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On some Nolidae (Lepidoptera) of the islands of the Western Indian Ocean

Maik BIPPUS

Abstract

Nycteola mauritia (JOANNIS, 1906) is recorded new for the fauna of Madagascar, *Nola denauxi* ORHANT, 2003 new for Mauritius; *Maceda mansueta* WALKER, 1858 and *Nola melanoscelis* (HAMPSON, 1914) are reported for the first time from the island of Reunion.

Adults and genitalia of these species are illustrated as well as for *Pardasena virgulana* (MABILLE, 1880). Hostplant records from Reunion and Madagascar are reported for two species.

Zusammenfassung

Nycteola mauritia (JOANNIS, 1906) wird neu aus Madagaskar nachgewiesen, desweiteren *Nola denauxi* ORHANT, 2003 von Mauritius; *Maceda mansueta* WALKER, 1858 und *Nola melanoscelis* (HAMPSON, 1914) werden erstmals in Reunion festgestellt. Von diesen Arten, sowie *Pardasena virgulana* (MABILLE, 1880), werden Falter und Genitalien abgebildet. Für 2 von den Arten wurden Futterpflanzen in Reunion und Madagaskar festgestellt.

Keywords: Lepidoptera, Nolidae, Madagascar, Reunion, Mauritius

Introduction

In this paper the author would like to illustrate five species of Nolidae that he collected during the past years on the islands of Madagascar, Mauritius and Reunion.

Four of these species are reported for the first time from one of these islands and two species were also raised from larvae collected on their respective hostplants.

Maceda mansueta WALKER, 1858 (Fig. 05)

Wingspan: 30mm

1 specimen was collected in Reunion, La Possession, alt.400m on 28.xii.2017.

B i o l o g y : This species had been recorded on *Heritiera littoralis* Aiton (Malvaceae) (Gerlach & Matyot, 2006). This plant is also found in Reunion (introduced) and might be its possible hostplant.

D i s t r i b u t i o n : Across southern Asia and Australia. Regionally found in the Seychelles and recorded new from Reunion.

Nola denauxi ORHANT, 2003 (Figs. 01-03)

Forewing length: 5,5-6,0mm, wingspan: 12,5-13mm

This small species was previously known only from Reunion where it is a rather common species and can be frequently found at light in low and medium altitudes.

Two females were now collected also in Mauritius, Mahébourg, 24.iv.2017 (Figs. 1-3; dissected, slide Mru-116) and Blackriver, 08.vi.2016.

F e m a l e g e n i t a l i a (Fig. 03): Reduced apophysis anteriores, short posteriores. The bursae shows two irregular, thorn-like signa.

B i o l o g y : Unknown.

D i s t r i b u t i o n : Reunion and recorded new from Mauritius.

Nola melanoscelis (HAMPSON, 1914), (Figs. 06-10)

Wingspan: 12-15mm.

This widespread African species is reported new for the Mascarene island of Reunion.

Male and female genitalia of *Nola melanoscelis* were previously illustrated by van Son (1933), pl.IV, Figs. 4a-4b and HACKER & SCHREIER & GOATER (2012), pages 121/122, Figs. A-K.

HACKER et al. (2012) distinguished the male of *Nola melanoscelis* from its congeners from the same species group (*Nola submelanoscelis* HACKER, 2012, *Nola biangulata* (TOULGOET, 1954), *Nola paramelanoscelis* HACKER, 2012 and *Nola trini*, FIEBINGER & LE-GRAIN, 2009) by its blunt, inwardly curved harp (Fig. 10), smaller size (10-13mm) and a reduced antemedian fasciae.

The author still could find the antemedian fasciae in some few specimens. Also his collected specimens are larger in size (12-15mm) than indicated by Hacker et al. but correspond to their illustrations of male (Fig. 10) and female genitalia (Figs. 08-09).

F e m a l e g e n i t a l i a (Figs. 08-09): Short apophysis, both pairs have approximately the same length. The bursae shows one rounded, cup shaped signum (Fig. 10).

B i o l o g y : LE PELLEY (1959) stated *Rotheca myricoides* (Hochst.) Steane & Mabb. (Lamiaceae) as a hostplant for *Nola melanoscelis* in Kenya and *Clerodendrum* sp. from Uganda. At the time of his publication also *Rotheca myricoides* was included in the genus *Clerodendrum* and the record from Uganda possibly refers to the same plant.

Rotheca myricoides is present in Reunion. This plant had been introduced from East Africa in the 19th century.

S p e c i m e n s e x a m i n e d : 26 specimens, found at light in Reunion, La Possession, Ravine à Malheur, altitude 400m on the following dates:

2013: 10.v.2013, 08.vii.2013, 03.ix.2013

2014: 19.viii.2014, 27.viii.2014, 10.ix.2014, 29 .ix.2014, 04.x.2014, 10.x.2014, 16.x.2014 (male, gen.slide RE-1324), 14.xi.2014, 17.xii.2014 (female, gen.slide RE-1424) 31.xii.2014 (female, gen.slide RE-1450)

2015: 09.iii.2015, 12.iii.2015, 29.iii.2015, 23.vi.2015, 25.vi.2015, 04.vii.2015, 07.viii.2015, 22.viii.2015, 26.viii.2015, 01.ix.2015

2016: 31.vii.2016, 24.ix.2016, 31.xii.2016

Two specimen were placed in the BMNH, London, England in vii.2015, additional specimens in Naturalis Biodiversity Center, Leiden, Netherlands in viii.2016 and Musée d'Histoire Naturelle, Saint Denis in ix.2017.

Although it appears to be rather common species it might be locally restricted as its known host-plant is not widely spread in Reunion and is found in low and medium altitudes only.

D i s t r i b u t i o n : Eastern, Western and Southern Africa, recorded new for Reunion.

Nycteola mauritia (JOANNIS, 1906), (Figs. 04; 11-17)

Wingspan: 19-20mm

The fore wings of this species are greyish, with some irregular transversal markings and with a more or less pronounced reddish or brownish cellspot.

This is a common species in Reunion, where the author raised it also from larvae found on *Syzygium jambos* (L.) Alston collected in La Cayenne, Salazie (x.2014) and La Possession (ix.2015) as well as *Syzygium cymosum* (Lam.) DC. collected in La Montagne (10. xii.2014).

In Madagascar (Andasibe, 26.xi.2016) the author found 9 larvae on *Eucalyptus robusta* Sm. from which 5 specimens (2 males, 3 females) eclosed in xii.2016.

H o s t p l a n t s : Myrtaceae species. *Eucalyptus robusta* Sm. (Madagascar), *Syzygium jambos* (L.) Alston, *Syzygium cumini* (L.) Skeels and *Syzygium cymosum* (Lam.) DC. (Myrtaceae).

B i o l o g y : The larvae (Fig. 4) of this species are gregarious, light green to pinky-rose and covered by fine, clear setae. They use to change their colouration during development. Its not unusual to find larvae of both colours together on the same plant. They prefer feeding on the young shoots of their hostplant but also accept older leaves. At maturity they form whitish, flat cocoons of 9-11mm length on a leaf. Pupal stage: 8-10 days.

D i s t r i b u t i o n : Madagascar (new record), Mauritius, Reunion and Seychelles.

D i s c u s s i o n : Particularly the new record on *Eucalyptus robusta* draw the author's attention onto the Australian species of the genus *Nycteola*.

Eucalyptus robusta is an introduced species in the islands of the Western Indian Ocean. It originates from Australia and was first introduced to Mauritius before 1822 by Félix Victor

Jaunet (FARQUHAR, 1822). This plant was also introduced to the other islands from which *Nycteola mauritia* was reported: Madagascar, Reunion (VERHAEGEN et al., 2011) and the Seychelles.

This lead the author to ask the question: Might this lepidoptera also be an introduced Australian species that was introduced to the islands of the Western Indian Ocean with some *Eucalyptus* plants?

Unfortunately the Australian species of this genus had not been revised and no genitalia illustrations have been published. Therefore these species could not be compared scientifically to *Nycteola mauritia* in a satisfactory manner.

COMMONS (1990) published images of the larvae of *Nycteola cristallites* (MEYRICK, 1902), a species that currently is treated as a junior synonym of *Nycteola polycyma* (TURNER, 1899) and their larvae appear being identical to those of *Nycteola mauritia* (Fig. 4). In Australia *Nycteola polycyma* is known to feed also on the same *Eucalyptus* species: *Eucalyptus robusta*.

Peter Lillywhite of Museums Victoria, Australia was so kind to have their lepidoptera specialists compare the author's images to their collection and they suggested that *Nycteola mauritia* might be identical to *Nycteola exophila* (MEYRICK, 1888) (pers.comm. 2017).

Unfortunately also no dissection slides of this Australian species are available at their museum and additional research will be necessary to compare these species.

***Pardasena virgulana* (MABILLE, 1880), (Figs. 18-20)**

Wingspan: 18-19mm

Two specimens were collected in Andasibe, Madagascar on 27.xi. and 03.xii.2016.

This species is also rather common in Reunion, where the author reared it from *Lantana camara* L. (Verbanaceae), 18.x.2015, collected in La Possession, alt.500m.

In Kenya this species also was recorded on *Acacia xanthophloea* Benth. and *Acacia tortilis* (Forssk.) Hayne (Fabaceae) by AGASSIZ & HARPER (2009).

H o s t p l a n t s : *Acacia xanthophloea* Benth., *Acacia tortilis* (Forssk.) Hayne (Fabaceae) and *Lantana camara* L. (Verbanaceae).

D i s t r i b u t i o n : southern and eastern Africa, including Madagascar, Mauritius and Reunion.

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Author's address:

Maik BIPPUS

193bis CD41

97419 La Possession

Reunion

E-Mail: maikbippus@web.de

Plate 1:

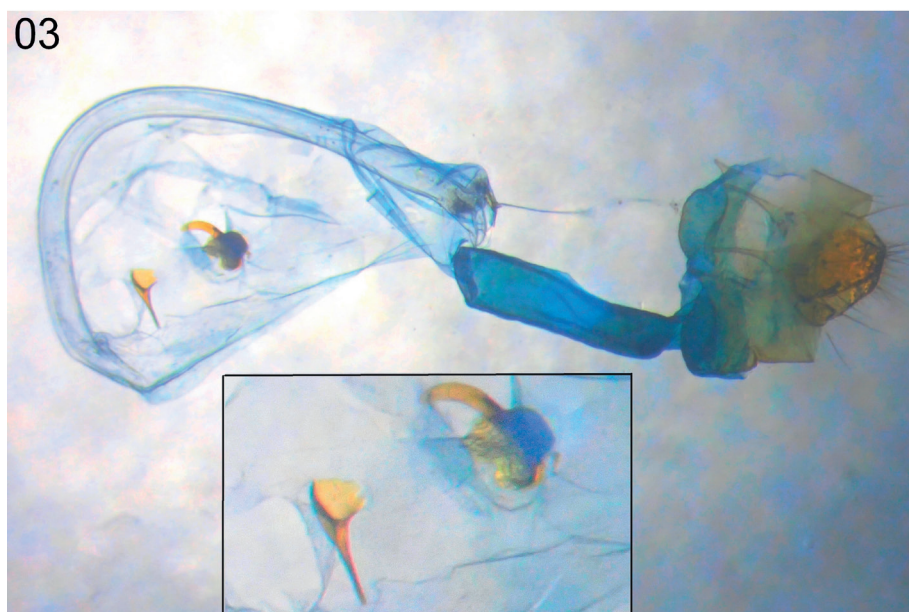


Plate 2:

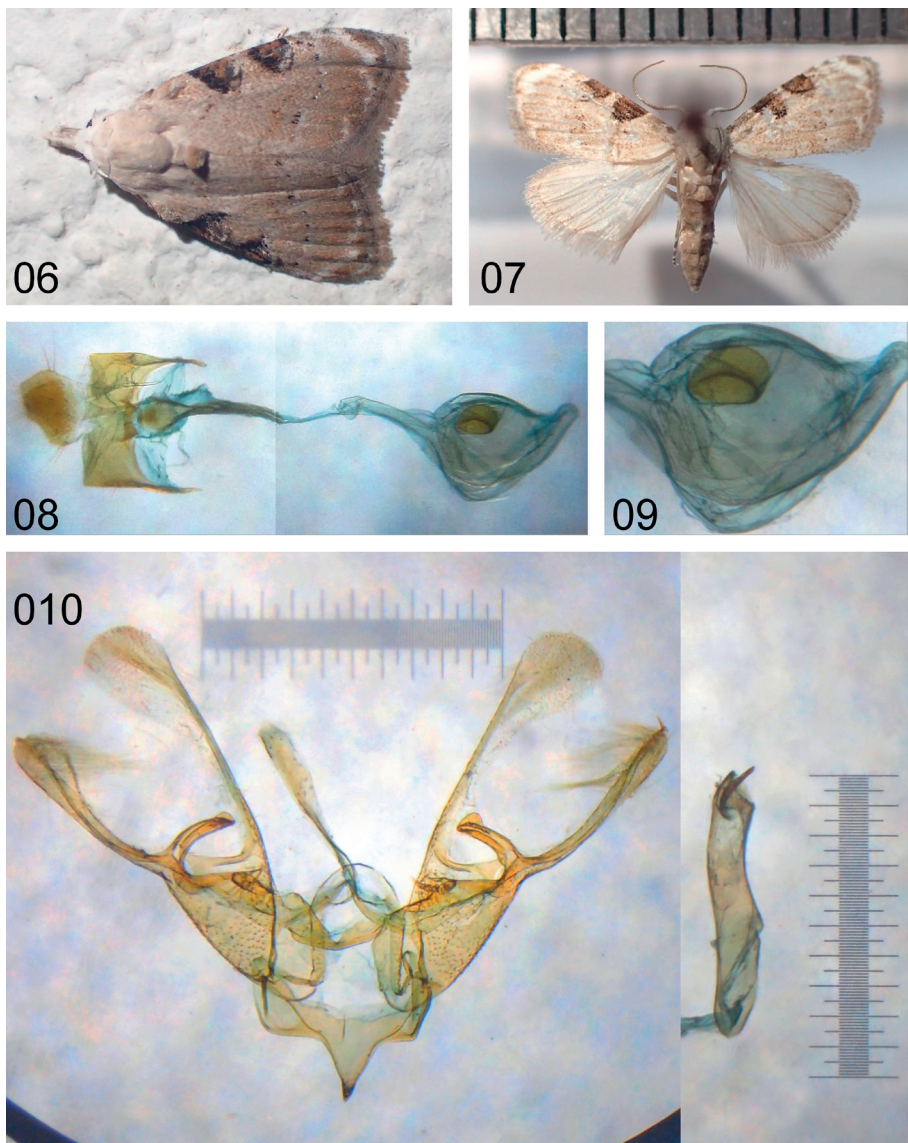


Fig. 06: *Nola melanoscelis*, Reunion, 27.vii.2017; **Fig. 07:** *Nola melanoscelis*, male, Reunion, 30.x.2015; **Fig. 08:** *Nola melanoscelis*, female genitalia, slide RE-1450, 31. xii.2014; **Fig. 09:** *Nola melanoscelis*, female genitalia: enlarged bursae; **Fig. 10:** *Nola melanoscelis*, male genitalia, slide RE-1324, 16.x.2014; aedeagus in scale

Plate 3:

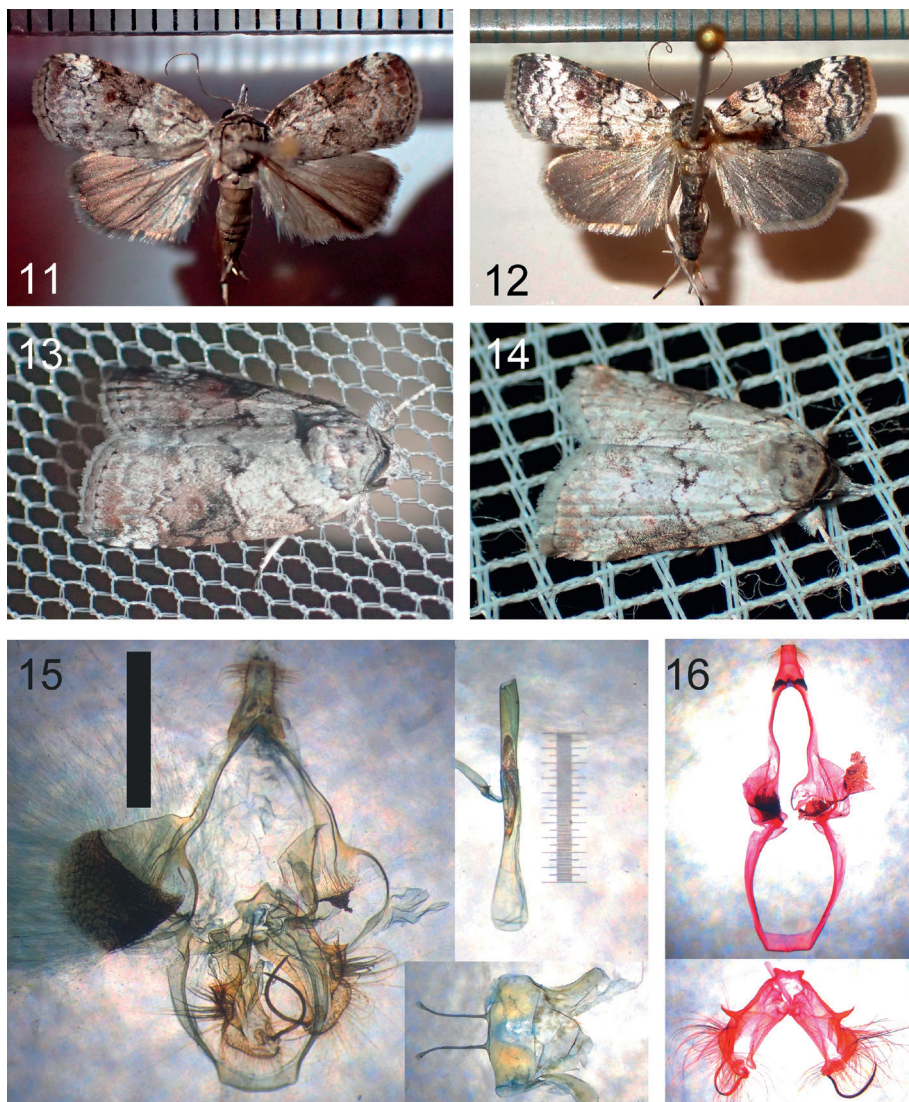


Fig. 11: *Nycteola mauritia*, Madagascar, e.l. *Eucalyptus robusta*; **Fig. 12:** *Nycteola mauritia*, Reunion, e.l. *Syzygium cymosum*; **Fig. 13:** *Nycteola mauritia*, Madagascar, e.l. *Eucalyptus robusta*; **Fig. 14:** *Nycteola mauritia*, Reunion, 21.ii.2017; **Fig. 15:** *Nycteola mauritia*, male genitalia, Madagascar, e.l., slide Mad-012a. Valvae attached and bent downwards. The right lateral part of genitalia shield was removed from the tegumen for better visibility. Aedeagus in scale. The 8th sternite is reduced in size; **Fig. 16:** *Nycteola mauritia*, male genitalia, Reunion, slide RE-2193, e.l. *S.cymosum*. Genitalia shield removed. Detached valvae below.

Plate 4:

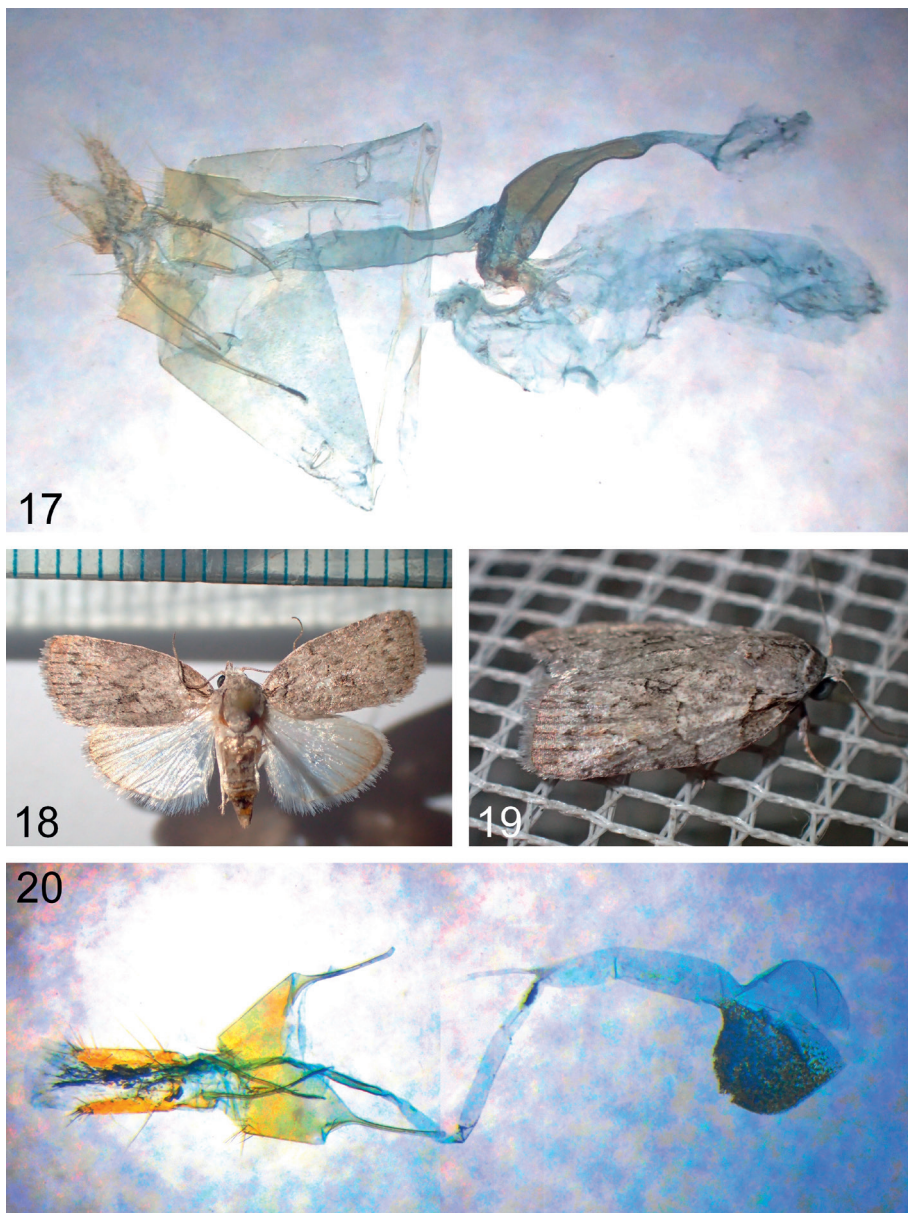


Fig. 17: *Nycteola mauritia*, female genitalia, Reunion; **Fig. 18:** *Pardasena virgulana*, Reunion, female, 20.ii.2017; **Fig. 19:** *Pardasena virgulana*, Reunion, female, 20.ii.2017; **Fig. 20:** *Pardasena virgulana*, Reunion, female genitalia

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