

## A contribution to the knowledge of the Sphingidae fauna of Mozambique

MAREK BĄKOWSKI<sup>1\*</sup>, GYULA M. LÁSZLÓ<sup>2</sup>, HITOSHI TAKANO<sup>2</sup>

<sup>1</sup>Department of Systematic Zoology, Adam Mickiewicz University, Collegium Biologicum, Uniwersytetu Poznańskiego 6, Poznań 61-614, Poland

<sup>2</sup>The African Natural History Research Trust (ANHRT), Street Court Leominster-Kingsland, HR6 9QA, United Kingdom

\*Corresponding author - [bakowski@amu.edu.pl](mailto:bakowski@amu.edu.pl)

Received 15 September 2020 | Accepted by V. Pešić: 8 October 2020 | Published online 10 October 2020.

---

### Abstract

A list of 74 species of the Sphingidae (Lepidoptera) recently sampled at sites in Maputo, Gorongosa, Manica, Cabo Delgado and Zambezia provinces of Mozambique is provided. All species are illustrated of which fourteen are recorded for the first time from Mozambique.

**Key words:** Faunistics, new distributional records, Gorongosa National Park, Quirimbas National Park, Chimanimani National Reserve, Maputo Special Reserve.

---

### Introduction

Aside from recent studies on the Rhopalocera of Mozambique (Congdon et al. 2010; van Velzen et al. 2016; Bayliss et al. 2018) the entomological fauna of this country has been relatively poorly explored due mainly to its vast area, much of it difficult to access, and the prolonged civil war in the final quarter of the 20<sup>th</sup> Century.

The most recent efforts to explore the insect biodiversity of Mozambique were undertaken by the Adam Mickiewicz University, Poznań, Poland (AMU) and the African Natural History Research Trust, Leominster, UK (ANHRT) in close collaboration with a number of local institutions. All sampling expeditions were conducted between April 2015 and December 2019. A large proportion of the data were gathered during annual biodiversity surveys conducted by the E.O. Wilson Biodiversity Laboratory at Gorongosa National Park (EOWL) and additional data were collected during similar surveys in the Chimanimani National Reserve. The study in Quirimbas National Park (Taratibo Hills) was carried out within the framework of the Erasmus Programme in collaboration with Lurio University, Pemba, Mozambique and AMU. Sampling of the Maputo Special Reserve was conducted between 2016 and 2018 by the ANHRT and the Natural History Museum of Maputo, Mozambique (MHNM), sampling the Lepidoptera fauna of the Reserve in different seasons. A short reconnaissance trip was organised by the ANHRT and the MHNM in August of 2018 to Chimanimani National Reserve, Gorongosa National Park, Mount Mabu and

Mount Namuli, with the aim of more comprehensive sampling efforts during the rains. A number of papers dealing with the results from these expeditions have been published (László & Vetina 2019; Yakovlev et al. 2020; Volynkin & László 2018, 2019), with the present paper on the Sphingidae a further contribution to our knowledge of the lepidopteran fauna of Mozambique. Although the Sphingidae fauna of southern Africa is relatively well known (Pinhey 1962, 1979; Mitchell 1973), very few publications dealing with the Mozambique fauna exist (Goldbach 1993; de Encarnação 2014).

According to the Afromoths website, 54 species are currently recorded from the country, with a relatively low number of both recorded species and known localities, even for the widespread and common species (De Prins & De Prins 2020).

This paper is intended to provide an update on the Sphingidae fauna of Mozambique as a result of the recent research carried out by the aforementioned institutions.

## Material and methods

Sphingidae specimens were collected by various means of light trapping using a white vertical sheet or square ground-plan tent illuminated by either 250 W or 125 W Mercury vapour bulb and automatic bucket traps equipped with 8W actinic light tubes, LepiLED light source or 160 W blended bulb. The material sampled is deposited in the AMU, ANHRT, EOWL and MHNM collections. Species concepts follow Kitching & Cadiou (2000) and where available more recent revisionary works (Haxaire & Melichar 2012; Melichar & Řezáč 2014; Eitschberger & Melichar 2016; Melichar et al. 2016). A number of publications and resources were consulted with regard Mozambican records of Sphingidae: Pinhey (1962), Carcasson (1968), Pinhey (1976) and the Sphingidae Taxonomic Inventory (Kitching 2020). Photos of adults were taken using either a Nikon D700 or a Nikon D90 or a Nikon DX1 camera equipped with either a Nikkor AF-S Micro 105 mm or a Nikkor AF Micro 60 mm lens.

### Abbreviations

AMU – Adam Mickiewicz University, Poznań, Poland

ANHRT – African Natural History Research Trust, Leominster, United Kingdom

C12 – Coutada 12 Wildlife Utilisation Area

CNR – Chimanimani National Reserve

EOWL – E.O. Wilson Biodiversity Laboratory, Gorongosa National Park, Mozambique

GNP – Gorongosa National Park

MHNM – Museu de História Natural, Maputo, Mozambique

MSR – Maputo Special Reserve

## List of collecting data

\* Sampling localities visited by researchers of the Adam Mickiewicz University and Gorongosa National Park

\*\* Sampling localities visited by researchers of the African Natural History Research Trust and the Natural History Museum of Maputo

## SOFALA PROVINCE, GORONGOSA DISTRICT

### A. Gorongosa National Park (GNP)

#### 1. Bela Vista Camp (Miombo/riverine forest), 18°41'42.3"S; 34°12'38.8"E, 250 m a.s.l.\*

[1] 05–12.V.2015, M. Bąkowski

#### 2. Bunga Camp (Miombo/riverine forest), 18°35'59.0"S; 34°20'14.1"E, 79 m a.s.l.\*

[2A] 21.IV.–05.V.2015, M. Bąkowski

[2B] 28.III.–15.IV.2016, M. Bąkowski

- [2C] 18–24.IV.2016, M. Bąkowski  
 [2D] 01–25.I.2017, R. Guta  
 [2E] 29.IV.2017, M. Bąkowski  
 [2F] 03.IV.2018, M. Bąkowski  
 [2G] 03–08.IV.2018, M. Bąkowski  
 [2H] 22–25.XI.2018, M. Bąkowski  
 [2I] 21.IV.–09.V.2019, M. Bąkowski  
 [2J] 19–23.XI.2019, M. Bąkowski

**3. Bwe Maria, 19°01'29.2"S; 34°11'00.8"E, 79 m a.s.l.\***

- [3] 17.VII.2018, R. Guta & P. Naskrecki

**4. Chitengo Camp, 18°58'45.6"S; 34°21'07.7"E, 38 m a.s.l.\***

- [4A] 12–18.V.2015, M. Bąkowski  
 [4B] 28.III.–15.IV.2016, M. Bąkowski  
 [4C] 18–24.IV.2016, M. Bąkowski  
 [4D] 15–30.XI.2016, P. Naskrecki  
 [4E] 01–25.I.2017, R. Guta  
 [4F] 19–28.II.2017, M. Bąkowski  
 [4G] 28–31.III.2017, M. Castene  
 [4H] 17–31.III.2018, P. Naskrecki  
 [4I] 28.III.2018, M. Bąkowski  
 [4J] 28.III.–24.IV.2018, M. Bąkowski  
 [4K] 03–08.IV.2018, M. Bąkowski  
 [4L] 22–25.XI.2018, M. Bąkowski  
 [4M] 25.XI.2018, M. Bąkowski  
 [4N] 21.IV.–09.V.2019, M. Bąkowski  
 [4O] 05.V.2019, M. Bąkowski  
 [4P] 19–23.XI.2019, M. Bąkowski  
 [4Q] 07.XII.2019, M. Bąkowski

**5. Civeta Old Camp (Miombo woodland), 18°56'12.6"S; 34°11'43.2"E, 114 m a.s.l.\***

- [5A] 13–19.XI.2019, M. Bąkowski  
 [5B] 24–30.XI.2019, M. Bąkowski

**6. Mt Gorongosa SE slope (riverine forest/grassland), 18°28'58.9"S; 34°02'40.6"E, 937 m a.s.l.\*\***

- [6] 08-09.VIII.2018, G. László, W. Miles & A. Vetina

**7. Murombodzi Waterfall (riverine forest), 18°29'00.1"S; 34°02'34.6"E, 842 m a.s.l.\***

- [7A] 22–24.IV.2018, M. Bąkowski  
 [7B] 01–06.V.2019, M. Bąkowski

**8. Nhascuvo, 19°03'31.5"S; 34°13'39.1"E, 59 m a.s.l.\***

- [8] 05–12.XII.2016, R. Guta

**9. Urema Road (first bridge), 18°59'37.9"S; 34°23'01.4"E, 28 m a.s.l.\***

- [9] 15.VI.2014, P. Naskrecki

**10. Vinho Road, 18°59'41.9"S; 34°21'03.6"E, 30m a.s.l.\***

- [10] 26.VI.2018, N. Vincente & P. Naskrecki

**SOFALA PROVINCE, CHERINGOMA DISTRICT**

**B. Coutada 12 (C12)**

**11. Chironde Camp, 18°19'40.1"S; 35°21'28.8"E, 156 m a.s.l.\***

[11] 27.III.2017, M. Castene

**12. Inhamitanga Forest Camp, 18°14'18.1"S; 35°19'48.6"E, 213 m a.s.l.\***

[12] 09–14.IV.2018, M. Bąkowski

**13. Nyago hunting camp, 18°39'38.8"S; 35°27'20.2"E, 213 m a.s.l.\***

[13] 09–16.IV.2016, M. Bąkowski

**14. near Pauei (Miombo woodland), 18°25'30.6"S; 35°20'54.3"E, 152 m a.s.l.\***

[14] 14–19.IV.2018, M. Bąkowski

### **C. Cheringoma Plateau**

**15. near Codzo (=Khodzue) Gorge, 18°33'50.0"S; 34°52'21.9"E, 216 m a.s.l.\***

[15] 14–25.IV.2017, M. Bąkowski

**16. Massiabosa, Swanepoel Concession, 18°33'05.2"S; 35°01'49.8"E, 240 m a.s.l.\***

[16] 10–13.IV.2017, M. Bąkowski

### **MANICA PROVINCE, SUSSUNDENGA DISTRICT**

#### **D. Chimanimani National Reserve (CNR)**

**17. Buffer zone, Moribane Forest, Ndzou Camp, 19°44'04.9"S; 33°20'10.1"E, 593 m a.s.l.\***

[17] 02–08.XII.2018, M. Bąkowski

**18. Buffer zone, Nhahomba Ranger Camp, 19°35'08.9"S; 33°05'05.9"E, 606 m a.s.l.\***

[18] 26.XI.–02.XII.2018, M. Bąkowski

**19. Buffer zone, Nhambaua Ranger Camp, 19°42'06.8"S; 33°01'34.7"E, 750 m a.s.l.\***

[19] 24–30.XI.2019, M. Bąkowski

**20. Moribane Forest, Ndzou Camp (moist forest), 19°44'01.4"S, 33°20'15.1"E. 630 m a.s.l.\*\***

[20] 03–05.VIII.2018, G. László, W. Miles & A. Vetina

**21. Nyabawa village (Eastern Miombo Woodland), 19°42'09.4"S, 33°01'53.1"E, 708 m a.s.l.\*\***

[21] 05–06.VIII.2018, G. László, W. Miles & A. Vetina

**22. Rio, Nhamadzi Camp, 19°45'00.1"S; 33°03'24.2"E, 1206 m a.s.l.\***

[22] 01–05.XII.2019, M. Bąkowski

### **CABO DELGADO PROVINCE, ANCUABE DISTRICT**

#### **E. Quirimbas National Park**

**23. Taratibo Hills, 12°48'58.4"S; 39°41'43.5"E, 336 m a.s.l.\***

[23] 19–25.III.2018, M. Bąkowski

### **MAPUTO PROVINCE, MATUTUINE DISTRICT**

#### **F. Maputo Special Reserve (MSR)**

**24. Forest Clearing Campsite (sand forest), 26°17'24"S; 32°45'45"E, 11 m a.s.l.\*\***

[24] 09–12.VI.2017, M. Aristophanous, G. László, W. Miles & A. Vetina

**25. Futi Corridor (sand forest-woodland mosaic), 26°32'10.1"S; 32°43'09.7"E, 17 m a.s.l.\*\***  
[25] 23–24.II.2018, G. László, J. Mulvaney & L. Smith

**26. Hygrophilous grassland-sand forest ecotone, 26°28'32.6"S, 32°45'07.7"E, 18 m a.s.l.\*\***  
[26] 10.XII.2016, M. Aristophanous, J. Cristovão, G. László & W. Miles

**27. Ponta Milibangalala (dune forest – dune grassland), 26°26'58.6"S; 32°55'29.8"E, 15 m a.s.l.\*\***  
[27A] 30.XI.–3.XII.2016, M. Aristophanous, J. Cristovão, G. László & W. Miles  
[27B] 25–30.V.2017, M. Aristophanous, G. László, W. Miles & A. Vetina  
[27C] 17–21.II.2018, G. László, J. Mulvaney & L. Smith

**28. Mangrove Camp (mangrove-woodland mosaic), 26°19'35.9"S, 32°42'35.7"E. 9 m a.s.l.\*\***  
[28] 07–09.XII.2016, M. Aristophanous, J. Cristovão, G. László & W. Miles

**29. Swamp Forest (sand thicket), 26°27'59"S; 32°54'16"E, 15 m a.s.l.\*\***  
[29] 28.V.2017, M. Aristophanous, G. László, W. Miles & A. Vetina

**30. West Gate (sand thicket – sand forest), 26°30'14.2"S; 32°42'59.6"E, 22 m a.s.l.\*\***  
[30A] 21–30.XI.2016, M. Aristophanous, J. Cristovão, G. László & W. Miles  
[30B] 03–13.XII.2016, M. Aristophanous, J. Cristovão, G. László & W. Miles  
[30C] 30.V.–09.VI.2017, M. Aristophanous, G. László, W. Miles & A. Vetina  
[30D] 09–17.II.2018, G. László, J. Mulvaney & L. Smith  
[30E] 10–17.II.2018, G. László, J. Mulvaney & L. Smith  
[30F] 13–15.II.2018, G. László, J. Mulvaney & L. Smith  
[30G] 21–22.II.2018, G. László, J. Mulvaney & L. Smith  
[30H] 24.II.2018, G. László, J. Mulvaney & L. Smith  
[30I] 24–25.II.2018, G. László, J. Mulvaney & L. Smith

#### **ZAMBEZIA PROVINCE, LUGELA DISTRICT**

##### **G. Mt Mabu**

**31. Limbue village (rubber plantation/riverine forest), 16°21'09.3"S; 36°23'50.6"E, 300 m a.s.l.\*\***  
[31] 10–11.VIII.2018, G. László, W. Miles & A. Vetina

**32. Tacuane village (forest remnant/farmland), 16°22'24.7"S; 36°27'57"E, 317 m a.s.l.\*\***  
[32] 11–12.VIII.2018, G. László, W. Miles & A. Vetina

#### **ZAMBEZIA PROVINCE, GURUE DISTRICT**

##### **H. Mt Namuli**

**33. SW slopes near Mucunha village (forest remnant), 15°22'33"S; 37°05'06"E, 1245 m a.s.l.\*\***  
[33] 15–16.VIII.2018, G. László, W. Miles & A. Vetina

**34. SW slopes near Mucunha village (secondary vegetation/farmland), 15°21'27"S; 37°05'18"E, 1139 m a.s.l.\*\***  
[34] 14–15.VIII.2018, G. László, W. Miles & A. Vetina

#### **List of species**

##### **Smerinthinae**

**1. *Polyptychus andosa amaniensis*** Carcasson, 1968 (Fig. 1)

Material examined:

**Mt Namuli:** [33] – 1 ex.

New country record for Mozambique.

The sole Mozambican record of this species was previously based on de Encarnação (2014), which is a misidentification of a specimen of *Neopolyptychus compar*.

**2. *Polyptychus corydoni*** Rothschild & Jordan, 1903 (Figs. 2-3)

Material examined:

**Gorongosa National Park:** [6] – 1 ex.; [7B] – 1 ex.; **Coutada 12:** [13] – 1 ex.; **Chimanimani National Reserve:** [22] – 2 exs.

New country record for Mozambique.

**3. *Polyptychus jansei*** Clark 1936 (Fig. 4)

Material examined:

**Chimanimani National Reserve:** [19] – 3 exs.

**4. *Polyptychus grayii*** (Walker, 1856) (Figs. 5-6)

Material examined:

**Gorongosa National Park:** [4E] – 1 ex.; [4L] – 1 ex.; [4N] – 1 ex.; **Maputo Special Reserve:** [27C] – 1 ex.; [28] – 1 ex.

**5. *Neopolyptychus compar compar*** (Rothschild & Jordan, 1903) (Figs. 7-8)

Material examined:

**Chimanimani National Reserve:** [17] – 2 exs.; [18] – 3 exs.; [19] – 4 exs.; **Maputo Special Reserve:** [25] – 3 exs.; [30A] – 4 exs.; [30B] – 6 exs.; [30C] – 8 exs.; [30E] – 6 exs.; [30F] – 15 exs.; [30G] – 5 exs.; [30I] – 7 exs.

**6. *Andriasa contraria contraria*** Walker, 1856 (Fig. 9)

Material examined:

**Maputo Special Reserve:** [30C] – 1 ex.

**7. *Pseudoclanis postica*** (Walker, 1856) (Figs. 10-12)

Material examined:

**Gorongosa National Park:** [6] – 1 ex.; **Chimanimani National Reserve:** [17] – 1 ex.; **Maputo Special Reserve:** [27A] – 1 ex.; [27B] – 1 ex.; [30A] – 6 exs.; [30C] – 4 exs.; [30F] – 16 exs.; [30G] – 9 exs.; **Mt Mabu:** [31] – 2 exs.

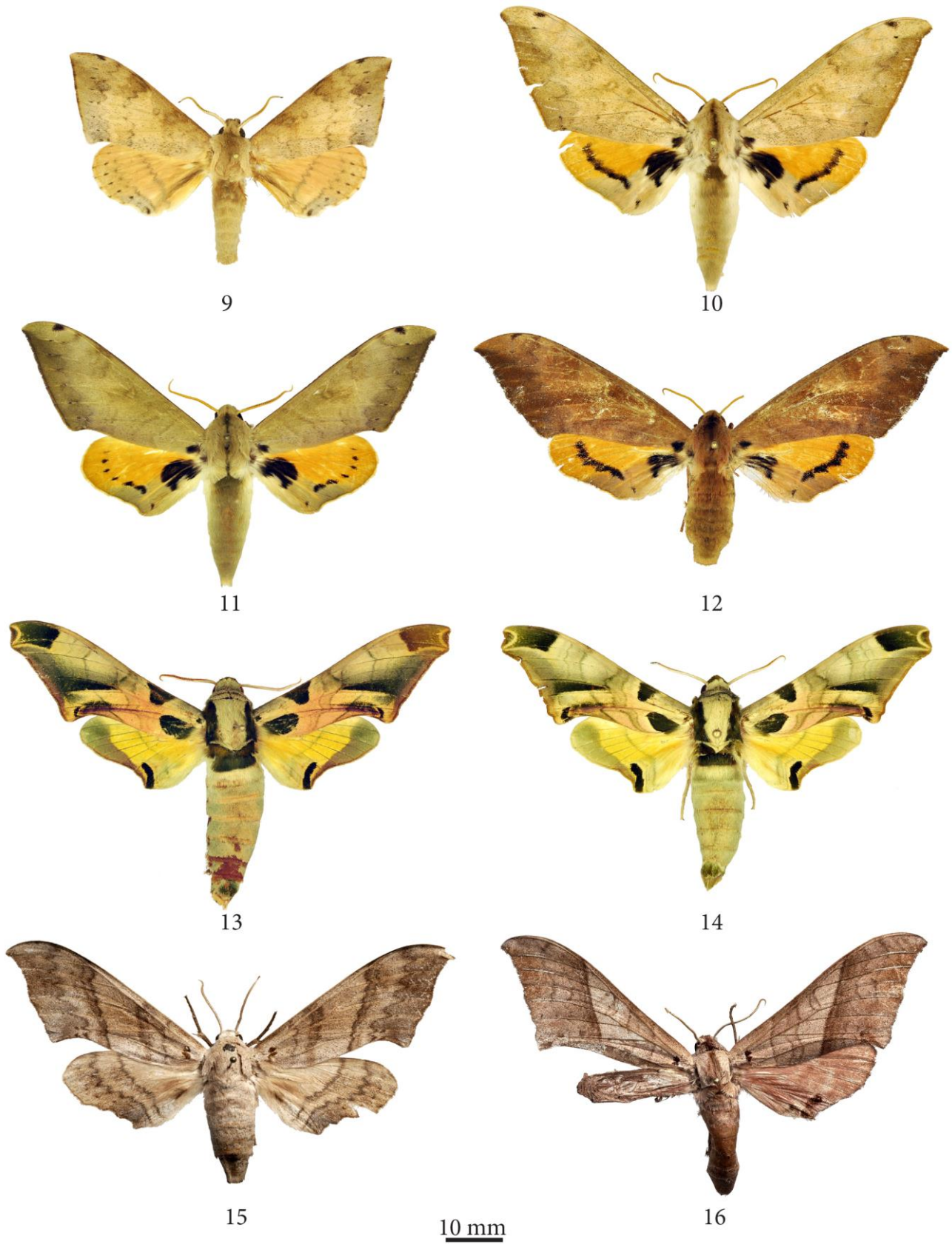
**8. *Batocnema africanus*** (Distant, 1899) (Figs. 13-14)

Material examined:

**Maputo Special Reserve:** [25] – 1 ex.; [27C] – 1 ex.; [30A] – 3 exs.; [30F] – 1 ex.; [30G] – 8 exs.; [30D] – 4 exs.



**Figures 1-8.** 1, *Polyptychus andosa amaniensis*, ♂, Mt. Namuli (ANHRT); 2, *P. corydoni*, ♂, CNR (AMU); 3, *Ibidem*, ♂, GNP (ANHRT); 4, *P. jansei*, ♂, CNR (AMU); 5, *P. grayii*, ♂, GNP (AMU); 6, *Ibidem*, ♀, MSR (ANHRT); 7, *Neopolyptychus compar compar*, ♂, MSR (ANHRT); 8, *Ibidem*, ♀, MSR (ANHRT).



**Figures 9-16.** 9, *Andriasa contraria contraria*, ♂, MSR (ANHRT); 10, *Pseudoclanis postica*, ♂, Mt. Mabu (ANHRT); 11, *Ibidem*, ♂, MSR (ANHRT); 12, *Ibidem*, ♀, MSR (ANHRT); 13, *Batocnema africanus*, ♂, MSR (ANHRT); 14, *Ibidem*, ♂, MSR (ANHRT); 15, *Falcatula falcatus*, ♀, GNP (AMU); 16, *Rufoclanis fulgurans*, ♀, GNP (AMU).



**9. *Falcatula falcatus*** (Rothschild & Jordan, 1903) (Fig. 15)

Material examined:

**Gorongosa National Park:** [2A] – 1 ex.; [4B] – 3 exs.; [4E] – 2 exs.; [4G] – 1 ex.; [4K] – 2 exs.; [4N] – 1 ex.; [4P] – 1 ex.; [5A] – 2 exs.; [7B] – 1 ex.; [8] – 1 ex.; **Coutada 12:** [11] – 1 ex.; [13] – 1 ex.; **Chimanimani National Reserve:** [17] – 1 ex.; [18] – 1 ex.; [19] – 2 exs.; [22] – 1 ex.

**10. *Rufoclanis fulgurans*** (Rothschild & Jordan, 1903) (Fig. 16)

Material examined:

**Gorongosa National Park:** [4B] – 7 exs.; [4E] – 4 exs.; [4K] – 1 ex.; [4N] – 2 exs.; [5A] – 1 ex.; [8] – 1 ex.; **Coutada 12:** [13] – 2 exs.; [18] – 1 ex.

**11. *Rufoclanis numosae numosae*** (Wallengren, 1860) (Figs. 17-18)

Material examined:

**Gorongosa National Park:** [4B] – 7 exs.; [4K] – 1 ex.; [4N] – 2 exs.; **Coutada 12:** [13] – 1 ex.; **Maputo Special Reserve:** [28] – 1 ex.; [30A] – 2 exs.; [30B] – 1 ex.; [30E] – 2 exs.; [30F] – 16 exs.; [30G] – 4 exs.; [30I] – 3 exs.

**12. *Afroclanis calcareus*** (Rothschild & Jordan, 1907) (Fig. 19)

Material examined:

**Gorongosa National Park:** [1] – 1 ex.; [5A] – 1 ex.; **Chimanimani National Reserve:** [22] – 2 exs.

**13. *Afroclanis neavi*** (Hampson, 1910) (Fig. 20)

Material examined:

**Gorongosa National Park:** [2A] – 3 exs.; [2B] – 8 exs.; [2C] – 1 ex.; [2D] – 2 exs.; [2E] – 1 ex.; [2F] – 4 exs.; [2H] – 1 ex.; [2I] – 1 ex.; [5A] – 5 exs.; [8] – 5 exs.; **Coutada 12:** [13] – 1 ex.; [14] – 1 ex.; **Cheringoma Plateau:** [15] – 1 ex.; **Chimanimani National Reserve:** [18] – 1 ex.

**14. *Neoclanis basalis*** (Walker, 1866) (Figs. 23-24)

Material examined:

**Gorongosa National Park:** [2A] – 1 ex.; [4E] – 4 exs.; [4P] – 4 exs.; [8] – 1 ex.; **Coutada 12:** [13] – 1 ex.; [14] – 2 exs.; **Chimanimani National Reserve:** [17] – 4 exs.; **Quirimbas National Park:** [23] – 3 exs.

**15. *Leucophlebia rosulenta*** Rothschild & Jordan, 1916 (Fig. 21)

Material examined:

**Chimanimani National Reserve:** [22] – 1 ex.; **Quirimbas National Park:** [23] – 1 ex.

**16. *Lophostethus dumolinii*** (Angas, 1849) (Figs. 26-27)

Material examined:

**Maputo Special Reserve:** [30A] – 1 ex.; [30B] – 1 ex.

**17. *Likoma apicalis*** (Rothschild & Jordan, 1903) (Fig. 22)

Material examined:

**Gorongosa National Park:** [1] – 1 ex.; [2A] – 1 ex.

SPHINGIDAE FAUNA OF MOZAMBIQUE



**Figures 17-25.** 17, *Rufoclanis numosae numosae*, ♂, GNP (AMU); 18, *Ibidem*, ♂, MSR (ANHRT); 19, *Afroclanis calcareus*, ♂, GNP (AMU); 20, *A. neavi*, ♂, GNP (AMU); 21, *Leucophlebia rosulenta*, ♂, CNR (AMU); 22, *Likoma apicalis*, ♂, GNP (AMU); 23, *Neoclanis basalis*, ♂, GNP (AMU); 24, *Ibidem*, ♀, GNP (AMU); 25, *Platysphinx piabilis*, ♂, GNP (AMU).

**18. *Platysphinx piabilis*** (Distant, 1897) (Fig. 25)

Material examined:

**Gorongosa National Park:** [4E] – 4 exs.; [4L] – 1 ex.; [4P] – 1 ex.; [5A] – 1 ex.; [8] – 1 ex.; **Chimanimani National Reserve:** [18] – 1 ex.; [19] – 2 exs.; [22] – 1 ex.**Sphinginae****19. *Acherontia atropos*** (Linnaeus, 1758) (Figs. 28-29)

Material examined:

**Gorongosa National Park:** [3] – 1 ex.; [4F] – 1 ex. (caterpillar on *Stachytarpheta urticifolia* Sims); [4O] – 1 ex.; [6] – 1 ex.; [9] – 1 ex.; [10] – 1 ex.**Maputo Special Reserve:** [27B] – 1 ex.; [28] – 1 ex.; [30B] – 1 ex.; [30C] – 1 ex.; [30G] – 1 ex.**20. *Agrius convolvuli*** (Linnaeus, 1758) (Figs. 30-31)

Material examined:

**Gorongosa National Park:** [2A] – 1 ex.; [4B] – 14 exs.; [4K] – 1 ex.; [4N] – 1 ex.; [4P] – 3 exs.; [7B] – 3 exs.; **Cheringoma Plateau:** [15] – 3 exs.; [16] – 1 ex.; **Maputo Special Reserve:** [25] – 1 ex.; [28] – 3 exs.; [30B] – 2 exs.; [30C] – 1 ex.**21. *Coelonia fulvinotata fulvinotata*** (Butler, 1875) (Fig. 41)

Material examined:

**Gorongosa National Park:** [4B] – 2 exs.; [4K] – 2 exs.; **Coutada 12:** [12] – 2 exs.; [14] – 1 ex.; **Chimanimani National Reserve:** [17] – 7 exs.; [18] – 3 exs.; [19] – 1 ex.; [20A] – 1 ex.; [22] – 4 exs.; **Quirimbas National Park:** [23] – 1 ex.; **Maputo Special Reserve:** [30A] – 1 ex.**22a. *Macropoliana natalensis natalensis*** (Butler, 1875) (Figs 38-39)

Material examined:

**Maputo Special Reserve:** [26] – 1 ex.; [27A] – 2 exs.; [27C] – 2 exs.; [29] – 1 ex.; [30B] – 5 exs.; [30G] – 1 ex.**22b. *Macropoliana natalensis pinheyi*** Eitschberger & Melichar, 2016 (Fig. 40)

Material examined:

**Chimanimani National Reserve:** [17] – 1 ex.**23. *Poliana wintgensis*** (Strand 1910) (Fig. 32)

Material examined:

**Gorongosa National Park:** [4K] – 2 exs.**24. *Pantophaea favillacea*** (Walker, 1866) (Figs. 33-34)

Material examined:

**Gorongosa National Park:** [4B] – 3 exs.; [4E] – 1 ex.; [4K] – 6 exs.; [4M] – 1 ex.; [4N] – 1 ex.; **Maputo Special Reserve:** [30E] – 2 exs.; **Coutada 12:** [12] – 1 ex.; [13] – 1 ex.; [14] – 1 ex.; **Cheringoma Plateau:** [15] – 1 ex.; **Quirimbas National Park:** [23] – 1 ex.;**25. *Litosphingia corticea*** Jordan, 1920 (Fig. 35)

Material examined:

**Coutada 12:** [12] – 6 exs.; [19] – 3 exs.

**26. *Oligographa juniperi*** (Boisduval, 1847) (Figs. 36-37)

Material examined:

**Maputo Special Reserve:** [25] – 20 exs.; [26] – 3 exs.; [27C] – 1 ex.; [28] – 14 exs.; [30A] – 17 exs.; [30B] – 22 exs.; [30D] – 11 exs.; [30F] – 8 exs.; [30G] – 13 exs.; [30I] – 7 exs.

**27. *Xanthopan morgani morgani*** (Walker, 1856) (Figs. 42-43)

Material examined:

**Gorongosa National Park:** [4A] – 1 ex.; [4K] – 1 ex.; [6] – 2 exs.

### Macroglossinae

**28. *Cephonodes virescens*** (Wallengren, 1858) (Fig. 44)

Material examined:

**Gorongosa National Park:** [2A] – 1 ex.; **Coutada 12:** [13] – 1 ex.; [14] – 1 ex.; **Cheringoma Plateau:** [15] – 2 exs.; **Chimanimani National Reserve:** [17] – 1 ex.; [18] – 1 ex.; [19] – 2 exs.; **Quirimbas National Park:** [23] – 5 exs.; **Maputo Special Reserve:** [27A] – 3 exs.; [30A] – 4 exs.; [30B] – 1 ex.

**29. *Sphingonaepiopsis ansorgei*** (Rothschild, 1894) (Figs. 51-52)

Material examined:

**Maputo Special Reserve:** [28] – 1 ex.; [30C] – 1 ex.

New country record for Mozambique.

**30. *Sphingonaepiopsis nana*** (Walker, 1856) (Figs. 47-50)

Material examined:

**Gorongosa National Park:** [4B] – 1 ex.; [4Q] – 1 ex.; **Coutada 12:** [12] – 1 ex.; **Maputo Special Reserve:** [30C] – 1 ex.; [26] – 1 ex.; **Mt Mabu:** [31] – 4 exs.

**31. *Odontosida pusillus*** (Felder & Felder, 1874) (Figs. 55-58)

Material examined:

**Maputo Special Reserve:** [26] – 1 ex.; [30A] – 23 exs.; [30B] – 11 exs.; [30D] – 2 exs.; [30F] – 1 ex.; [30G] – 7 exs.; [30H] – 4 exs.

**32. *Atemnora westermanni*** (Boisduval, 1875) (Fig. 45)

Material examined:

**Gorongosa National Park:** [2A] – 1 ex.; **Coutada 12:** [14] – 1 ex.

**33. *Antinephele maculifera*** Holland, 1889 (Fig. 46)

Material examined:

**Chimanimani National Reserve:** [25A] – 2 exs.

New country record for Mozambique.



26



27



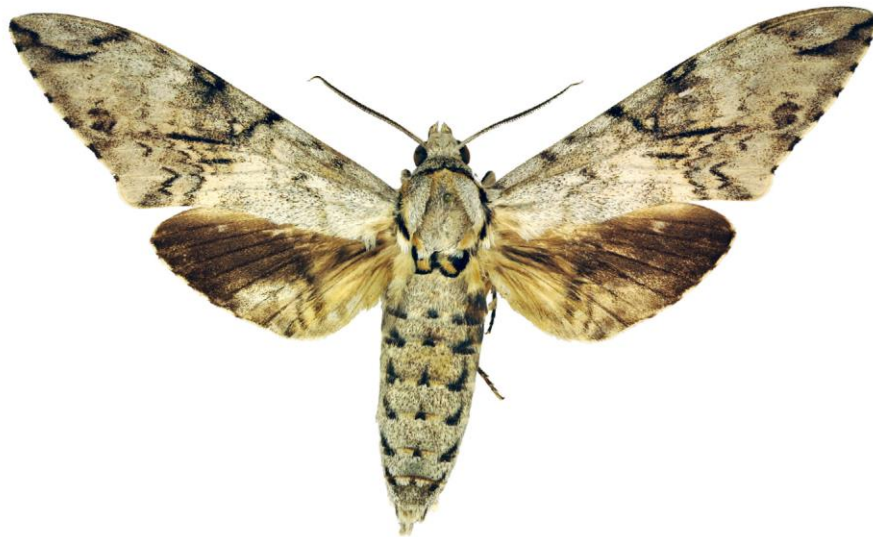
28

10 mm

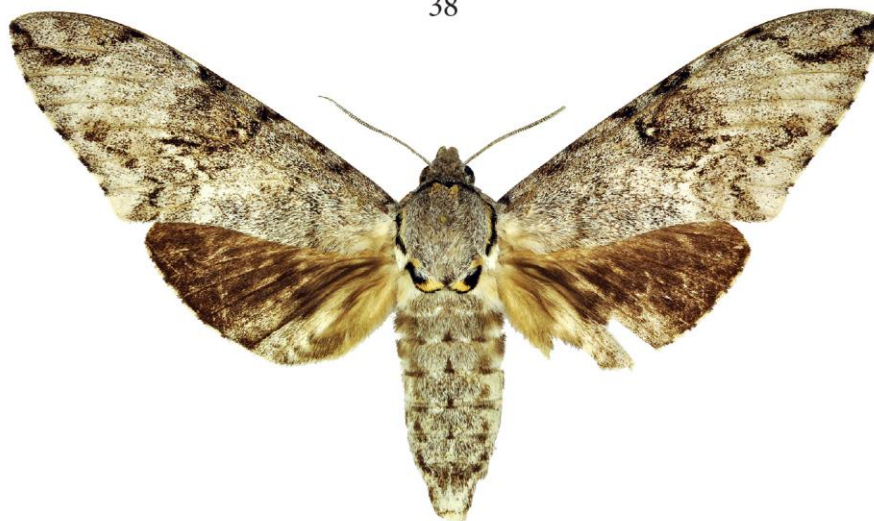
**Figures 26-28.** 26, *Lophostethus dumolinii*, ♂, MSR (ANHRT); 27, *Ibidem*, ♀, MSR (ANHRT); 28, *Acherontia atropos*, ♂, MSR (ANHRT).



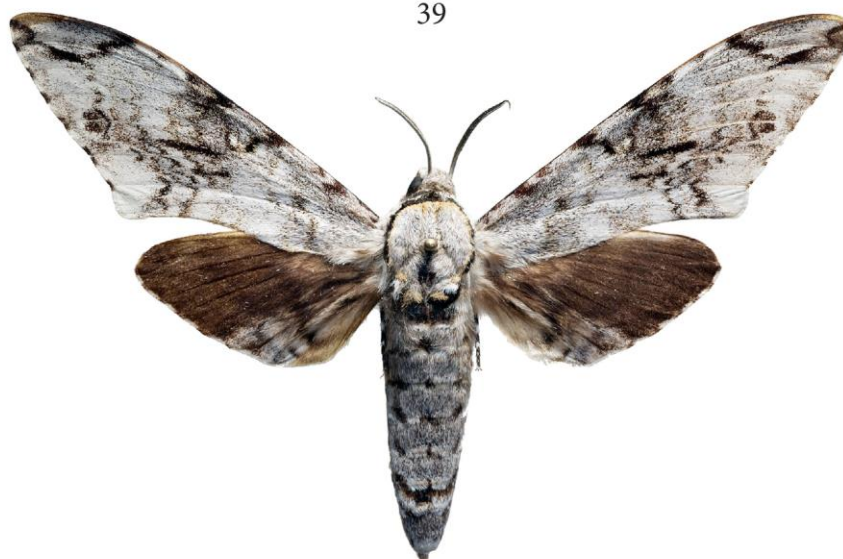
**Figures 29-37.** 29, *Acherontia atropos*, ♀, MSR (ANHRT); 30, *Agrius convolvuli*, ♂, MSR (ANHRT); 31, *Ibidem*, ♀, MSR (ANHRT); 32, *Poliana wintgensis*, ♂, GNP (AMU); 33, *Pantophaea favillacea*, ♂, MSR (ANHRT); 34, *Ibidem*, ♂, MSR (ANHRT); 35, *Litosphingia corticea*, ♂, Coutada (AMU); 36, *Oligographa juniperi*, ♂, MSR (ANHRT); 37, *Ibidem*, ♂, MSR (ANHRT).



38



39



40

10 mm

**Figures 38-40.** 38, *Macropoliana natalensis natalensis*, ♂, MSR (ANHRT); 39, *Ibidem*, ♀, MSR (ANHRT); 40, *M. natalensis pinheyi*, ♂, CNR (AMU).



41



42



43

10 mm

**Figures 41-43.** 41, *Coelonia fulvinotata fulvinotata*, ♂, MSR (ANHRT); 42, *Xanthopan morganii morganii*, ♂, GNP (ANHRT); 43, *Ibidem*, ♀, GNR (AMU).





**Figures 44-60.** 44, *Cephonodes virescens*, ♂, MSR (ANHRT); 45, *Atemnora westermanni*, ♂, GNP (AMU); 46, *Antinephele maculifera*, ♂, CNR (ANHRT); 47, *Sphingonaepiopsis nana*, ♂, MSR (ANHRT); 48, *Ibidem*, ♂, Mt. Mabu (ANHRT); 49, *Ibidem*, ♂, Mt. Mabu (ANHRT); 50, *Ibidem*, ♂, GNP (AMU); 51, *S. ansorgei*, ♂, MSR (ANHRT); 52, *Ibidem*, ♀, MSR (ANHRT); 53, *Macroglossum trochilus*, ♂, C12 (AMU); 54, *Leucostrophus alterhirundo*, ♂, Mt. Namuli (ANHRT); 55, *Odontosida pusillus*, ♂, MSR (ANHRT); 56, *Ibidem*, ♂, MSR (ANHRT); 57, *Ibidem*, ♂, MSR (ANHRT); 58, *Ibidem*, ♀, MSR (ANHRT); 59, *Nephele argentifera*, ♂, MSR (ANHRT); 60, *Ibidem*, ♀, MSR (ANHRT).

**34. *Macroglossum trochilus*** (Hübner, 1823) (Fig. 53)

Material examined:

**Gorongosa National Park:** [4N] – 2 exs.; [7A] – 1 ex.; **Coutada 12:** [12] – 1 ex.; [13] – 5 exs.

**35. *Leucostrophus alterhirundo*** d'Abreu, 1987 (Fig. 54)

Material examined:

**Gorongosa National Park:** [2A] – 2 exs.; [4C] – 2 exs.; [4E] – 1 ex.; [4I] – 4 exs.; [4K] – 1 ex.; **Coutada 12:** [12] – 4 exs.; [14] – 1 ex.; **Maputo Special Reserve:** [30A] – 1 ex.; [33] – 1 ex.

**36. *Daphnis nerii*** (Linnaeus, 1758) (Fig. 61)

Material examined:

**Gorongosa National Park:** [4B] – 2 exs.; [4C] – 1 ex.; [7B] – 3 exs.; **Coutada 12:** [13] – 1 ex.; **Chimanimani National Reserve:** [20A] – 1 ex.; **Maputo Special Reserve:** [27C] – 1 ex.; [28] – 2 exs.; [30A] – 4 exs.; [30B] – 4 exs.; [30F] – 1 ex.; [30I] – 1 ex.

**37. *Nephele accentifera*** (Palisot de Beauvois, 1821) (Fig. 62)

Material examined:

**Gorongosa National Park:** [4K] – 1 ex.; **Cheringoma Plateau:** [15] – 1 ex.; **Maputo Special Reserve:** [30A] – 1 ex.

**38. *Nephele aequivaleans*** (Walker, 1856) (Figs. 66-67)

Material examined:

**Chimanimani National Reserve:** [17] – 6 exs.; [20A] – 5 exs.

New country record for Mozambique.

**39. *Nephele argentifera*** (Walker, 1856) (Figs. 59-60)

Material examined:

**Gorongosa National Park:** [4B] – 1 ex.; [4K] – 1 ex.; [4N] – 1 ex.; [7B] – 1 ex.; **Chimanimani National Reserve:** [19] – 1 ex.; **Quirimbas National Park:** [23] – 1 ex.; **Maputo Special Reserve:** [26] – 1 ex.; [27A] – 1 ex.; [27B] – 5 exs.; [27C] – 5 exs.; [28] – 4 exs.; [30A] – 15 exs.; [30B] – 2 exs.; [30F] – 1 ex.

**40. *Nephele bipartita*** Butler, 1878 (Figs. 64-65)

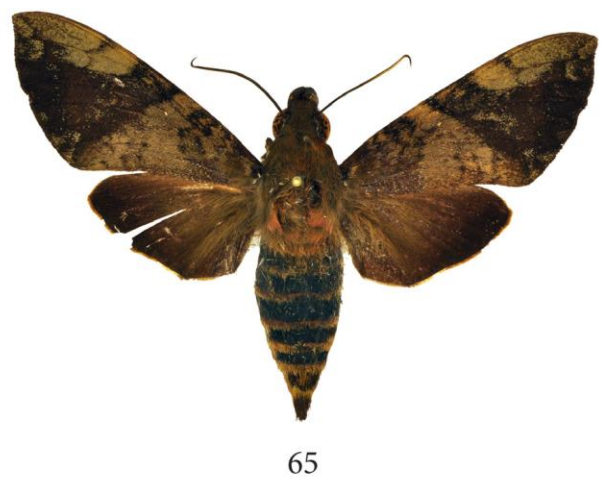
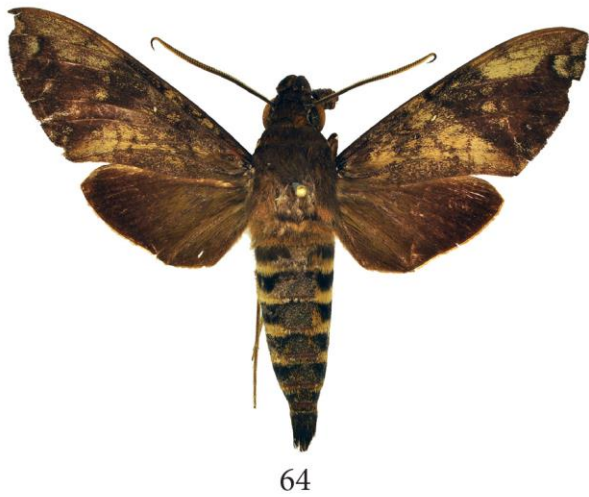
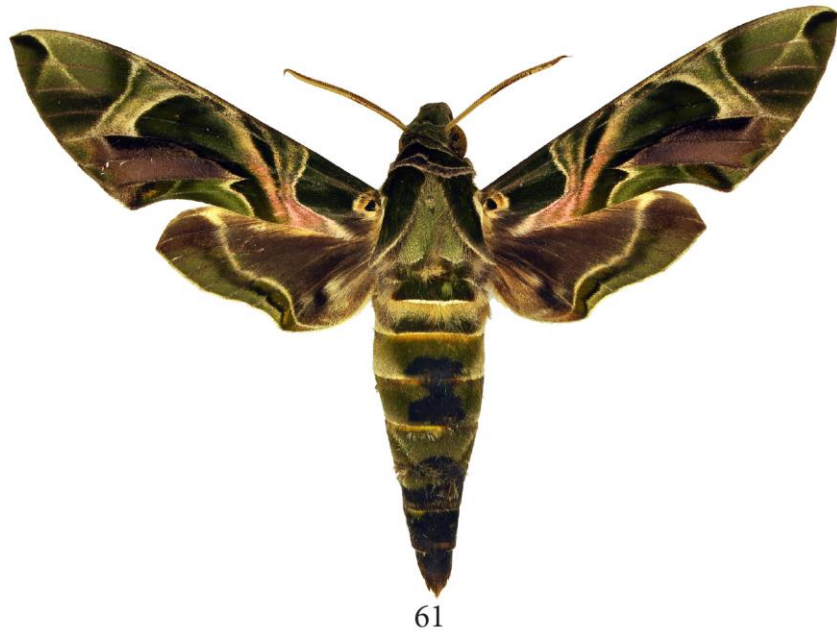
Material examined:

**Gorongosa National Park:** [2A] – 1 ex.; [4B] – 2 exs.; [4E] – 2 exs.; [4P] – 1 ex.; [5B] – 1 ex.; **Cheringoma Plateau:** [16] – 3 exs.; **Chimanimani National Reserve:** [17] – 2 exs.; [18] – 1 ex.; [21] – 3 exs.; **Maputo Special Reserve:** [30A] – 1 ex.; [30B] – 1 ex.; [30E] – 1 ex.; [30F] – 3 exs.; [30G] – 1 ex.; [30I] – 1 ex.

**41. *Nephele comma*** Hopffer, 1857 (Figs. 70-71)

Material examined:

**Gorongosa National Park:** [4B] – 4 exs.; [4C] – 1 ex.; [4E] – 2 exs.; [4L] – 1 ex.; [4P] – 1 ex.; [5B] – 2 exs.; [7B] – 3 exs.; **Chimanimani National Reserve:** [17] – 14 exs.; [18] – 10 exs.; [19] – 1 ex.; [20A] – 24 exs.; **Maputo Special Reserve:** [25] – 1 ex.; [27A] – 4 exs.; [30B] – 3 exs.; [30G] – 1 ex.

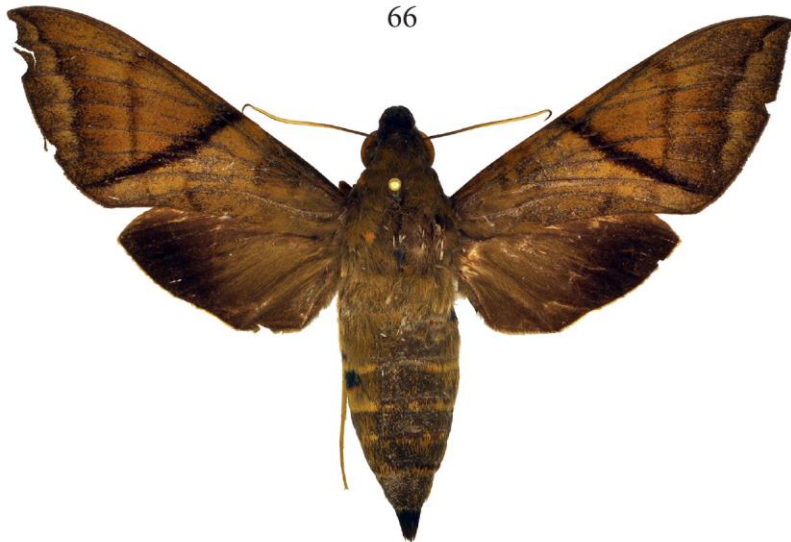


10 mm

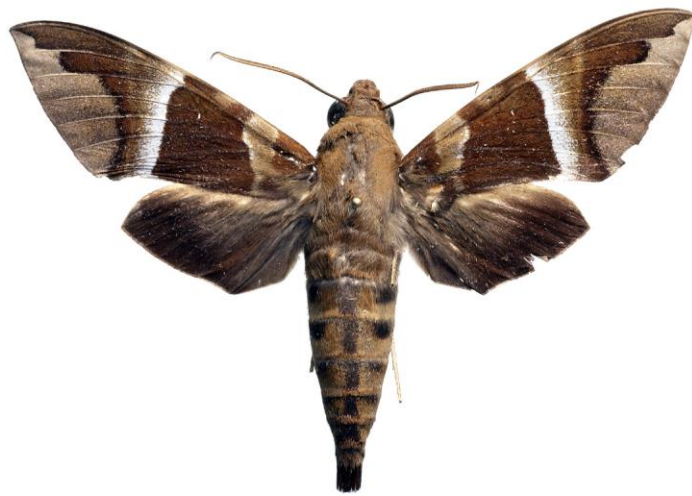
**Figures 61-65.** 61, *Daphnis nerii*, ♂, MSR (ANHRT); 62, *Nephela accentifera*, ♂, MSR (ANHRT); 63, *N. peneus*, ♂, MSR (ANHRT); 64, *N. bipartita*, ♂, CNR (ANHRT); 65, *Ibidem*, ♀, MSR (ANHRT).



66



67



68

10 mm

**Figures 66-68.** 66, *Nephela aequivalens*, ♂, CNR (ANHRT); 67, *Ibidem*, ♀, CNR (ANHRT); 68, *N. rosae illustris*, ♂, CNR (AMU).



69



70



71



72



73

10 mm

**Figures 69-73.** 69, *Nephela oenopion continentis*, ♂, GNP (AMU); 70, *N. comma*, ♂, MSR (ANHRT); 71, *Ibidem*, ♀, MSR (ANHRT); 72, *N. funebris*, ♂, MSR (ANHRT); 73, *Ibidem*, ♀, GNP (ANHRT).

**42. *Nephele funebris*** (Fabricius, 1793) (Figs. 72-73)

Material examined:

**Gorongosa National Park:** [2A] – 1 ex.; [4K] – 2 exs.; [6] – 1 ex.; [7B] – 1 ex.; **Coutada 12:** [12] – 4 exs.; [13] – 10 exs.; [14] – 4 exs.; **Chimanimani National Reserve:** [17] – 12 exs.; [18] – 4 exs.; [19] – 6 exs.; [20A] – 15 exs.; [22] – 5 exs.; **Maputo Special Reserve:** [27A] – 2 exs.; [27B] – 3 exs.; [27C] – 2 exs.; [28] – 2 exs.; [30A] – 65 exs.; [30B] – 9 exs.; [30C] – 2 exs.; [30D] – 10 exs.; [30F] – 5 exs.; [30G] – 3 exs.; [30I] – 1 ex.

**43. *Nephele peneus*** (Cramer, 1776) (Fig. 63)

Material examined:

**Gorongosa National Park:** [4B] – 2 exs.; [4K] – 1 ex.; **Chimanimani National Reserve:** [20A] – 2 exs.; **Maputo Special Reserve:** [27B] – 2 exs.; [27C] – 1 ex.; [30A] – 2 exs.; [30D] – 1 ex.; [30I] – 1 ex.

**44. *Nephele oenopion continentis*** Rothschild & Jordan, 1903 (Fig. 69)

Material examined:

**Gorongosa National Park:** [4B] – 1 ex.

New country record for Mozambique.

**45. *Nephele rosae illustris*** Jordan, 1920 (Fig. 68)

Material examined:

**Gorongosa National Park:** [7B] – 2 exs.; **Chimanimani National Reserve:** [17] – 4 exs.; **Mt Mabu:** [31] – 1 ex.

**46. *Temnora elegans polia*** Rothschild, 1904 (Fig. 78)

Material examined:

**Coutada 12:** [14] – 1 ex.; **Chimanimani National Reserve:** [18] – 1 ex.

New country record for Mozambique.

**47. *Temnora fumosa fumosa*** (Walker, 1856) (Figs. 74-75)

Material examined:

**Gorongosa National Park:** [4B] – 1 ex.; **Coutada 12:** [12] – 1 ex.; **Maputo Special Reserve:** [27A] – 1 ex.; [27C] – 1 ex.; [28] – 2 exs.; [30B] – 6 exs.; [30A] – 2 exs.; [30F] – 1 ex.; **Mt Namuli:** [34] – 1 ex.

**48. *Temnora fuscata subrubra*** Darge, 2011 (Fig. 79)

Material examined:

**Gorongosa National Park:** [7B] – 2 exs.

New country record for Mozambique.

**49. *Temnora iapygoides*** (Holland, 1889) (Fig. 80)

Material examined:

**Mt Namuli:** [33] – 1 ex.

New country record for Mozambique.

This identification was confirmed through dissection of the single male specimen which revealed a bifurcate apex of the gnathos.

**50. *Temnora inornatum*** (Rothschild, 1894) (Fig. 82-83)

Material examined:

**Maputo Special Reserve:** [25] – 1 ex.; [27A] – 1 ex.; [28] – 1 ex.; [30A] – 4 exs.; [30B] – 1 ex.; [30D] – 1 ex.; [30F] – 3 exs.

New country record for Mozambique.

**51. *Temnora marginata marginata*** (Walker, 1856) (Figs. 88-89)

Material examined:

**Coutada 12:** [13] – 3 exs.; **Chimanimani National Reserve:** [19] – 2 exs.; [22] – 4 exs.; **Maputo Special Reserve:** [29] – 1 ex.; [30A] – 1 ex.; [30C] – 1 ex.; [30G] – 1 ex.; [30H] – 1 ex.

**52. *Temnora murina*** (Walker, 1856) (Figs. 85-87)

Material examined:

**Maputo Special Reserve:** [25] – 5 exs.; [27A] – 5 exs.; [27B] – 1 ex.; [27C] – 19 exs.; [30A] – 1 ex.; [30B] – 1 ex.; [30D] – 4 exs.; [30F] – 8 exs.; [30G] – 7 exs.; [30I] – 1 ex.

New country record for Mozambique.

**53. *Temnora natalis*** (Walker, 1856) (Figs. 76-77)

Material examined:

**Gorongosa National Park:** [4E] – 3 exs.; [4N] – 1 ex.; [4Q] – 1 ex.; **Maputo Special Reserve:** [25] – 1 ex.; [27C] – 1 ex.; [30A] – 4 exs.; [30B] – 6 exs.; [30F] – 2 exs.; [30G] – 1 ex.; [30H] – 1 ex.

**54. *Temnora pylades stevensoni*** Clark, 1926 (Figs. 92-93)

Material examined:

**Mt Namuli:** [33] – 2 exs.; [34] – 1 ex.

**55. *Temnora pseudopylas pseudopylas*** (Rothschild, 1894) (Figs. 94-95)

Material examined:

**Gorongosa National Park:** [5A] – 1 ex.; [6] – 11 exs.; [7A] – 5 exs.; [7B] – 3 exs.; **Coutada 12:** [12] – 1 ex.; **Chimanimani National Reserve:** [18] – 3 exs.; [19] – 1 ex.

**56. *Temnora roberstoni*** Carcasson, 1968 (Fig. 81)

Material examined:

**Gorongosa National Park:** [2A] – 1 ex.; [4K] – 1 ex.; **Coutada 12:** [12] – 5 exs.

**57. *Temnora sardanus hirsutus*** Darge, 2004 (Fig. 84)

Material examined:

**Gorongosa National Park:** [7B] – 3 exs.; **Chimanimani National Reserve:** [17] – 2 exs.; [18] – 1 ex.; [19] – 1 ex.; [22] – 4 exs.

New country record for Mozambique.



**Figures 74-87.** 74, *Temnora fumosa fumosa*, ♂, MSR (ANHRT); 75, *Ibidem*, ♂, Mt. Namuli (ANHRT); 76, *T. natalis*, ♂, MSR (ANHRT); 77, *Ibidem*, ♂, MSR (ANHRT); 78, *T. elegans polia*, ♂, C12 (AMU); 79, *T. fuscata subrubra*, ♂, GNP (AMU); 80, *T. iapygoides*, ♂, Mt. Namuli (ANHRT); 81, *T. robertsoni*, ♂, C12 (AMU); 82, *T. inornatum*, ♂, MSR (ANHRT); 83, *Ibidem*, ♂, MSR (ANHRT); 84, *T. sardanus hirsutus*, ♂, CNR (AMU); 85, *T. murina*, ♂, MSR (ANHRT); 86, *Ibidem*, ♀, MSR (ANHRT); 87, *Ibidem*, ♂, MSR (ANHRT).





**Figures 88-100.** 88, *Temnora marginata marginata*, ♂, MSR (ANHRT); 89, *Ibidem*, ♂, MSR (ANHRT); 90, *T. zantus zantus*, ♂, MSR (ANHRT); 91, *T. zantus curvilimes*, ♂, GNP (ANHRT); 92, *T. pylades stevensoni*, ♂, Mt. Namuli (ANHRT); 93, *Ibidem*, ♂, Mt. Namuli (ANHRT); 94, *T. pseudopylas*, ♂, GNP (ANHRT); 95, *Ibidem*, ♂, GNP (ANHRT); 96, *Basiothia medea* ♀, MSR (ANHRT); 97, *Hyles livornica*, ♂, MSR (ANHRT); 98, *Ibidem*, ♀, MSR (ANHRT); 99, *Hippotion balsaminae*, ♂, GNP (ANHRT); 100, *Ibidem*, ♂, MSR (ANHRT).

**58a. *Temnora zantus zantus*** (Herrich-Schäffer, 1854) (Fig. 90)

Material examined:

**Maputo Special Reserve:** [27B] – 1 ex.

**58b. *Temnora zantus curvilimes*** Hering, 1927 (Fig. 91)

Material examined:

**Gorongosa National Park:** [1] – 1 ex.

**59. *Basiothia medea*** (Fabricius, 1781) (Fig. 96)

Material examined:

**Gorongosa National Park:** [4K] – 1 ex.; [7B] – 2 exs.; **Maputo Special Reserve:** [25] – 2 exs.; [28] – 2 exs.

**60. *Euchloron megaera megaera*** (Linnaeus, 1758) (Figs. 123-125)

Material examined:

**Gorongosa National Park:** [2A] – 3 exs.; [4K] – 3 exs.; [4N] – 4 exs.; [7A] – 2 exs.; [7B] – 2 exs.; [20] – 6 exs.; **Coutada 12:** [12] – 2 exs.; **Cheringoma Plateau:** [15] – 2 exs.; [16] – 2 exs.; **Chimanimani National Reserve:** [17] – 1 ex.; [18] – 1 ex.; [19] – 1 ex.; [22] – 2 exs.; **Quirimbas National Park:** [23] – 1 ex.; **Maputo Special Reserve:** [24B] – 1 ex.; [27A] – 1 ex.; [27B] – 4 exs.; [28] – 1 ex.; [30A] – 8 exs.; [30B] – 1 ex.; [30C] – 2 exs.; [30D] – 2 exs.; [30F] – 2 exs.; **Mt Mabu:** [32] – 1 ex.

**61. *Hyles livornica*** (Esper, 1780) (Figs. 97-98)

Material examined:

**Maputo Special Reserve:** [27B] – 1 ex.; [28] – 1 ex.; [30A] – 2 exs.

New country record for Mozambique.

**62. *Hippotion balsaminae*** (Walker, 1856) (Figs. 99-100)

Material examined:

**Gorongosa National Park:** [4E] – 1 ex.; [4B] – 1 ex.; [6] – 1 ex.; **Cheringoma Plateau:** [16] – 1 ex.; **Chimanimani National Reserve:** [22] – 1 ex.; **Maputo Special Reserve:** [27B] – 1 ex.; [30C] – 3 exs.; [30F] – 1 ex.

**63. *Hippotion celerio*** (Linnaeus, 1758) (Figs. 101-102)

Material examined:

**Gorongosa National Park:** [4B] – 10 exs.; [4J] – 2 exs.; [4N] – 3 exs.; [4P] – 1 ex.; [5A] – 1 ex.; [6] – 9 exs.; [7B] – 6 exs.; **Coutada 12:** [13] – 1 ex.; **Chimanimani National Reserve:** [17] – 2 exs.; [19] – 1 ex.; [22] – 1 ex.; **Maputo Special Reserve:** [27A] – 2 exs.; [27B] – 4 exs.; [27C] – 2 exs.; [28] – 9 exs.; [30A] – 4 exs.; [30B] – 3 exs.; [30D] – 1 ex.; [30G] – 4 exs.

**64. *Hippotion eson*** (Cramer, 1779) (Figs. 103-104)

Material examined:

**Gorongosa National Park:** [6] – 7 exs.; **Maputo Special Reserve:** [30C] – 1 ex.; [30F] – 1 ex.; [30H] – 1 ex.; [27B] – 2 exs.

New country record for Mozambique.



101



102



103



104



105



106

10 mm

**Figures 101-106.** 101, *Hippotion celerio*, ♂, GNP (ANHRT); 102, *Ibidem*, ♀, MSR (ANHRT); 103, *H. eson*, ♂, GNP (ANHRT); 104, *Ibidem*, ♀, MSR (ANHRT); 105, *H. gracilis*, ♂, GNP (AMU); 106, *Ibidem*, ♂, GNP (AMU).

**65. *Hippotion gracilis*** (Butler, 1875) (Figs. 105-106)

Material examined:

**Gorongosa National Park:** [4E] – 1 ex.; [7B] – 3 exs.; **Coutada 12:** [13] – 1 ex.; **Chimanimani National Reserve:** [18] – 2 exs.

**66. *Hippotion osiris*** (Dalman, 1823) (Figs. 107-108)

Material examined:

**Gorongosa National Park:** [4H] – 1 ex.; [6] – 1 ex.; **Maputo Special Reserve:** [25] – 1 ex.; [28] – 1 ex.; [30B] – 1 ex.; [30C] – 1 ex.; [30I] – 3 exs.

**67. *Hippotion rosae rosae*** (Butler, 1882) (Figs. 109-110)

Material examined:

**Gorongosa National Park:** [4B] – 1 ex.; [4D] – 1 ex.; **Maputo Special Reserve:** [27C] – 1 ex.; [28] – 3 exs.; [30A] – 3 exs.; [30B] – 1 ex.; [30G] – 1 ex.

**68. *Hippotion roseipennis*** (Butler, 1882) (Figs. 111-113)

Material examined:

**Gorongosa National Park:** [2A] – 2 exs.; [4E] – 2 exs.; [4B] – 1 ex.; [4N] – 3 exs.; [5A] – 1 ex.; [8] – 1 ex.; **Maputo Special Reserve:** [27B] – 5 exs.; [27C] – 1 ex.; [28] – 6 exs.; [30A] – 8 exs.; [30B] – 1 ex.; [30C] – 6 exs.; [30D] – 1 ex.; [30F] – 3 exs.; [30I] – 3 exs.

**69. *Theretra capensis*** (Linnaeus, 1764) (Figs. 119-120)

Material examined:

**Chimanimani National Reserve:** [18] – 2 exs.; **Maputo Special Reserve:** [27A] – 3 exs.; [27C] – 6 exs.; [28] – 6 exs.; [30A] – 31 exs.; [30B] – 7 exs.; [30D] – 6 exs.; [30F] – 15 exs.; [30G] – 3 exs.; [30I] – 4 exs.

**70. *Theretra dominikae*** Melichar & Řezáč, [2014] (Fig. 118)

Material examined:

**Quirimbas National Park:** [23] – 1 ex.

**71. *Theretra monteironis*** (Butler, 1882) (Figs. 115-116)

Material examined:

**Gorongosa National Park:** [4B] – 1 ex.; [4E] – 4 exs.; [4P] – 1 ex.; **Chimanimani National Reserve:** [18] – 1 ex.; [19] – 3 exs.; **Maputo Special Reserve:** [28] – 5 exs.; [30A] – 14 exs.; [30B] – 3 exs.; [30D] – 1 ex.; [30F] – 1 ex.; [30G] – 1 ex.; [30H] – 1 ex.

**72. *Theretra mothironi*** Haxaire & Melichar, 2012 (Fig. 117)

Material examined:

**Gorongosa National Park:** [4B] – 2 exs.; [4E] – 1 ex.; **Chimanimani National Reserve:** [19] – 1 ex.

**73. *Theretra orpheus orpheus*** (Herrich-Schäffer, 1854) (Fig. 114)

Material examined:

**Maputo Special Reserve:** [27B] – 1 ex.; [30B] – 2 exs.



**Figures 107-116.** 107, *Hippotion osiris*, ♂, MSR (ANHRT); 108, *Ibidem*, ♀, GNP (ANHRT); 109, *H. rosae rosae*, ♂, MSR (ANHRT); 110, *Ibidem*, ♀, MSR (ANHRT); 111, *H. roseipennis*, ♂, MSR (ANHRT); 112, *Ibidem*, ♂, MSR (ANHRT); 113, *Ibidem*, ♀, MSR (ANHRT); 114, *Theretra orpheus orpheus* ♂, MSR (ANHRT); 115, *T. monteironis*, ♂, MSR (ANHRT); 116, *Ibidem*, ♀, MSR (ANHRT).



**Figures 117-122.** 117, *Theretra mothironi*, ♂, GNP (AMU); 118, *T. dominikae*, ♀, GNP (AMU); 119, *T. capensis*, ♂, MSR (ANHRT); 120, *Ibidem*, ♀, MSR (ANHRT); 121, *Centroctena imitans*, ♂, MSR (ANHRT); 122, *Ibidem*, ♀, MSR (ANHRT).

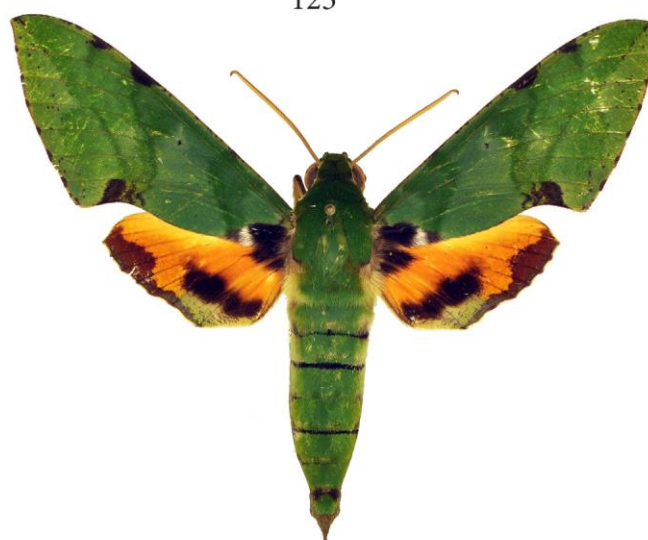
**74. *Centroctena imitans*** (Butler, 1882) (Figs 121-122)

Material examined:

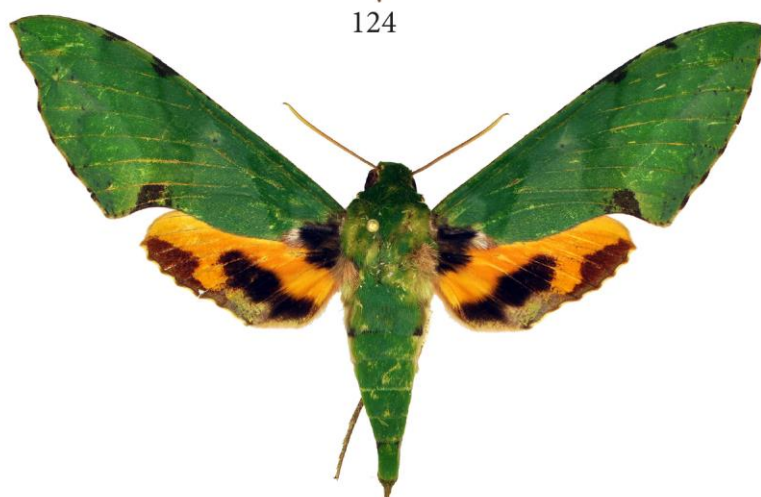
**Maputo Special Reserve:** [27B] – 1 ex.; [28] – 1 ex.; [30A] – 16 exs.; [30B] – 5 exs.; [30D] – 2 exs.; [30F] – 4 exs.; [30G] – 3 exs.



123



124



125

10 mm

**Figures 123-125.** 123, *Euchloron megaera megaera*, ♂, GNP (ANHRT); 124, *Ibidem*, ♂, MSR (ANHRT); 125, *Ibidem*, ♀, Mt. Mabu (ANHRT).

## Conclusions

The results of recent sampling in Mozambique have yielded a number of species new to the country suggesting there is still a great deal to be discovered in this wonderfully biodiverse country. Seventy-four species of Sphingidae are recorded in the current study taking the total for Mozambique to 79 species although the true total for the country is probably nearer 90 species. Further sampling in the highlands of Niassa Province on the Lake Nyassa escarpment as well as the Vumba/Chimanmani Mountains on the border of Zimbabwe will undoubtedly yield further records including the endemic species to the latter locality (e.g. *Temnora swynnertoni* Stevenson, 1938). It may also be possible that new species in genera such as *Temnora* await discovery in the montane forests of central Mozambique, as was the case with a number of butterfly taxa (van Velzen et al. 2016; Bayliss et al. 2018, 2019).

## Acknowledgements

The research carried out by the senior author in Gorongosa National Park, its buffer zone and Coutada 12 was made possible through the financial support received from the Gorongosa Restoration Project and the logistical support provided by Dr Piotr Naskręcki, Mr Jason Denlinger, Mr Matthew Jordan and members of the Gorongosa conservation and law enforcement departments. Our special thanks go to Dr Marc Stalmans for granting us research permits and for his extensive assistance provided during our visit to GNP. The second author is indebted to the following collaborative partners in the Maputo Special Reserve for the diverse technical and logistical assistance: Mr Armando Guenha, Mr Miguel Goncalves, Mr Natercio Ngovene and Mr Brian Neubert. We are grateful to Dr Bartolomeu Soto and Dr Mateus Mutemba (Administração Nacional das Areas de Conservação, Maputo) for granting us the necessary research permits to the conservation areas and to Dr Lucilia Chuquela (Museu de História Natural de Maputo) for issuing the export permits and providing administrative support. Mr Alvaro Vetina (Museu de História Natural de Maputo) is thanked for his invaluable help during the fieldwork and communication with local authorities and village chiefs. The third author is grateful to Dr Ian Kitching (Natural History Museum, London) for helpful discussions on African Sphingidae biogeography and taxonomy.

Finally, we are grateful to our colleagues who have contributed observations and specimens, including but not limited to, Mateus Castene, Norina Vicente and Ricardo Guta (Gorongosa National Park).

## References

- Bayliss, J.L., Congdon, T.C.E. & Collins, S.C. (2018) A new subspecies of *Papilio (Princeps) pelodurus* Butler, 1896 (Lepidoptera: Papilionidae: Papilioninae) from several mountains in northern Mozambique. *Metamorphosis*, 29, 132–136.
- Bayliss, J.L., Brattström, O., Bampton, I. & Collins, S.C. (2019) A new species of *Leptomyrina* Butler, 1898 (Lepidoptera: Lycaenidae) from Mts Mecula, Namuli, Inago, Nallume and Mabu in Northern Mozambique. *Metamorphosis*, 30, 19–24.
- Carcasson, R.H. (1968) Revised catalogue of the African Sphingidae (Lepidoptera) with descriptions of the East African species. *Journal of the East Africa Natural History Society and National Museum*, 26(3), 1–148, pls 1–17.
- Congdon, T.C.E., Collins, S.C. & Bayliss, J.L. (2010) Butterflies of south east Africa's mountains (Mozambique and Malawi). *Metamorphosis*, 21, 45–107.
- De Prins, J. & De Prins, W. (2020) Afromoths, online database of Afrotropical moth species (Lepidoptera). <http://www.afromoths.net> (accessed 10 June 2020).
- Eitschberger, U. & Melichar, T. (2016) Revision und Neugliederung aller Arten, die momentan in der Gattung *Macropoliana* auct. (nec Carcasson, 1968) vereint, zusammengefaßt sind (Lepidoptera, Sphingidae). *Neue Entomologische Nachrichten*, 71, 1–639.
- de Encarnação, E.R.O. (2014) Diversidade comparada de traças nocturnas no PNQ e na Baía de Pemba. Departamento de Ciências Biológicas, Faculdade de Ciências Naturais, BSc thesis 43 pp.
- Goldbach, G. (1993) Schmetterlingsarten aus dem Gebiet von Moatize/Moçambique (Lepidoptera). *Nachrichten des Entomologischen Vereins Apollo (N.F.)*, 14, 71–80.



- Haxaire, J. & Melichar, T. (2012) Notes sur les *Theretra* du groupe *cajus* (Cramer, 1777) avec description de deux nouvelles espèces. *The European Entomologist*, 4, 87–106.
- Kitching, I.J. & Cadiou, J.-M. (2000) *Hawkmoths of the world: an annotated and illustrated revisionary checklist (Lepidoptera: Sphingidae)*. Cornell University Press & The Natural History Museum, Ithaca & London, 226 pp.
- Kitching, I.J. (2020) Sphingidae Taxonomic Inventory, <http://sphingidae.myspecies.info/>, (accessed on 11 February 2020)
- László, Gy.M. & Vetina, A.A. (2019) Contribution to the knowledge of the Nolini of the Maputo Special Reserve in South Mozambique with description of two new species and several taxonomic updates (Lepidoptera, Nolidae, Nolinae). *Zootaxa*, 4571 (2), 225-246, DOI: 10.11646/zootaxa.4571.2.3.
- Melichar, T. & Řezáč, M. (2014) A new species of the genus *Theretra* Hübner [1819] (Lepidoptera, Sphingidae) from east Africa. *The European Entomologist*, 5(3), 77-82.
- Melichar, T., Řezáč, M. & Ilčíková, A. (2016) Descriptions of three new taxa in the *Temnora pylas* (Cramer, 1779) species group (Lepidoptera, Sphingidae), with notes on several other taxa. *The European Entomologist*, 8(3), 105–131.
- Mitchell, M.N. (1973) Annotated check list of Zambian hawk moths (Lepidoptera: Sphingidae). *Zambia Museums Journal*, 4, 59–104.
- Pinhey E.C.G. (1962) *Hawk moths of Central and Southern Africa*. Longmans, Salisbury (I-IX), 1-139, pls. 1-17.
- Pinhey, E.C.G. (1979) *Moths of Southern Africa*. A. A. Balkema/Rotterdam, 132-143.
- van Velzen, R., Collins, S.C., Brattström, O. & Congdon, T.C.E. (2016) Description of a new *Cymothoe* Hübner from northern Mozambique (Lepidoptera: Nymphalidae: Limenitidinae). *Metamorphosis*, 27, 34–41.
- Volynkin, A. & László, Gy.M. (2018) On the taxonomy of the genus *Tumicla* Wallengren, 1863 with description of two new species from Mozambique (Lepidoptera: Erebidae: Arctiinae). *Zootaxa*, 4442 (2), 293-306, DOI: 10.11646/zootaxa.4442.2.6.
- Volynkin, A. & László, Gy.M. (2019) Four new species of the genus *Tumicla* Wallengren, 1863 (Lepidoptera: Erebidae: Arctiinae). *Zootaxa*, 4668 (3), 421-434, DOI: 10.11646/zootaxa.4668.3.7.
- Yakovlev, R.V., László, Gy.M., Vetina, A.A. (2020) Contribution to the knowledge of the Carpenter Moths (Lepidoptera, Cossidae) of the Maputo Special Reserve in South Mozambique with description of two new species. *Ecologica Montenegrina* 28, 2020, 40-52, DOI: 10.37828/em.2020.28.8