

THE BUTTERFLIES OF COUTADA 11, ZAMBEZE DELTA, MOZAMBIQUE



Alan Gardiner, April 2018



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1. Introduction & Background

After a brief visit to Coutada 12, in 2016, I became aware of the importance of this area to conservation and the preservation of biodiversity. I also noticed the area had a relatively low number of people. However if population levels increase and pressures for land to be used as agriculture (or in an unsustainable way) increase the area could be threatened by land use changes which do not preserve its diversity.

In 2017, after many years, I re-engaged with Ivan Carter while he was visiting the Southern African Wildlife College. We talked about methods to try and improve the significance and ultimately the sustainability of the natural resources of the Marromeu complex which includes Coutada 11. In order to do this one needs to know what is there and its importance, a first step in this process is to do meaningful surveys. Although Ivan and myself liaised concerning surveys of a number of groups this did not come to fruition. However it was decided I would do a short collecting trip for butterflies to do a preliminary list of the butterflies of Coutada 11. At the same time and realizing plants (soil and water) are a bases for most living animals I asked Prof. Tony Cunningham to join me on the trip. While I was to do the butterflies Tony would look at the plants of the area (see his report Shoots, Roots and Leaves: a preliminary survey of plant species in Coutada 11, with notes on their uses and chiSena names).

2. The field trip and significant findings

A field visit to record the butterflies of Coutada 11 was made from the 3-7th April 2018. Much of the collecting took place around the main camp Mungari. Butterflies were collected both with a hand net, trap net and visual observations. A total of 115 butterfly species were recorded. To have recorded a hundred and fifteen species in the few days of the study highlights the high diversity of the area. Of special interest were:

- i. *Charaxes pseudophaeus* endemic to the region. Previously only recorded from around Gogoi through to the Dondo area this is now the furthest northern record.
- ii. *Acraea dondoensis* endemic to the region. Previously recorded from around Dondo, Savanne and the Beira area this is now the furthest northern record.
- iii. *Charaxes etesipe tavetensis* a more widely distributed species but considered rare.
- iv. *Neptidopsis fulgurata platyptera* a more widely distributed species but considered rare.

3. An interesting Emperor moth species

In addition to the butterflies a light trap was put out for moths. Although this was not a good time of year for emperor moths of particular interest was a number of specimens of an *Adafroptilum* species (pictured below). Only two previous specimens were known, one collected by Pinhey in 1969 and one by myself in Coutada 12, October 2016. Pinhey (1972) stated:

A specimen collected on one of the Author's expeditions (May, 1969) in the Dondo forest area of Mozambique, may represent a distinct species rather than a race or subspecies. It is much more distinctly marked on the upperside and the underside has very prominent lines, unlike the normal *incana*.



A specimen from the genus *Adafroptilum* a member of the emperor moth group.

Investigations may show this to be an undescribed species.

This species requires further investigation and indicates a need for further surveys for the moths and butterflies of the area.

4. Discussion & Conclusion

To produce such a long list, 115 species, of butterfly species from a relatively short sampling time already provides an indication of the biological importance of the area. In addition two narrow range endemics *Acraea dondoensis* and *Charaxes psuedophaeus* were observed. As with the plants the information shows the area to contain both restricted range species and a high general diversity and hence should be considered an important biodiversity area. The area forms part of the Southern Zanzibar-Inhambane Coastal Forest Mosaic, an ecoregion of which the conservation status is 'critical' (Schipper & Burgess 2004). It is therefore important conservation effort is put into maintaining the remains of this special & diverse habitat. I feel the College can form a beneficial partnership with management of Coutada 11 not only concerning the surveying of biological diversity but also in many other aspects of making the system sustainable (e.g. in community engagement, anti-poaching strategies and resource use). I suggest strategic meetings are held between the management of Coutada 11 and SAWC management to see how the two can work together.

5. List of species recorded during the trip, pictures are those taken during the field work

PAPILIONIDAE

Papilionini

1. *Papilio nireus lyaeus* Doubleday, 1845
2. *Papilio dardanus cenea* Stoll, 1790
3. *Papilio demodocus* Esper, [1798]

Leptocercini

4. *Graphium antheus* (Cramer, 1779)
5. *Graphium porthaon* (Hewitson, 1865)
6. *Graphium angolanus* (Goeze, 1779)
7. *Graphium leonidas* (Fabricius, 1793)



Graphium leonidas ♀

PIERIDAE

Coliadinae

8. *Eurema brigitta* (Stoll, [1780])
9. *Eurema hecabe solifera* (Butler, 1875)
10. *Catopsilia florella* (Fabricius, 1775)

Pierinae

11. *Colotis euipe omphale* (Godart, 1819)
12. *Colotis regina* (Trimen, 1863)
13. *Colotis eris* (Klug, 1829)
14. *Eronia leda* (Boisduval, 1847)
15. *Nepheronia argia mhondana* (Suffert, 1904)
16. *Nepheronia thalassina sinulata*
17. *Leptosia alcesta inalcesta* Bernardi, 1959



Nepheronia argia mhondana ♀



egg of *Nephronia thalassina sinulata*

Pierini

18. *Appias epaphia contracta* (Butler, 1888)
19. *Mylothris agathina* (Cramer, 1779)
20. *Belenois aurota* (Fabricius, 1793)
21. *Belenois creona severina* (Stoll, 1781)
22. *Belenois gidica abyssinica* (Lucas, 1852)
23. *Belenois thysa* (Hopffer, 1855)

LYCAENIDAE

Lipteninae

Liptenini

24. *Pentila tropicalis fuscipunctata* Henning & Henning, 1994
25. *Baliochila barnesi* Stempffer & Bennett, 1953



Pentila tropicalis fuscipunctata



Baliochila neavei

Theclinae

26. *Myrina silenus ficedula* Trimen, 1879

Aphnaeini

27. *Axiocerses tjoane* (Wallengren, 1857)
28. *Axiocerses amanga* (Westwood, 1881)

Theclini

29. *Hypolycaena philippus* (Fabricius, 1793)
30. *Stugeta bowkeri tearei* Dickson, 1980

- 31. *Pilodeudorix zeloides* (Butler, 1901)
- 32. *Deudorix diocles* Hewitson, 1869

Polyommatainae

Lycaenesthini

- 33. *Anthene amarah* (Guérin-Méneville, 1849)
- 34. *Anthene kersteni* (Gerstaecker, 1871)
- 35. *Anthene liodes* (Hewitson, 1874)



Anthene kersteni ♀

Polyommataini

- 36. *Tuxentius calice* (Hopffer, 1855)
- 37. *Zizeeria knysna* (Trimen, 1862)
- 38. *Actizera lucida* (Trimen, 1883)
- 39. *Zizula hylax* (Fabricius, 1775)
- 40. *Azanus jesous* (Guérin-Méneville, 1849)
- 41. *Azanus mirza* (Plötz, 1880)
- 42. *Euchrysops malathana* (Boisduval, 1833)
- 43. *Chilades trochylus* (Freyer, [1843])

NYMPHALIDAE

Libytheinae

- 44. *Libythea labdaca laius* Trimen, 1879



Libythea labdaca laius

Danainae

Danaini

- 45. *Danaus chrysippus orientis* (Aurivillius, 1909)
- 46. *Amauris niavius dominicanus* Trimen, 1879
- 47. *Amauris ochlea* (Boisduval, 1847)

Satyrinae

Melanitini

48. *Bicyclus anynana* (Butler, 1879)
49. *Bicyclus campina* (Aurivillius, 1901)
50. *Bicyclus safitza* (Westwood, 1850)
51. *Ypthima impura paupera* Ungemach, 1932



Bicyclus safitza

Charaxinae

Charaxini

52. *Charaxes varanes varanes* (Cramer, 1777)
53. *Charaxes varanes vologeses* (Mabille, 1876)
54. *Charaxes candiope* (Godart, 1824)
55. *Charaxes protoaclea azota* (Hewitson, 1877)
56. *Charaxes castor flavifasciatus* Butler, 1895
57. *Charaxes brutus natalensis* Staudinger, 1885
58. *Charaxes cithaeron* Felder & Felder, 1859
59. *Charaxes violetta melloni* Fox, 1963
60. *Charaxes etesipe tavetensis* Rothschild, 1894
61. *Charaxes achaemenes* Felder & Felder, 1867
62. *Charaxes baumanni whytei* Butler, 1894
63. *Charaxes pseudophaeus* van Someren, 1975
64. *Charaxes manica* Trimen, 1894
65. *Charaxes zoolina zoolina* (Westwood, [1850])
66. *Charaxes ethalion*



Charaxes candiope



Charaxes protoclea azota ♂



Charaxes protoclea azota ♀



Charaxes brutus natalensis ♀



Charaxes cithaeron cithaeron ♂



Charaxes Cithaeron Cithaeron ♀



Charaxes violetta melloni ♂



Charaxes zoolina zoolina ♀ & larva



Charaxes baumanni whytei ♂



Charaxes baumanni whytei ♀



Charaxes zoolina zoolina ♀ & larva

Euxanthini

67. *Charaxes wakefieldi* (Ward, 1873)



Charaxes wakefieldi ♂

Nymphalinae

Nymphalini

68. *Junonia hierta cebrene* Trimen, 1870

69. *Junonia natalica* (Felder & Felder, 1860)

70. *Hypolimnias anthedon wahlbergi* (Wallengren, 1857)

71. *Hypolimnias misippus* (Linnaeus, 1764)

Cyrestinae

Cyrestini

72. *Cyrestis camillus sublineata* Lathy, 1901

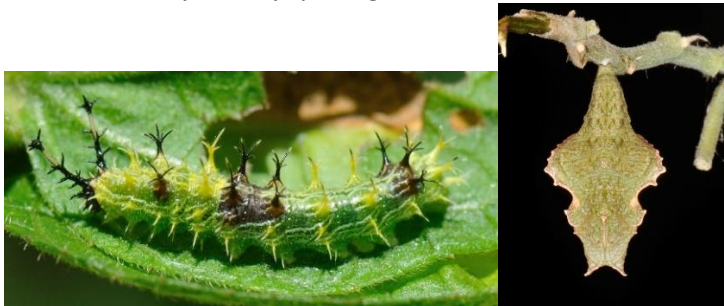
Biblidinae

Biblidini

73. *Byblia anvatara acheloia* (Wallengren, 1857)

74. *Neptidopsis fulgurata platyptera* Rothschild & Jordan, 1903

75. *Eurytela dryope angulata* Aurivillius, 1899



Eurytela dryope angulata larva & pupa

Limenitinae

Limenitidini

- 76. *Cymothoe coranus* Grose-Smith, 1889
- 77. *Pseudacraea lucretia expansa* (Butler, 1878)



Pseudacraea lucretia expansa larva

Neptidini

- 78. *Neptis goochii* Trimen, 1879
- 79. *Neptis saclava marpessa* Hopffer, 1855
- 80. *Neptis trigonophora* Butler, 1878

Adoliadini

- 81. *Euryphura concordia* (Hopffer, 1855)
- 82. *Euryphura achlys* (Hopffer, 1855)
- 83. *Hamanumida daedalus* (Fabricius, 1775)
- 84. *Aterica galene theophane* Hopffer, 1855
- 85. *Euphaedra neophron* (Hopffer, 1855)



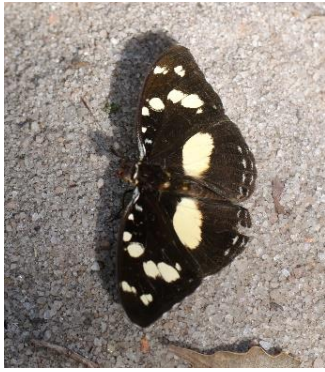
Euryphura Concordia ♀



Euryphura achlys ♂



Euryphura achlys ♀ (photo T. Cunningham)



Aterica galene theophane ♂



Aterica galene theophane ♀



Euphaedra neophron ♀ upper & underside

Heliconiinae

Acraeini

- 86. *Acraea neobule* Doubleday, 1847
- 87. *Acraea dondoensis* Stevenson, 1934 (endemic)
- 88. *Acraea petraea* Boisduval, 1847
- 89. *Acraea aglaonice* Westwood, 1881
- 90. *Acraea natalica* Boisduval, 1847
- 91. *Acraea oncaea* Hopffer, 1855
- 92. *Acraea encedon* (Linnaeus, 1758)
- 93. *Acraea serena* (Fabricius, 1775)
- 94. *Pardopsis punctatissima* (Boisduval, 1833)



Acraea aglaonice ♀



Acraea oncaea ♀



Acraea dondoensis ♂



Pardopsis punctatissima

Vagrantini

95. *Lachnoptera ayresii* Trimen, 1879

96. *Phalanta phalantha aethiopica* (Rothschild & Jordan, 1903)

97. *Phalanta eurytis eurytis*

HESPERIIDAE

Coeliadinae

- 98. *Coeliades forestan foestan* (Stoll, [1782])
- 99. *Coeliades libeon* (Druce, 1875)



Coeliades forestan foestan

Pyrginae

Tagiadini

- 100. *Tagiades flesus* (Fabricius, 1781)
- 101. *Netrobalane canopus* (Trimen, 1864)

Hesperiinae

Aeromachini

- 102. *Astictopterus stellata mineni* (Trimen, 1894)
- 103. *Ampittia capenas* (Hewitson, 1868)
- 104. *Gorgyra johnstoni* (Butler, 1894)
- 105. *Teniorhinus herilus* (Hopffer, 1855)
- 106. *Acada biseriata* (Mabille, 1893)
- 107. *Andronymus caesar philander* (Hopffer, 1855)
- 108. *Andronymus neander* (Plötz, 1884)
- 109. *Zophopetes dysmephila* (Trimen, 1868)
- 110. *Platylesches moritili* (Wallengren, 1857)



Acada biseriata

Baorini

- 111. *Pelopidas mathias* (Fabricius, 1798)
- 112. *Borbo borbonica* (Boisduval, 1833)
- 113. *Borbo detecta* (Trimen, 1893)
- 114. *Borbo fatuellus* (Hopffer, 1855)
- 115. *Gegenes niso* (Linnaeus, 1764)

6. Acknowledgements

I would like to thank the Ivan Carter Wildlife Conservation Alliance for seeing the value of such a study and taking it forward. I am also grateful to Prof. Tony Cunningham for making his time free to come and do an initial survey of the plants, their uses and their local chiSena names. It was also a pleasure to work and be in contact with the staff at the camp, the interest they took in the project and the hospitality they gave, in particular Byron du Preez, Lawrence Jones & Nigel Wardley.

7. References

- Pinhey, E.C.G. 1972. The Emperor Moths of South and South Central Africa. C. Struik (PTY) Ltd, Cape Town.
- Schipper, J. & Burgess, N. 2004. Ecoregion 21: Southern Zanzibar-Inhambane Coastal Forest Mosaic. In N. Burgess, J. D'Amico Hales, E. Underwood, E. Dinerstein, D. Olsen, I. Itoua, J. Schipper, T. Ricketts & K. Newman. *Terrestrial ecoregions of Africa & Madagascar*. 254-256, Island Press, Washington.