

Acraeinae species in alphabetic order

<i>Acraea acara</i>	51	<i>Acraea johnstoni</i>	118
<i>Acraea acerata</i>	54	<i>Acraea leucopyga</i>	122
<i>Acraea acrita</i>	56	<i>Acraea machopenua</i>	125
<i>Acraea acuta</i>	59	<i>Acraea natalica</i>	127
<i>Acraea aganice and Acraea aganice montana</i>	61	<i>Acraea neobule</i>	131
<i>Acraea anacreon</i>	64	<i>Acraea oncaea</i>	134
<i>Acraea anemosa</i>	69	<i>Acraea pentapolis epidica</i>	138
<i>Acraea asema</i>	72	<i>Acraea perenna</i>	141
<i>Acraea atergatis</i>	75	<i>Acraea periphanes</i>	143
<i>Acraea axina</i>	76	<i>Acraea petraea</i>	145
<i>Acraea baxteri</i>	78	<i>Acraea pharsalus</i>	147
<i>Acraea boopis cholui</i>	79	<i>Acraea pudora</i>	150
<i>Acraea burni</i>	82	<i>Acraea pudorella detecta</i>	151
<i>Acraea cabira</i>	84	<i>Paropsis punctatissima</i>	154
<i>Acraea caldarena</i>	88	<i>Acraea punctellata</i>	157
<i>Acraea cepheus bergeriana</i>	92	<i>Acraea quirina</i>	160
<i>Acraea cerasa and Acraea cerasa cerita</i>	95	<i>Acraea rabbaiae perlucida</i>	163
<i>Acraea cuva</i>	96	<i>Acraea rahira and Acraea rahira mufindi</i>	164
<i>Acraea egina</i>	98	<i>Acraea scalvittata</i>	
<i>Acraea encedon</i>	101		
<i>Acraea epaea melina</i>			
<i>Acraea ...</i>			

ACRAEINAE OF MALAWI
(Lepidoptera, Nymphalidae)

Dominique Bernaud & Raymond Murphy

Acraeinae of Malawi - Introduction - I

Authors and acknowledgements

Raymond Murphy has been living in Malawi for many years and has collected a series of *Acraea*. As far as possible, the species were bred in divergent places. His contribution of the knowledge of Acraeinae and their biotopes in Malawi is in fact very important. His research continues today. Raymond Murphy is also a great contributor for all insect researches in Malawi. He has an extensive collection in Mzuzu, North of Malawi. He is also at the origin of many new records and new species.

D. Bernaud breeding
Acraea caterpillarsR. Murphy trapping
Charaxes

For more than twenty years, Dominique Bernaud has carried out in-depth studies on the Acraeinae subfamily in collaboration with Professor Jacques Pierre of the Museum of Natural History of Paris.

Today he has bred more than 80 different species of *Acraea*. He has published many papers and is still working on the classification of the Acraeinae. J. Pierre, curator of the French Natural History Museum in Paris, developed a website (acraea.com), which provides extensive data on Acraeinae (phylogenetic relationships, photographs of imago and caterpillars, original descriptions and publications). He has visited several times and has visited most of the sites described below.

We acknowledge the very helpful I.M. (Forestry Research Institute of Malawi), the M.M.C.T. (Mulanje Mountain Conservation Trust), David Nangoma, Juvenal Nangoma, and the very valuable cordial assistance of the Forestry Research Institute of Malawi with access to the Blantyre Museum and additional records and general

We acknowledge the participation of J. Pierre (Museum of Natural History of Paris) who organized two trips with them and published together three papers. We also acknowledge the authorization to publish the biological collections (Museum of Natural History of Paris collection). We are supported with the Kaunda and Ro-

Sydney (left) and Robert (right)

Acraea (Actinote) goetzei

Acraea goetzei is a common butterfly in Lake Nyassa being the type of the species flying on Zomba plateau in April 2005.

We bred it several times on *Sparmannia ricinocarpa* (Tiliaceae) which seems to be its commonest food plant in Malawi, but also on *Triumfetta annua* (Tiliaceae) and perhaps *Triumfetta rhomboidea*.

This little *Acraea* has a special flight, which is fast and disorderly.

Distribution in Malawi

Chelinda - Nyika	10° 35' South	33° 48' East
Chikangawa	11° 50' South	33° 49' East
Chiradzulu Mt.	15° 41' South	35° 10' East
Chisangali Falls - Nyika	10° 33' South	33° 41' East
Chisongeli Fst - Mulanje	16° 05' South	35° 44' East
Choma Mt.	11° 17' South	34° 04' East
Dedza Mt.	14° 20' South	34° 20' East
Juniper Fst - Nyika plateau	10° 45' South	33° 54' East
Kalwe Fst - Nkhata Bay	11° 36' South	34° 15' East
Kasitu - Mshiditu Fst - Dzalyama range	14° 29' South	33° 35' East
Kawandama Hill - Vipha Mt.	12° 02' South	33° 51' East
Lichenya hut - Mulanje	15° 58' South	35° 33' East
Lwanjati Mt - Vipha Mt.	12° 22' South	33° 42' East
Michiru Hill	15° 44' South	34° 58' East
Mkwadzi Fst - Nkhata bay	11° 41' South	34° 15' East
Mughese Fst - Mfusu Hill	09° 39' South	33° 32' East
Mulanje Mt.	15° 58' South	35° 38' East
Mulaza stream - Mulanje slopes	16° 01' South	35° 32' East
Munese Hill - Vipha Mt.	11° 49' South	33° 50' East
Nyanda - Nyika plateau	10° 27' South	33° 52' East
Nkhata bay - Bangulu Mt.	11° 39' South	34° 17' East
Nichiti Fst	13° 22' South	34° 00' East
Ruo river - Mulanje Mt.	15° 58' South	35° 39' East
Thazima gate - Nyika plateau	10° 50' South	33° 35' East
Uzumara Fst	10° 42' South	34° 08' East
Willandi Fst - Mfusu Hill	09° 42' South	33° 29' East
Zavo Chelope Fst (Zavochepo) - Nyika	10° 34' South	33° 42' East
Zomba plateau	15° 23' South	35° 20' East

Flight period: our records by month and area

	J	F	M	A	M	J	J	A	S	O	N	D
North	X	X				X	X	X	X	X	X	X
South			X	X	X	X	X	X	X	X	X	X

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goetzei, ♂, Nyanga - Nyika



goetzei, ♀, Ruu River



goetzei, ♂, Dedza Mt



goetzei, ♀, Thazima Gate



goetzei, ♂, Ruu River



goetzei, ♀, Zomba Plateau



goetzei, ♂, Mughese Fst



goetzei, ♀, Juniper Fst

ACRAEINAE OF MALAWI
(Lepidoptera, Nymphalidae)

By Dominique Bernaud and Raymond Murphy

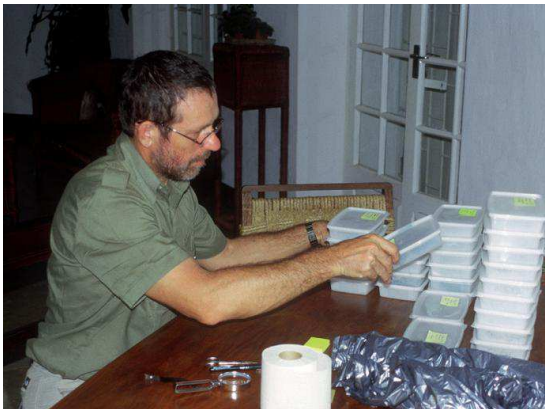
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D. Bernaud breeding
Acraea caterpillars



R. Murphy trapping
Charaxes

For more than twenty years, Dominique Bernaud has carried out in-depth studies on the Acraeinae subfamily in collaboration with Professor Jacques Pierre of the Museum of Natural History of Paris.

His main contribution consists in breeding *Acraea*. Today he has bred more than 80 different species of African *Acraea*. He has published many papers and is still working on the classification of the Acraeinae subfamily with J. Pierre, curator of Lepidoptera department of the French Natural History Museum in Paris. He has developed a website (acraea.com), which provides extensive data on Acraeinae (phylogenetic classification, photographs of imago and caterpillars, original descriptions and publications). He has been to Malawi several times and has visited most of the sites described below.

We would like to acknowledge the very helpful contribution of F.R.I.M. (Forestry Research Institute of Malawi), Gerald Meke, the M.M.C.T. (Mulanje Mountain Conservation Trust), David Nangoma, Julian Bayliss, and the valuable cordial assistance of Professor Cornell Dudley with access to the Blantyre Museum Collection, additional records and general help with the research.

We would also acknowledge the participation of J. Pierre (French National Museum of Natural History) and C. Joly. We have organized two trips with them in Malawi and we have published together three papers on Malawi.

We thank the Oxford Museum of Natural History and James Hogan for their authorization to publish photographs of the Hope entomological collections (especially from the old Lamborn collection).

All these researches have been supported with the outstanding assistance of Sydney Kaunda and Robert Sigini.



Sydney (left) and Robert (right)

Acraeinae of Malawi - Checklist - 5

Actual list of Acraeinae of Malawi

Our work allows us to present a new revised checklist of Acraeinae of Malawi, which contains 50 confirmed species (53 taxa with subspecies *montana*, *cerita* and *mufindi*) and 3 more hypothetical species (*atergatis*, *chambezi* and *encedana*).

The species *chaeribula*, *conradti*, *excelsior*, *guillemei* and *pseudolycia* are not today supported by any specimen.

Species	Subspecies	Caught by the authors	Seen in collections	Recorded by	Hypothetical	Mis identification	Synonymies and forms
<i>acara</i>	<i>acara</i>	Yes, C					
<i>acerata</i>	<i>acerata</i>	Yes, R					<i>vinidia</i>
<i>acrita</i>	<i>acrita</i>	Yes, C					<i>aquila</i> , <i>msamwiae</i>
<i>acuta</i>	<i>acuta</i>	Yes, R					
<i>aganice</i>	<i>aganice</i>	Yes, C					
<i>aganice</i>	<i>montana</i>	Yes, C					
<i>anacreon</i>	<i>anacreon</i>	Yes, VC					<i>bomba</i> , <i>induna</i>
<i>anemosa</i>	<i>anemosa</i>	Yes, C					<i>arcticincta</i>
<i>asema</i>	<i>asema</i>	Yes, C					
<i>atergatis</i>	<i>atergatis</i>				Dowsett		
<i>axina</i>	<i>axina</i>	Yes, R	Gifford				
<i>baxteri</i>	<i>baxteri</i>	No, VR		Dowsett			
<i>bonasia*</i>	<i>bonasia</i>	Yes, VR		Murphy			<i>alicia</i> is a synonym
<i>boopis</i>	<i>choloui</i>	Yes, R					
<i>burni</i>	<i>burni</i>	Yes, VR					
<i>cabira</i>	<i>cabira</i>	Yes, VC					
<i>caldarena</i>	<i>caldarena</i>	Yes, VC					<i>amphimalla</i>
<i>cephesus</i>	<i>bergeriana</i>	Yes, VR					
<i>cerasa</i>	<i>cerasa</i>	Yes, VR					
<i>cerasa</i>	<i>cerita</i>	Yes, VR					
<i>chaeribula</i>	<i>chaeribula</i>					Aurivillius	
<i>chambezi</i>	<i>chambezi</i>				Gifford		
<i>conradti</i>	<i>conradti</i>					Gifford	
<i>cuva</i>	<i>cuva</i>	No, VR		Handman			
<i>egina</i>	<i>egina</i>	Yes, C					<i>areca</i> , <i>khara</i> , <i>harrisoni</i>
<i>encedana</i>	<i>encedana</i>				Pierre		
<i>encedon</i>	<i>encedon</i>	Yes, VC					<i>lycia</i>
<i>epaea</i>	<i>melina</i>	Yes, R					<i>gea</i>
<i>esebria</i>	<i>esebria</i>	Yes, NC					
<i>excelsior</i>	<i>excelsior</i>					Butler	
<i>goetzei</i>	<i>goetzei</i>	Yes, VC					
<i>guillemei</i>	<i>guillemei</i>					Butler	

Acraeinae of Malawi - Checklist - 6

Species	Subspecies	Caught by the authors	Seen in collections	Recorded by	Hypothetical	Misidentification	Synonymies and forms
<i>igola</i>	<i>igola</i>	Yes, VR					
<i>insignis</i>	<i>insignis</i>	Yes, NC					
<i>johnstoni</i>	<i>johnstoni</i>	Yes, C					
<i>leucopyga</i>	<i>leucopyga</i>	Yes, NC					
<i>lyci</i>	<i>lyci</i>	Yes, VR					
<i>makequena</i>	<i>makequena</i>	No, VR	Gifford				
<i>natalica</i>	<i>natalica</i>	Yes, VC					
<i>neobule</i>	<i>neobule</i>	Yes, C					
<i>oncaea</i>	<i>oncaea</i>	Yes, VC					
<i>pentapolis</i>	<i>epidica</i>	Yes, R					
<i>perenna</i>	<i>perenna</i>	Yes, VR					
<i>periphanes</i>	<i>periphanes</i>	Yes, NC					
<i>petraea</i>	<i>petraea</i>	No, VR		Gifford			
<i>pharsalus</i>	<i>pharsalus</i>	Yes, C					
<i>pseudolydia</i>	<i>pseudolydia</i>					Butler	
<i>pudorella</i>	<i>detecta</i>	Yes, VR					
<i>punctatissima</i>	<i>punctatissima</i>	Yes, C					
<i>punctellata</i>	<i>punctellata</i>	Yes, VR					
<i>quirina</i>	<i>quirina</i>	Yes, R					
<i>rabbaiiae</i>	<i>perlucida</i>	Yes, VR					
<i>rahira</i>	<i>rahira</i>	Yes, VR					
<i>rahira</i>	<i>mufindi</i>	Yes, VR					
<i>scalivittata</i>	<i>scalivittata</i>	No, VR	FRIM				
<i>serena</i>	<i>serena</i>	Yes, VC					
<i>sotikensis</i>	<i>sotikensis</i>	Yes, NC					
<i>ventura</i>	<i>ventura</i>	Yes, C					
<i>vumbui</i>	<i>vumbui</i>	Yes, NC					
<i>zetes</i>	<i>zetes</i>	Yes, VR					
<i>zonata</i>	<i>zonata</i>		BMNH	Gifford			

Frequency: **VC**: very common, **C**: common, **NC**: not common, **R**: rare, **VR**: very rare

* *Acraea bonasia* (form *alicia*) seems to occur in Northern Malawi (Kapororo road). It has been recently recorded by one of us (R. M). So it has been added just before printing. This record must be confirmed.

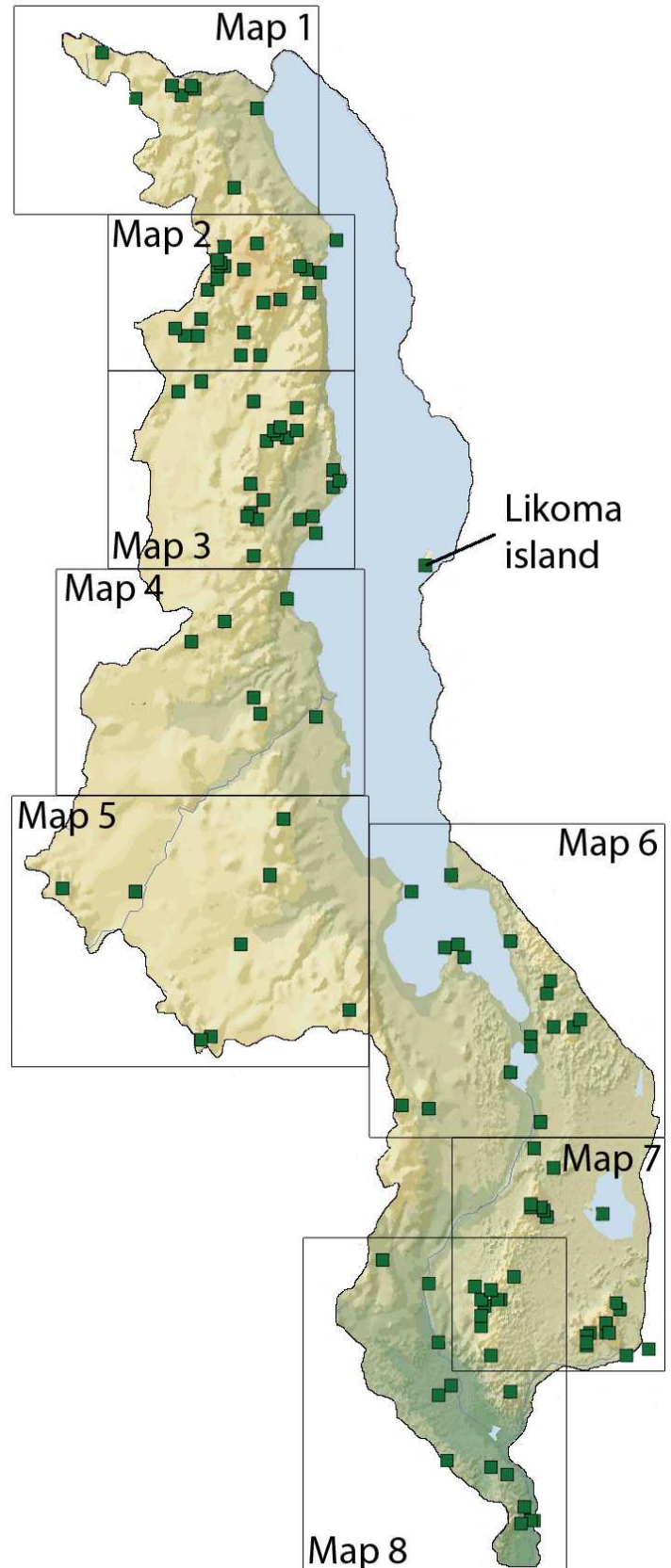


Acraea bonasia (f. *alicia*) Kapororo road
This specimen has been found in an old collection.

Prospected areas (gazetteer) and distribution of Acraeinae in Malawi

During several years, the two authors led systematic researches on the Acraeinae subfamily in Malawi. This paper is a first synthesis. Due to this work, we are able to make a complete inventory of *Acraea* species living today in Malawi and their distribution throughout the country. Our wish is that this work will be a sound argument for improving protection of the few remaining primary forests in Malawi.

Malawi is a fascinating country for butterfly studies as three faunas meet in this area. South African species come through Mozambique (Zambezi pass). Eastern coastal species come from Tanzania and Mozambique. Central African species come through Zambia. Some species are represented by both the central and eastern subspecies (or considered as subspecies before this work) in the same area (Zomba plateau for instance). We will discuss the status of these subspecies below.



Map of Malawi with all localities surveyed in this work (see Gazetteer). All the maps have been done with DMap for Windows software (Dr Alan Morton - www.dmap.co.uk). We must thank him for his permanent assistance.

Acraeinae of Malawi - Landscape plate I - 25

