with its synonym *Zebronia braurealis* Walker, 1859; *C. putrisalis* (Viette, 1958) (*Diastictis*) comb. nov., and *C. tenera* (Butler, 1883) (*Hydrocampa*) comb. nov.

Key words: *Lepyrodes*, *astomalis*, synonym, distribution, systematic placement, *Chabulina*, new combination.

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INTRODUCTION

The species *onychinalis* was originally described by Guenée (1854) in the genus *Asopia* Treitschke, 1828 from India, Coromandel (Oriental Region). *Asopia* became a junior objective synonym of *Pyalis* Linnaeus, 1758 (Pyraloidea: Pyralidae: Pyralinae) (Fletcher & Nye, 1984). Hampson (1896, 1899) listed the species *onychinalis* under the genus *Bocchoris* Moore, 1885 with synonyms *Zebronia braurealis* Walker, 1859 (type locality: Ceylon) and *Lepyrodes astomalis* Felder & Rogenhofer, 1875 (type locality: Knysna, South Africa). Hampson also mentioned the distribution from West Africa over Asia to Australia.

The generic placement of this species is not clear at the moment. Munroe (1956, 1967) mentioned that the types of the genera *Bocchoris*, *Chabula*, *Didymostoma* and *Aediodina* are all generically distinct not only from *Diastictis* but also from each other. In his 1956 article Munroe only studied *Diastictis* and did not elaborate on the other above listed genera. He mentioned also that *Bocchoris* as listed by Hampson (1896, 1899) is a very heterogenous group. The synonymy of *Bocchoris* is discussed in detail by Rose & Kirti (1986). Krüger (2020) placed the species *onychinalis* with its synonyms *astomalis* and *braurealis* under the genus *Bocchoris* Moore [1885]1884-7.

The validity of the genera mentioned above is not the subject of this paper and is left for another study.

The species *onychinalis* was placed by Shaffer (1996) under *Glyphodes*. This placement is followed in recent databases: Beccaloni *et al.* 2003. The Global Lepidoptera Names Index (LepIndex), De Prins J. & De Prins W. 2003–2022. Afromoths.net, and Nuss *et al.* 2003–2022. Global Information System on Pyraloidea.

On the other hand, Shaffer & Munroe (2007) created the genus *Chabulina* for the species *Diastictis putrisalis* Viette, 1958, a species, at least externally, very similar in wing pattern to *onychinalis*. Apart from the type species, they included in the description of that genus the following species: *Chabulina tenera* (Butler, 1883) from Sulawesi and an unnamed species from Africa misidentified as “*tenera*” but closer to “*putrisalis*”.

Based on the above, and after the dissection of various species currently listed under the different genera listed above, the author can only conclude that *Bocchoris* and *Glyphodes* as listed under the above three databases are heterogenous and contain non-related species of very different genera. In order to create a starting point for the revision of these genera and to clarify the identity of these species, this paper focuses in a first instance on the correct identification of *onychinalis* and *astomalis*, and extend the results of Shaffer & Munroe (2007) to include a wider range of species in the genus *Chabulina*.

In this study, material from different localities was studied and compared with type material in order to establish the correct identity linked to these published names. The type of *onychinalis* could not be located (lost?) but specimens from the Oriental region from different localities were

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studied. The types of *braurealis* and *astomalis* are in the Natural History Museum (London.). The type of *braurealis* has lost its abdomen. The abdomen of *astomalis* is attached under the specimen in a gelatin vial, thus it is not sure that this is the correct abdomen.

METHODS AND MATERIALS

Genitalia dissection:

Genitalia were dissected following Maes (1985) (modification and extension of Robinson (1976) specific towards the Pyraloidea) except that now the abdomen is opened laterally to better document the characters on sternites and tergites.

Digital processing of images:

Images of the adults were taken with a Canon Eos 5D Mark IV with a Macro lens EF 100mm 1:2.8 using Helicon remote (ver. 3.9.12M). Stacking of images was done with Helicon focus (ver.8.1.2).

Acronyms and abbreviations

ABSRC: AgroBioSys Intl. Reference Collection, Wetteren, Belgium.

MHNG : Musée d'histoire naturelle, Gèneve, Suisse.

MNHN: Musée national d'histoire naturelle, Paris, France.

NHM: The Natural History Museum, London, UK.

RMCA: The Royal Museum for Central Africa, Tervuren, Belgium.

RESULTS

Crambidae Latreille, 1810

Spilomelinae Guenée, 1854

Margaroniini Swinhoe & Cotes, 1889

Chabulina astomalis (Felder & Rogenhofer, 1875)

Felder & Rogenhofer, 1875. Reise ost. Fregatte Novara (Zool.) Lep.(Het.) bd.2, abt. 2, pl. 135, Fig.22 (*Lepyrodes*) **stat. rev., comb. nov.**

= *Nausinoe gueyraudi* Guillermet, 2004 Nouv.Revue Ent.(N.S.) 20 fasc.4: 381 pl.1 Fig.5, pl.3 Fig.2 **syn.nov.**

Type material examined:

Nausinoe gueyraudi Guillermet, 2004: Reunion, Ste. Suzanne, 18.ix.1983, 25m (Edmond Gueyraud), Gen. slide nr. ♀ 1142 (Guillermet) (MNHN)

Lepyrodes astomalis Felder & Rogenhofer, 1875: South Africa, Knysna (abdomen in gelatin vial) (NHM);

Additional material examined:

♂: CAMEROON, Centre Province, near Magong, SE of Yoko. Savannah-Rainforest edge, 05°23'38.5"N; 012°30'48.4"E. 732m. 15W Black MV Light. 9–11.vi.2018. K. Maes, Gen. Prep.nr. ♂1859, ABSRC1000155; ♂: idem, ABSRC1000158; ♀: idem, ABSRC1000159; ♂: idem, ABSRC1000163; ♂: idem, ABSRC1000168; ♂: idem but 5–9.vi.2017. K. Maes, ABSRC1000840; ♂: idem but 30.vi.2019 to 6.vii.2019. K. Maes, ABSRC1000605; ♂: idem but 750m, 5–9.vi.2017. K. Maes, ABSRC1000849;

♂: CAMEROON, Centre Province, Yaoundé, Mt. Phébé, 1070m. 8.viii.1993. K. Maes Gen. Prep. nr. ♂1858, ABSRC1000604;

♂: CAMEROON, Centre Province, Batchenga. 19.vii.1993. K. Maes, ABSRC1002462;

♀: CAMEROON, South West Province, Mundemba Korup National Park. 27.ii.1989. K.Maes, ABSRC1000842;

♂: CAMEROON, South Province, near Ebogo village, fresh clearing near edge of secondary forest, 03°24'31.9"N; 11°29'30.2"E. 670m. MV Light. 14–15 .xii.2014. K. Maes, ABSRC1000841;

♂: CAMEROON, Northern Province, Hippo Camp, on border Faro River near Faro National Park, 8°23'36.4"N; 12°49'26.03"E. 297m. Black/MV Light. 21.vi.2019. K. Maes, K. Maes Gen.Prep.nr. ♂1861, ABSRC1001260;

♂: CAMEROON, Eastern Province, Dja reserve Schouam Rock 16–19.iv.1993 K. Maes, ABSRC1002461;

♂: CAMEROON, Dschang 1400m, 27.iii.1988 K. Maes, ABSRC1002464;

♂: CAMEROON, East Province, near Lokomo. 02°44'26.64"N; 15°25'17.92"E. 446m. MV Light. 10–15.vii.2007. K. Maes, ABSRC1002465;

♂: KENYA, Rift Valley, Nguruman Escarpment. 01.45°S; 36.02°E. 750m. MV Light. 18.vi.1998. K. Maes, ABSRC1000843; ♂: idem, ABSRC1000844; ♂: idem, ABSRC1000845; ♀: idem, ABSRC1000846; ♀: idem, ABSRC1000847; ♀: idem, ABSRC1000848; ♂: idem, Gen.Prep.nr. ♂1133, ABSRC1000850; ♀: idem, Netted in flight. Gen.Prep.nr. ♀1856, ABSRC1000601;

♂: KENYA, Rift Valley, Matthews Range, Ngeng River. 01.15°N; 37.15°E. 4200ft. MV Light. 14.vi.1998. leg. S. Collins, ABSRC1002466;

♂: KENYA, Rift Valley, Marich Pass Field Station area. 01°32'10"N; 35°27'23.3"E. 966m. Black MV Light. 20.xi.2002. K. Maes, ABSRC1002467;

♂: KENYA, Rift Valley, Samburu Nature Reserve near Uaso Nyiro river, Intrepid Camp. 0°34'34.8"N; 37°39'36"E. 910m. Black MV Light. 13–14.xii.2002. K. Maes, ABSRC1002468;

♂: KENYA, Rift Valley, Marich Pass Field Station area. 01°32'10"N; 35°27'23.3"E. 966m. Black MV Light. 20.xi.2002. K. Maes, ABSRC1002469;

♂: ♀: KENYA, Coast, Taita Discovery Centre, Makaramba. 03°40'22"S; 38°45'44"E. 495m. Black MV Light. 03.vi.2000. K. Maes, ABSRC1000839;

♂: SOUTH AFRICA, Limpopo, Waterberg, Groenfontein. 30.xi.2004. leg. W. Mey, ABSRC1002463.

Description:

Head: Frons rounded, maxillary palps close to base of labial palps, upturned, black at the base, terminal segment white; labial palps upturned, white with a black streak at the base of the first and second segment; antenna filiform. **Thorax:** Forewings narrowly triangular with a complicated wing pattern consisting of black lines on a white or white-yellowish background: antemedian line consisting of two lines: the inner one straight towards the inner margin, outer line forming a large U-shaped line continuing in the reniform stigma and costa, between the lines same color as ground color; postmedian line rather large at costa; hind wing with well represented ante- and postmedian black lines and a series of black spots in the postmedian fascia.

Abdomen: White with some black scaling dorsally forming a large “O” and some white scaling limiting the distal edge of the tegumen of each segment.

Wingspan: 17–21mm.

Tympanal organs: Invaginated.

Male genitalia: (Figs 1–3) Typical *Glyphodes* type genitalia: distal part uncus slender, ventrally with long setae, ventral part long slender on a wide tegumen, ventrally as a U-shaped structure with a wide saccus. Valva rounded, rather short, membranous, sacculus with a simple fibula. Valva a bit wider than *C. onychinalis* and with a fibula slightly longer; Aedeagus tubular, one part sclerotized over its longitudinal length, vesica membranous, cornutus lacking.

Female genitalia: (Figs 7 & 9) Papillae anales with short and long setae; apophyses posteriores and anteriores: narrow, well sclerotized; apophyses anteriores almost twice the length of the apophyses posteriores: ostium wide, calyx-shaped; ductus bursae half width of corpus bursae; the latter long ovoid with a simple bilobed signum composed of multiple small sclerotisations.

Distribution: The species is restricted to the African continent. At present no specimens have been collected from the African islands Madagascar, Comores.

Host plant: unknown.

Diagnosis:

This species is removed from synonymy with *Asopia onychinalis* Guenée, 1854 and is considered here as a valid species. Ground colour black and white without any yellow scaling; male genitalia with a simple vesica, cornutus lacking; female genitalia with an ostium as wide as deep.

Chabulina onychinalis (Guenée, 1854)

Guenée, 1854 in Boisduval & Guenée, Hist. nat. Insectes (Spéc. gén. Lépid.) 8:205 pl.6, fig.9 (*Asopia*) **comb. nov.** = *Zebronia braurealis* Walker, 1859 List Specimens Lepid. Insects Colln Br. Mus. 19: 971.

Type material examined: *Asopia onychinalis* Guenée, 1854, [India] Côte de Coromandel (lost); *Zebronia braurealis* Walker, 1859, Ceylon (abdomen lost) (NHM).

Additional material examined: ♂: BRIT. INDIA, Ex coll. Swinhoe/ Coll. Janse, K. Maes Gen. Prep. nr. ♂1064, ABSRC1000131;

♀: INDIA, Khasia Hills, Assam, leg. Doherty, ABSRC1000132;

♀: LAOS, Luang Prabang, Nong Khiaw Viewpoint Resort. 20°34'05.02"N; 102°37'08.47"E. 510m. MV Light. 29.iv.2019. leg. K. Maes, K. Maes Gen. Prep. nr. ♀1857, ABSRC1000563; ♂: idem, ABSRC1000567;

♀: LAOS, Luang Prabang, outskirts of Luang Prabang. 19°51'49.48"N; 102°07'22.58"E. 450m. MV Light. 28.vi.2019. leg. K. Maes, K. Maes Gen. Prep. nr. ♀1860, ABSRC1000564;

♂: LAOS, Oudamxay, Nam Kat Yola Pa, inside park area. 20°33'47.19"N; 102°13'50.23"E. 750m. MV Light. 3–8.v.2019. leg. K. Maes, K. Maes Gen. Prep. nr. ♂1861, ABSRC1000565; ♂: idem, ABSRC1000575; ♂: idem, ABSRC1000577; ♂: idem, ABSRC1000898; ♂: idem, ABSRC1000899; ♂: idem, ABSRC1000900; ♀: idem, ABSRC1001288; ♂: idem, ABSRC1001294; ♀: idem, ABSRC1001295; ♂: idem, ABSRC1001296; ♂: idem, ABSRC1001297; ♂: idem, ABSRC1001298;

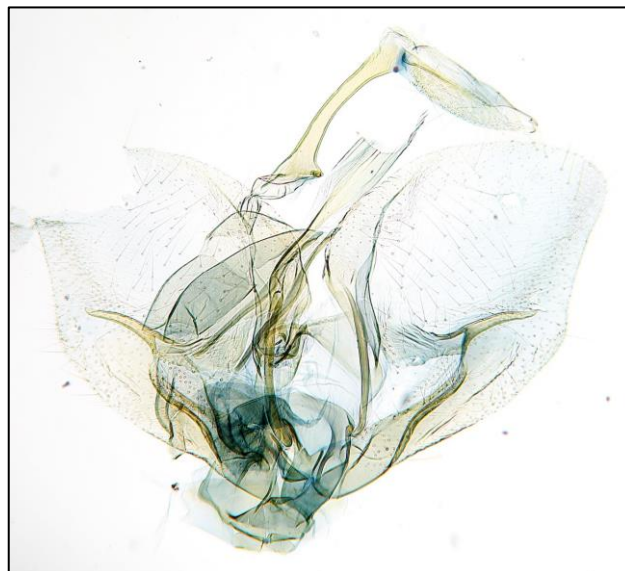


Figure 1 – *Chabulina astomalis* male genitalia ♂1133

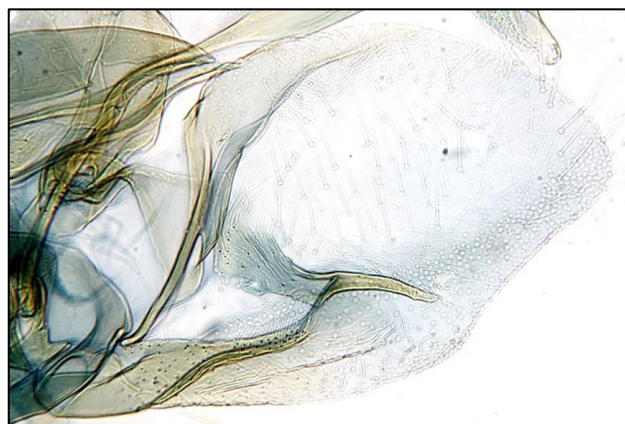


Figure 2 – *Chabulina astomalis* male valva ♂1133



Figure 3 – *Chabulina astomalis* male aedeagus left complete; right detail ♂1133

♂: CHINA, Hong Kong, Kadoorie Agr.Res.St., Shek Kong Yuen Long, Northern Territories. 22°N; 114°E. 600m. MV Light. 5.viii.1998. leg. R.C. Kendrick, ABSRC1000862;
 ♂: POLYNESIA, Fiji, Rotuma Island. 12°29'56.11"S; 177°07'16.62"E. 23m. MV Light. 14–26.i.2020. leg. V. Gurko, K. Maes Gen. Prep. nr. ♂1977, ABSRC1001639;
 ♂: idem, ABSRC1001663; ♀: idem, K. Maes Gen. Prep. nr. ♀2118, ABSRC1001664; ♂: idem, ABSRC1001663;
 ♀: idem, ABSRC1001665; ♀: idem, ABSRC1001674; ♀: idem, ABSRC1001675; ♂: ABSRC1001676; ♂: idem, ABSRC1001677.

Description:

Head: Frons rounded, maxillary palps close to base labial palps, upturned, black at the base, terminal segment white; labial palps upturned, white with a black streak at the base of the first and second segment; antenna filiform.

Thorax: Forewings narrow triangular with a complicated wing pattern consisting of black lines on a white or white-yellowish background: antemedian line consisting of two lines: the inner one straight towards the inner margin, outer line forming a large U-shaped line continuing in the reniform stigma and costa, between the lines light yellow scaling; postmedian line rather narrow at costa and with light yellow scaling; hind wing with narrow ante- and postmedian black lines and a limited series of black spots in the postmedian fascia; a small patch of light yellow scaling in the anal region of the antemedian fascia.

Wingspan: 17–21 mm.

Abdomen: White with some black scaling dorsally forming a large “O” and some white scaling limiting the distal edge of the tegumen of each segment.

Tympanal organs: invaginated.

Male genitalia: (Figs 4–6) Typically *Glyphodes* type genitalia: distal part uncus slender, ventrally with long setae, ventral part long slender on a wide tegumen ventrally as a U-shaped structure with a wide saccus. Valva rounded, rather short, membranous, sacculus with a simple fibula. Valva slightly longer and more pointed as *C. astomalis* and with a shorter, more slender fibula. Aedeagus tubular, one part sclerotized, vesica with a simple cornutus consisting of about six curved and aligned spines.

Female genitalia: (Figs 8 & 10) Papillae anales with short and long setae; apophyses posteriores rather wide, well sclerotized, of about equal length as apophyses anteriores: ostium narrow calyx-shaped; ductus bursae half width of corpus bursae; the latter long ovoid with a simple bilobed signum composed of multiple small sclerotisations.

Distribution: India and South East Asia, Australia.

Host plant: *Nerium* species (Solis, 2008).

Diagnosis:

Ground colour black and white but with some light-yellow scaling between the double postmedian lines near the costa; hind wing with some light yellow scaling near the anal area of the antemedian line (Fig. 11). Vesica in aedeagus with a simple cornutus consisting of about six curved and aligned spines. Ostium about half the width of its depth.

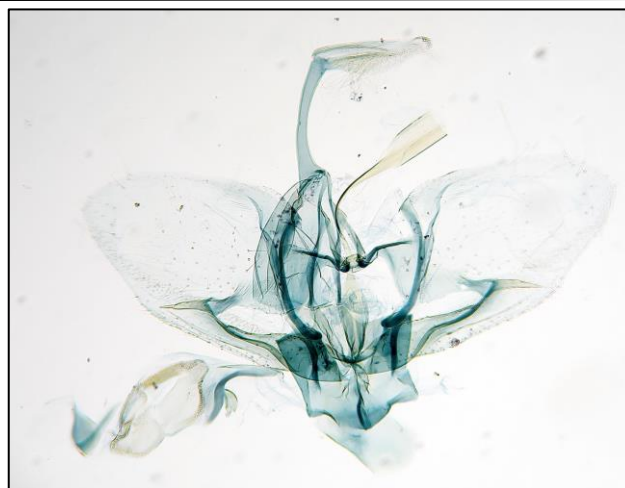


Figure 4 – *Chabulina onychinalis* male genitalia ♂1064

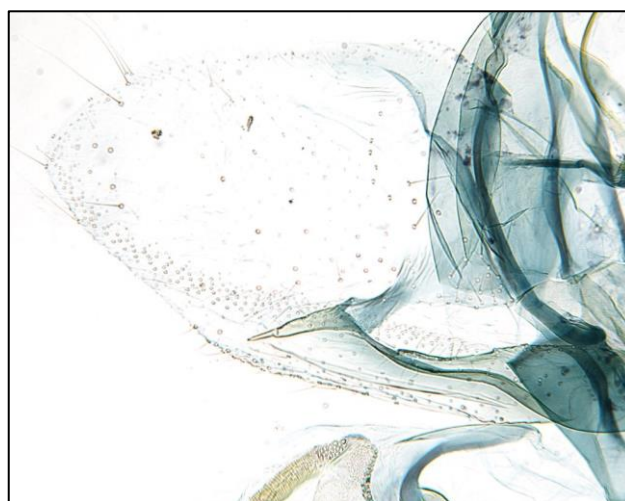


Figure 5 – *Chabulina onychinalis* male valva ♂1064

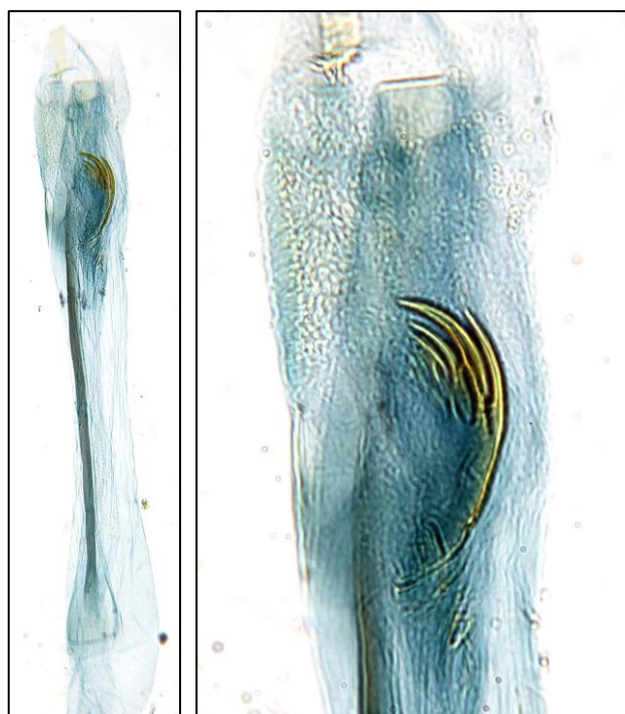


Figure 6 – *Chabulina onychinalis* male aedeagus left complete; right detail ♂1133



Figure 7 (left) – *C. astomalis* female genitalia ♀1856. **Figure 8** (right) – *C. onychinalis* female genitalia ♀1860.

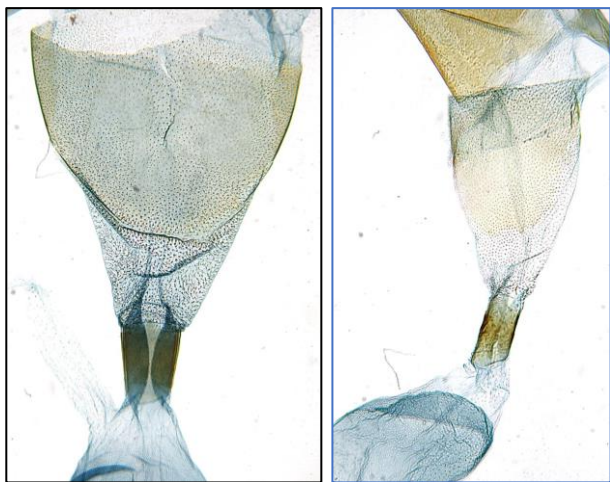


Figure 9 (left) – *C. astomalis* female detail sinus vaginalis ♀1856. **Figure 10** (right) – *C. onychinalis* detail sinus vaginalis ♀1860.

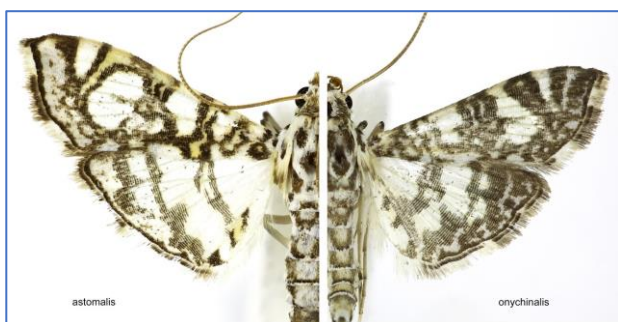


Figure 11 – Composite image showing upper side of ♂ *C. astomalis* (left) and ♂ *C. onychinalis* (right)

DISCUSSION

Systematic position:

As mentioned above, the genus *Glyphodes* as currently known is a mixture of different unrelated taxa. Sustrino (2002) studied the Australian *Glyphodes* species using morphological and molecular data and inferred already that *A. onychinalis* may need a separate genus. Sustrino (2003) concluded also from molecular data based on material from Indonesia and Australia that the genus *Glyphodes* consists of three different groups. *Chabulina*, with its representative *C. onychinalis*, would fall into Sustrino's *Glyphodes* group 2 (Sustrino, 2002; 2003; Sustrino *et al.*, 2006). The monophyly of these groups is still under discussion and under study. On the taxonomic part, Shaffer & Munroe (2007) started to break up the taxon by creating the genera *Chabulina* close to *Chabula* Moore, [1886], *Glyphodella* close to *Glyphodes* Guenée, 1854 but the number of species studied is rather limited and needs to be extended to include more species covering a larger geographical region. This paper is part of a study that covers the whole continent of Africa and due to zoogeographical reasons also a large part of the "Old World". Shaffer & Munroe (2007) included only *Diastictis putrisalis* Viette, 1958 and *Hydrocampa tenera* Butler, 1883 in the genus *Chabulina*, but after studying and dissecting the type material of African and Asian species, the following species are included in the genus *Chabulina*, since they comply with the morphological descriptions provided Shaffer & Munroe (l.c.):

Chabulina Shaffer & Munroe, 2007

Type species: *Diastictis putrisalis* Viette, 1958

- C. albinalis* (Hampson, 1912) (*Bocchoris*) **comb. nov.**
- C. amphipeda* (Meyrick, 1939) (*Margaronia*) **comb. nov.**
= *Glyphodes cadeti* Guillermet, 1996 **syn. nov.**
- C. astomalis* (Felder & Rogenhofer, 1875) (*Lepyrodes*) **stat. rev., comb. nov.**
= *Nausinoe gueyraudi* Guillermet, 2004 **syn. nov.**
- C. bleusei* (Oberthür, 1887) (*Synclera*) **comb. nov.**
- C. cineralis* (de Joannis, 1932) (*Margaronia*) **comb. nov.**
- C. labarinthalis* (Hampson, 1912) (*Bocchoris*) **comb. nov.**
= *Bocchoris labyrinthialis* Klima, 1939 misspelling
- C. nuclealis* (de Joannis, 1927) (*Bocchoris*) **comb. nov.**
- C. onychinalis* (Guenée, 1854) (*Asopia*) **comb. nov.**
= *Zebronia braurealis* Walker, 1859.
- C. putrisalis* (Viette, 1958) (*Diastictis*)
- C. tenera* (Butler, 1883) (*Hydrocampa*)

Chabulina albinalis (Hampson, 1912)

Type material examined: Holotype: INDIA, Bombay, Kuch (NHM).

Additional material examined: ♂: Mali Banamba, 5.xii.1991, J.Beerlink at light. degraded savannah with trees, fields and mango orchards 1/2 km from dessicating brook, ABSRC1000954, K.Maes Gen. Prep. nr. ♂1884; ♀: Niger Niamey, 29.ix.1994 light trap DFPV, ABSRC1000955, K.Maes Gen. Prep. nr. ♀1885; ♀: idem, ABSRC1000956;

Chabulina amphipeda (Meyrick, 1939)

Type material examined: Holotype: [NAMIBIA] S.W.A., Windhoek, iv.1937 (TMP);

Additional material examined: ♂: KENYA, Rift Valley, Marich Pass Field Station area. 01°32'14"N; 35°27'26"E. 950m. Mercury Vapor Light. 26–29.vii.1999. K.Maes, K.Maes Gen. Prep. nr. ♂1864, ABSRC1000651; ♀: idem, K.Maes Gen. Prep. nr. ♀1865, ABSRC1000652; ♂: KENYA, Coast, Tana River Primate Reserve, Mchelelo Camp, Riverine Forest. 01°52'59"S. 40°08'20"E. 251m. Mercury Vapor Light. 17–18.iii.1999. K.Maes, K.Maes Gen. Prep. nr. ♂1887, ABSRC1001176; ♀: idem, K.Maes Gen. Prep. nr. ♀1888, ABSRC1001177; ♂: idem, K.Maes Gen. Prep. nr. ♂1889, ABSRC1001178; ♀: KENYA, Mali Banamba, at light/ degraded savannah with trees, fields and mango trees 1/2km from dessicating brook, 5.xii.1991, J. Beerlink, ABSRC1002820.

***Glyphodes cadeti* Guillermet, 1996**

Type material examined: Holotype ♂: LA RÉUNION, la Grande Chaloupe, 11.iii.1986 (Chr. Guillermet) Gen. Prép. Chr. Guillermet n°947 (MNHN); ♀: LA RÉUNION, route des Colimaçons, 200m, 12.iii.1986 (Chr. Guillermet), Gen. Prép. Chr. Guillermet n°950 (MNHN).

***Chabulina cineralis* (de Joannis, 1932)**

Type material examined: Type ♀: MAURITIUS, Le Chaland, Carié, 16.x.1911 (MNHN).

Additional material examined: ♀: MAURITIUS, Ile Maurice Chalan Carié 16.x.1901, K.Maes Gen. Prép. nr. ♂20977 (MNHN).

***Nausinoe gueyraudi* Guillermet, 2004**

Type material examined: Holotype ♀: Ste Suzanne, 18.ix.1983, 25m (Edmond Gueraud), Gen. Prép. Guillermet Christian n° G 1142) (MNHN).

***Chabulina labarinthalis* (Hampson, 1912)**

Type material examined: Holotype ♂: NIGERIA, Lagos (NHM).

Additional material examined: ♀: CAMEROON, Sud Province, Campo Res., 80m, 1–4.xi.1991 K.Maes, K.Maes Gen. Prep. nr. ♀1870, ABSRC1000851; ♂: CAMEROON, Center Mt Phébé, 1070m, vi.1983, K.Maes Gen. Prep. nr. ♂1871, ABSRC1000852; ♂: UGANDA, Jinja Mabira Forest, x.1962 R.H.Carcasson, K.Maes Gen. Prep. nr. ♂1872, ABSRC1000861; ♀: CÔTE D'IVOIRE, Bouafé 29.x.1983 at light R.T.A.Schouten & J.R.M Buijsen, ABSRC1001179; ♀: TANZANIA, Mwanza, vii.1965 C.Marsh, ABSRC1001180; ♂: KENYA, Western, Kakamega Forest, Prim.For., 0°21.34'N; 34°51.39'E, 1600m. 15W Black Light. 22.xii.2002. F.N.Namu, ABSRC1001181.

***Chabulina nuclealis* (de Joannis, 1927)**

Type material examined: Holotype ♀: [MOZAMBIQUE], Makulane, 1906 (MHNG).

Additional material examined: ♀: NAMIBIA, 27km N of Otjivasandou on C35 1130m, 8.iv.1995, K.Maes Gen. Prep. nr. ♀1883, ABSRC1000645; ♂: SOUTH AFRICA, N. Natal, Ndumu Game Res. 26°53'S; 32°14'E, 30.xi–6.xii.1992. M.Krüger, K.Maes Gen. Prep. nr. ♂1882, ABSRC1000646;

***Chabulina putrisalis* (Viette, 1958)**

Type material examined: Holotype: ♂: ISOLE COMORE, Grande Comore, ix.1953, Genitalia slide nr. ♂1649 JCS (MNHN).

Additional material examined: ♀: SEYCHELLES, Aldabra 28.xii.1959 M.Gerber, K.Maes Gen. Prep. nr. ♀20979 (MNHN); ♂: idem, K.Maes Gen. Prep. nr. ♂20978 (MNHN).

***Chabulina tenera* (Butler, 1883)**

Type material examined: Holotype ♂: [PAKISTAN], Mulleer River near Kurrachee, xi.1879 (NHM).

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