



METAMORPHOSIS

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The aims of the Lepidopterists' Society of Africa are to promote the scientific study and the conservation of Lepidoptera in Africa, and to provide a communication forum for all people who are interested in African Lepidoptera.

Metamorphosis, which is the official journal of the Society, publishes original scientific papers as well as articles of a less technical nature. Fees indicated below refer to surface postage, but if airmail is required, notify the Treasurer and - per issue – add R32.00 for Africa or US \$6.00 if Overseas.

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Front cover: Male Roseate Emperor (*Eochroa trimeni*) bred from larvae collected at Nababeep, Namaqualand in September, 1983 (photo – Mark Williams).

Back cover: *Melianthus pectinatus*, the larval foodplant of *Eochroa trimeni*. Photographed at nababeep, Namaqualand (Mark Williams).

Editorial

This volume of *Metamorphosis* sees a change in editorship of the journal, brought about by the resignation of the previous editor Douglas Kroon. In the 19 years of its existence *Metamorphosis* has had five editors. The first 19 numbers of volume 1, spanning 1983 to 1987, were edited by Mark Williams. Numbers 20 to 25 of volume 1 (1987-1990) were edited by Nolan Owen-Johnston. William (Bill) Henning took over editorship from Nolan and was responsible for numbers 26 & 27 of volume 1 and volumes 2 to 5, spanning 1990 to 1994. Volumes 6 to 10 (1994-1999) were edited by Hermann Staude, and Douglas Kroon produced volumes 11 & 12 (2000-2001).

Each of these editors, in turn, was responsible for marked improvements, both in the content, and in the appearance of the journal, during their terms as editor. The earliest issues of *Metamorphosis* were rather crude roneoed affairs of about a half dozen pages in length. Our society logo, designed by the late Rob Pare, appeared on the front page from no. 15 of vol. 1. Volume 2 (1991) saw a radical shift to our current A5 format, an illustrated (black and white) front cover, and four thick issues per year. From volume 8 onwards we have had coloured covers, with some very beautiful illustrations of both moths and butterflies. To each of these editors, on behalf of all our members, I would like to express our heartfelt thanks for a (lonely) job well done. It is a privilege to assume editorship of such a professional publication.

Most editors have a motto (aside from a unique editorial policy), mine being “you can please some of the people some of the time but you must be nuts if you think that you can please everybody all of the time”. I know that criticism is inevitable - and I welcome it. If something in *Metamorphosis* “bugs” you please let me know (my e-mail address is given below).

The content and format of *Metamorphosis* must reflect a number of delicate balances. The most important, in my view, is the balance between “popular” and “scientific” articles. I am acutely aware that there is a wide range of “expertise” within our society. Those readers who feel lost when confronted with one of the scientific articles should remember that the international standing of the journal in scientific circles acts as a very important networking mechanism for the more serious lepidopterist. Besides, should you decide to become more involved, and as your knowledge grows, these articles will become more and more valuable to you. In the past we often had a problem finding the right balance of material because we were receiving mainly “taxonomic” articles. I am pleased to be able to note that nowadays we receive more short contributions than we did in the past. I would like to appeal to all our readers to share their collecting experiences with other members by sending in short reports of their collecting trips and anything else they may want to share. Do not be afraid of possible rejection as editor I would be delighted to help you kick your contribution into shape. Just e-mail it to me as a Word or Wordperfect file (mwilliam@op.up.ac.za).

Three men in an Isuzu - Namaqualand, October 2001

Stephen E. Woodhall

132, 7th Avenue, Edenvale 1610, South Africa

The first time I visited Namaqualand, it was with my wife Jayne in 1986. I had only been a member of Lepsoc since that year's annual general meeting, and this was my first major safari. Off we went for three weeks in October. We had a great time and caught a lot of butterflies. As my photography was in its infancy then, I took hardly any shots. In 1989, Mark Williams and I went again, this time in August, to look for Pennington's blue (*Lepidochrysoys penningtoni*). At that early time in the season we had a thin time of it, and failed in our quest. I did manage to get a few pix, but there remained a gaping hole in my photographic record, marked Namaqualand. I was very aware that I had neglected the area. Also, I remembered the sense of wonder that first trip had given me - would it return to someone whose senses had been blow-torched by such places as Manguzi (Zululand), Taï (Ivory Coast) and Kakamega (Kenya) in the meantime?

For a lot of reasons, I needed to rectify the photographic neglect ASAP, so I conspired with the McDermott brothers, Dave and Phil, to go there again this spring. Young Dustin was going to come but was distracted by the perfumed harems of Randburg, so he missed all the fun. Permits were sought and granted, hotels booked, a schedule was drawn up. I remembered Namaqualand's habit of reducing butterflying plans to wind-and-rain-scattered-shreds and kept my fingers crossed. I was also looking forward to observing the effects of Woodhall's First Law, which for recent readers is: *"The difficulty of capture of a butterfly is in inverse proportion to the square of the number of specimens in one's collection"*.

It can be the source of much entertainment to the keen watcher of Lepidopterists new to an area.

At 0300hrs on Saturday 29 September, we loaded up Wendy McDermott's Isuzu Frontier - a 3.21 V6 of more than adequate grunt! I hoped that we would stay out of trouble, or at least that Wendy was more understanding of abuse of vehicles in pursuit of butterflies than is Jayne. On the previous Namaqualand trips I had roughed it, but there is a strong streak of lazy lepidopterist in the McD's. They also have a delightful way of referring to our quarry as "flies" in the Moses Harris way. This was going to be a fly hunting trip in style. Lots of comfortable supplies were laid in - there was a black bag full of goodies that would make sure we didn't die of starvation in the middle of nowhere. We also had quite a selection of headgear to protect us from the (hopefully) hot sun. Phil stuck to a natty felt number and made rude comments about our hats. Dave and I had peaked caps that made us look like Tweedledee and Tweedledum [the imagination boggles! - Ed.] - but I, with my venerable black Lepsoc bush hat, was voted the most dim-looking of all.

Metamorphosis is a family publication so I cannot relate some of the choicer epithets we used to describe one another's choice of headgear.

The road to Kuruman was shorter and better paved than my memories of 12 years ago, and we were there by 0800hrs. Certain the butterflies were not going to be early risers, we repaired to the Wimpy for sustenance in the form of Mega Coffees and GWTB's (Great Wimpy Traditional Breakfasts) - which together with Kentucky Rounders are approaching the status of Official Lepsoc Safari Grub. We watched the continual procession of 4x4 (or should that be \$x\$?) outfits off up the road to Hotazel and the Kalahari. At least R20million worth of gear drove past as we ate. Great big Landcruisers, lots of 4x4 double cabs of various parentage and a generous supply of Landies, most of which were Defender 110's with fancy trailers. Amazing. But no Mere ML320's or BMW X5's - my pet hates, as I was teased about by Phil. Their absence, I think, proves my point that they are not serious 4x4's even compared to a RAV4. We soon set off up the same road to the well known dry riverbed some 10km out of Kuruman.

To our disappointment we found no dune coppers (*Aloeides simplex*) at all - just a few Damara coppers (*A. damarensis*). What we did find were dusky sapphires (*Stugeta subinfusca reynoldsi*). And ... hookthorn (*Acacia mellifera*). To Woodhall - brambles - to Dave McDermott, this vegetable from hell. He discovered how desert butterflies are adept at settling on one of these bushes and walking a few cm's down a viciously-thorned twig, to sit there giving him the V-sign. Woodhall's 1st law was in operation. His curses as he tried to scare the beastie from his resting-place and scoop him out of mid-air before he re-alihted, unfortunately, cannot be printed here. We did find some eggs and first instar larvae that Dave took with him to rear on the way.

The next stop was the Graveyard Dump [near Kuruman], which had produced a good haul of dune coppers (*A. simplex*) in the past. Alas, none were seen here either, but we did find Molomo coppers (*Aloeides molomo krooni*) in reasonable numbers. The first few specimens were very difficult to follow, but after a while it got easier ... and we found some nice sandmen (*Spialia*) there too, such as the Delagoa sandman (*S. delagoae*).

Our last stop in the area was the hill side 10km out of Kuruman on the way out to Kathu. This is a well-known haunt of the King copper (*Tylopaedia sardonix sardonix*), a butterfly deeply desired by Dave. He suffered greatly in the cause, modifying his jeans - torn knees and a very fetching triangulate tear that ventilated his rear nicely. He was last seen trying to convince Dustin that these were now a fashion statement worthy of purchase. But he did get a female, as did I, which pleased me as I lacked one from this population, which resembles form *knobeli* Van Son. Butterflies were quite scarce, so we did a lot of walking. We got back to the Isuzu in quite a state, but soon felt better after an Energade. But it was only 1430 and we felt we could go a lot further, so we ditched our plans to stay in Kuruman for the night and decided to press on to Upington.

We will not dwell on a little 90km detour towards Postmasburg caused by one of us missing the (admittedly badly signposted) left turn to Olifantshoek, whilst the others were snoozing... We arrived in Upington as the sun was setting, with nowhere booked

to stay, but luckily found a good place called the Affinity Guest House, run by Pieter and Magda King. Five star accommodation at a reasonable price was claimed and they were not wrong - the rooms were very comfy with TV and AC, all for R 170pp. There is a balcony overlooking the Orange where you can absorb a bitterly cold frostie or six, and breakfast is truly glorious; you can fill yourself with enough fuel for a full day in the field with no need to interrupt prime collecting time to eat lunch! Highly recommended as an overnight stop if you are off to Namaqualand, their telephone number is 054 3312101. Also recommended is the liver and bacon at O'Hagan's in Upington ...

In the morning we drove on across the desolate flats of Bushmanland, which seem to stretch forever. Truly million miles of bloody Africa stuff, made special by the Sociable Weavers' nests that weigh down the telegraph poles and larger trees, and the enigmatic Kokerbooms (*Aloe dichotoma*) on the hill sides. But eventually we passed Aggeney's and the first few flowers were spotted. Excitement mounted as we reached the Carolusberg junction in hot sunshine and turned right down a dirt road, eyes peeled for little dark insects. Suddenly we saw one, right where Owen Garvie said they would be - Badham's blue (*Lepidochrysops badhami*) at last! My two previous trips had failed to find this character completely.

My appreciation of others' antics with Primary Experiences now came back to haunt me. Dave and Phil were treated to the spectacle of an over-adrenalined Woodhall making a complete chump of himself trying to catch a *badhami*. Photography - forget it! The fridge trick was in order here. The worst thing about this butterfly is its ability to sit tight until you are right on top of it, then take off with a dancing, hopping flight over the bossies. Trouble is, it's the exact same colour as those bossies and very adept at dodging nets. But what the heck - this is what it is all about. Primary Experiences, I was once told by a hunter who knows, are great adrenalin stimulators whether the quarry is an elephant or a little black butterfly. There were a couple of warrior silver-spotted coppers (*Argyraspodes argyaspis*) around as well, which gave Dave some sport. They in fact totally eluded him, so they began to assume the stature in his mind that the blood-red glider (*Cymothoe sangaris*) did for me in West Africa - the more you miss, the harder is the next one to catch. Possibly the corollary to Woodhall's First Law.

Eventually we decided to head across the road to the Carolusburg Dump, dubbed the most beautiful in the world by Mark and I during our visit in 1989. It lived up to its reputation. The whole place was covered in flowers of all colours, including the glorious Gousblomme (*Arctotis*) with their fiery orange, naturally double, flowers. Namaqualand at her best, and as it turned out we saw very little as good as this for the rest of the trip. Namaqua widows (*Tarsocera namaquensis*) and deceptive widows (*T. imitator*) were everywhere. Beautiful, fresh Barkly's coppers (*Aloeides barklyi*) zoomed around the bases of the koppies as well as their steep, rocky slopes. Dog-fighting them were arid coppers (*Aloeides arida*), and around the rocks bounced Van Son's browns (*Stygionympha vansoni*). These were also freshly emerged and were one of the main photographic targets. There were numerous other Namaqualand butterflies about, including *L. badhami*, and everything kept flying until as late as 1630hrs. This really was a wonderful balmy afternoon among the flowers.

the collecting not *too* hard work, the silence of the Succulent Karoo a benison to the soul. .. Namaqualand is one of the best antidotes to too much Johannesburg that I know of.

Tired but happy we headed off to the Springbok Hotel, where we had booked rooms. Sorting out the day's captures, I found, to my horror, that some of my Kuruman captures, including a lovely female *Tylopaedia sardonyx*, had been left in the freezer at Affinity. A quick call to Magda confirmed that this was so, and she promised to look after them for me. Springbok Hotel is definitely not as good value as the Affinity Lodge and we decided to share a room - R480 per night for three, not as modern, and breakfast extra at R33 per head, and not as good. Dave had to threaten the management with dire consequences should they not serve us a drink on a Sunday evening. This intransigence led us to decide not to favour them with our dinner custom so, instead, we went to the Springbok Kafee and met the inimitable Jopie Kotze. We should really have stayed with him but had paid a deposit so we were stuck with the Hotel. We had a glorious rump steak feast and Jopie finished it off by sending us some Maroela Mampoer, which was a good *digestif*. It was called *Hakkiesdraad* (barbed-wire) and came in a bottle wrapped in the self-same wire. We were also joined by a large chap whose name escapes me but whose afters have will live on in my nightmares for a long time.

For those of you planning a trip to the uttermost West, Jopie can be contacted on 02771 2132 1, fax 02771 22718. E-mail has not penetrated there yet but his snail mail address is Box 26/ 100, Springbok 8240.

The next day dawned misty but by 0830 the clouds had cleared and the sun shone reminded my companions that Namaqualand is a fickle lady and we should gather butterflies whilst we may ... so off to Port Nolloth. We stopped at Anenous Pass on the way, where we found more *A. barklyi* as well as more *A. argyraspis*, which again eluded Dave. Also present were the little skippers the Namaqua dancer (*Alenia namaqua*) and the dwarf sandman (*Spialia nanus*). We could see a dark line over toward the coast, which worried us somewhat but as we got closer it retreated. Eventually we got to the coast to find a howling onshore gale. We found the spot (thanks to Wendy Garvie via cellphone - the wonders of technology!), trudded around the dunes for hours, and found a few tiny little Nolloth 's coppers (*Aloeides nollothi*) sitting on small pink flowered mesembs. These were almost impossible to follow, let alone catch or photograph, and occasionally we saw a Trimen's opal (*Chrysoritis trimeni*) flash by. I only managed to catch a female, missing a sitter of a male due to the old freezing problem. Dave and Phil got males that they insisted on giving to me, for which here I record my heartfelt thanks.

After a few hours of this we decided it was no good as a game of soldiers and set off back to Anenous Pass. There we found the same stuff flying again, and Dave at last beat his hoodoo with *A. argyraspis*. His approach reminded me of a Tom and Jerry cartoon where Tom creeps up on Jerry using only his toes for locomotion. Rob Paré's saying "all the agonising speed of a dead log" also comes to mind. The net comes down with infinite gentle slowness and hovers ... "strike!!!" you want to shout - but you can't. Eventually down it comes with a soft bang, usually followed by a terse curse, but in this case a shout of triumph. Further up the pass we found some *Rhus* bushes with some Namaqua arrowheads (*Phasis clavum*) around them. These also produced a lot of dead log imitations!

On the way back we stopped off at Nababeep – bumper sticker in Jopie’s shop – I ♥ Nababeep – I know where it is! We were hoping to find larvae of the Roseate Emperor (*Eochroa trimeni*) that is somewhat of a Holy Grail in these parts. Alas, we found hardly any of the foodplant (*Melianthus pectinatus*), so we consoled ourselves with finding Nababeep’s bottle store (after a long tour of the dorp) and reducing its stock of Amstels. We concurred that Nababeep is a strong candidate for the *anus mundi* award.

That evening we captured all our observations on Lepibase using my laptop in the Hotel bar then went to Jopie’s place for. . . another steak. The next day it was hot and sunny again, but the wind was up too. We went first to the north of Steinkopf to look for Boland skollys (*Thestor protumnus mijburghi*). One spot 11km N of Steinkopf turned up only Bampton’s copper (*Aloeides bamptoni*), so we headed off up north to Vioolsdrift. Dave and *Phil* expressed amazement that anything could fly in the Martian landscape outside the green strip along the Orange River. It reminded me of Egypt, where nothing *did* fly! The spot where in 1986 I found numbers of western pied blues (*Tuxentius hesperis*) had lost all its trees, probably in some flood, and I remembered, too late to bring my passport, that I had actually found Doubleday’s tip (*Colotis doubledayi angolanus*) on the SWA (now Namibian) side of the river. Thanks again to the Garvies we were able to find the correct spot on the SA side. And what a desolate spot it was ... *Phil* was convinced we were smoking our socks and even I was starting to think we were on a wild goose chase when up popped a little cream *Colotis*. Very like the African golden tip (*C. aurigineus*) which I have caught in desiccated terrain in Western Kenya, less like the *C. doubledayi doubledayi* from West Africa in D’Abrera. I must ask Torben Larsen what he thinks.

My companions could not wait to get away from this hellish spot - it was getting more oven-like by the minute - so we went back down south . We stopped at a spot 20km N of Steinkopf where we suspected from Pennington’s that we might get *T. protumnus mijburghi*, but no dice there and nothing at my old stamping ground 10km N of Steinkopf, which had produced Karoo opals (*Chrysoritis chrysantas*) years ago. We stopped and got more *A. bamptoni* at the 11km N spot, but eventually decided to go back to the Dump! Needless to say, the Dump came up Trumps again ... it must have got good rain in winter. Later, over another steak (well *Phil* had a mutton chop for a change), Jopie told us it was because the dry area north of Steinkopf is summer rainfall country, in Springbok and to the south is winter rainfall .

The next day saw us set off south to Garies, abandoning plans to stay at the Kamieskroon Hotel and opting for Jopie’s suggestion of Sophia’s Guest House in Garies. We stopped off at Arakoep on the way and looked for Dryburgh’s skolly (*Thestor dryburghi*). After a lot of searching *Phil* found three, which he gave me (thanks *Phil*) and I got a good photograph. There were other butterflies about, including *A. barklyi*, but the weather was beginning to look ominous. A strong wind had sprung up and thin clouds veiled the sun, soon augmented by thicker, lower cloud from the north. We decided to get out fast and get to Garies where there might still be sun. On

the way down the hill, Dave suddenly stopped, saying something had flown into his eye and was stinging ... As we went down, the stinging got worse and at the car Dave's eye was watering badly.

We drove to Kamieskroon where we tried irrigating his eye with water, but it only got worse and the other eye started as well. We drove to Garies, getting more worried, and were able to find a doctor who kindly opened his surgery at lunchtime. Dave seemed to be in there for an awfully long time ... eventually he emerged with the good news that there was no ulceration or scarification, or any sign of an insect. A likely culprit was pollen from one of the several species of *Euphorbia* that were flowering in the area.

We had a bit of daylight left, so we went off to look for the spots where I had found good numbers of Namaqua bars (*Cigaritis namaqua*) in 1986. The one spot, along the Groen Rivier, was easy to find but there was no sun. Another spot further up Studers Pass proved more difficult to find and I was amazed at how one's memory fades over fifteen years. But we did find a spot that produced a couple of Namaqua opals (*Chrysoritis aridus*) as well as more *Tarsocera* and a few *Phasis clavum*. The wind was really getting up and poor Dave's eyes were still playing up, so we set off back to Garies. Garies really is the back end of nowhere - if you see someone playing a banjo there you *run*. Sophia's place was the old Garies Hotel, basic but clean and comfortable. The only place to eat dinner was Margareta 's Ladies Bar and Steak House, evidently the only nightspot for about 100km. There was a copious supply of cold frosties whilst we captured data on Lepibase. We were amused to see that Big Brother TV had got this far into the boondocks, but the barmaid amazed us by never having seen a laptop before. In fact I think hardly anyone there had seen one ... a fascinated little crowd watched as the *boeremusiek* was stilled and the laptop showed the trailer to the Lord of the Rings movies.

We got to bed late after an ABF (absolute bloody final) drink and an ALBF (absolute *last* bloody final drink) etc. Cocktail flu made me unwilling to get up, and there was obvious cloud in the sky, but we decided to head up the pass to Witwater. As we went up Studers Pass the clouds thinned out although the wind was really howling. At the top, we stopped and straight away I found a freshly emerged male Wykeham's blue (*Lepidochrysops wykehami*). But butterflies were scarce in the thick succulent karoo. On the koppies we did find more *L. wykehami*, both sexes, and a very few Kaplan's opals (*Chrysoritis kaplani*) on the flats. A few *Chrysoritis aridus* flew, and plenty of the satyrines *Tarsocera namaquensis*. Trimen's brown (*Pseudonympha trimenii namaquana*), and Boland brown (*Melampias hubneri steniptera*). After a couple of hours battling the wind, it was obvious that the clouds were closing in. We decided on one last look at the dry riverbeds in the valley towards Wolfhok, and there we found some more of the skipper *Alenia namaqua*. Then Dave caught a little, golden-brown *Lepidochrysops*. Pennington's is vague as to whether this population is *bacchus* or *penningtoni*. It certainly looked like no *bacchus* I have ever seen, the golden sheen on the upperside is as bright as the copper sheen on a McGregor's blue (*Lepidochrysops mcgregori*). Whatever it is, it caused great excitement and a *really* intensive search of the hillside above the dry riverbed. Alas we found no more - I caught a little brown lycaenid with a whoop of joy only to find it was Dickson's geranium bronze (*Cacyreus dicksoni*).

The high cloud getting denser we decided to head back to Garies and hope for some last bits of sun on the spots in Studers Pass, but this was a forlorn hope. We consoled ourselves in Margaretto's with several cold beers, as the weather forecast destroyed our hopes for the morrow with a promise of 15°C in Springbok ... and it was not lying. The next day was cold, wet and drizzly. We opted to get off home a day early instead of moping around Namaqualand in the grey muck, with no real hope of sun on Saturday.

As we drove past Arakoep, a stray sunbeam played on the *dryburghi* spot, mocking us ... and after Springbok on the road to Aggeneys the sun did break through. But the wind was freezing and we pressed on towards Augrabies where we stopped for a look at the Falls, then looked on the red dunes between Keimoes and Upington. Alas we found no *Aloeides simplex* there, but we did find good numbers of *Stugera subinfusata reynoldsi* eggs, larvae and adults. The latter were just as good at hiding in thorns as the population at Kuruman, but one of them showed a predilection for thornless bushes growing on the tops of the tallest dunes ... so we did get a few adults.

After another comfy night in the Affinity Guest House, and retrieving my errant captures, we set off for Kuruman. We hoped to see speckled sulphur tips (*Colotis agoye bowkeri*) on the way, but as it turned out the only one we saw was back at the hillside 10km from Kuruman. There, Dave finally broke his duck with male *Tylopaedia sardonys*, although others led him a merry dance. After stopping to get foodplant for our *Stugeta* larvae, we set off for home. We got back with no damage to Wendy's chariot except for a broken door mirror caused by a suicidal Cape Turtle Dove ...

It would have been better to have two weeks in Namaqualand, because cold fronts occur about once a week in springtime and you are almost guaranteed two or three days rain per week. But this short visit was fun and we were successful whilst we had sun. My thanks to Dave and Phil for their generosity and great company on this trip, and thanks to Northern Cape Nature conservation for issuing a permit. Once I have worked out how to get Lepibase to print out visit reports, I will provide them with a full list of species recorded and habitats visited.

**Taxonomic notes on the Genus *Pseudonympha* Wallengren
(Lepidoptera: Nymphalidae: Satyrinae)**

Graham A. Henning. 17 Sonderend Street, Helderkruijn, 1724, South Africa.

Abstract

The position of the genus *Pseudonympha* within the tribe Satyrini is outlined by way of a key. The species groups within the genus are also keyed and a list of the species in each group is provided.

Key words: Lepidoptera, Nymphalidae, Satyrinae, Satyrini, *Pseudonympha*, species groups.

The genus *Pseudonympha* (Satyrini: Ypthimina) at present comprises 15 species of exclusively southern African distribution, their combined ranges extending from the western Cape to the Inyanga Mountains of north-eastern Zimbabwe.

Van Son, 1955, revised the Satyrinae of southern Africa. A hypothesis of relationships among the Satyrinae on a worldwide basis was proposed by Miller (1968). Some of the species placed in *Pseudonympha* by van Son were reallocated by Henning & Henning (1997). A review of the African Satyrinae was published later that same year by Henning (1997).

TRIBE SATYRINI**KEY TO SUBTRIBES OF AFRICAN SATYRINI**

1. Forewing cell long, half of forewing or more, cell not rounded, eyes glabrous 2
- Forewing cell less than half length of forewing, cell rounded, eyes not glabrous
Dirina
2. Midtibia spiny dorsally, female foretarsus pentamerous Satyrina
- Midtibia not spiny dorsally, female foretarsus not pentamerous Ypthimina

Note: Subtribe Satyrina is not represented in southern Africa.

Subtribe Ypthimina

This subtribe is represented in many parts of the world. Characteristics include the presence of fewer than five subsegments in the female foretarsus and a greatly reduced male foreleg. The male tibia and femur being reduced to almost “bead-like” proportions in some species. The hindwing cell is long in comparison with the length of the hind wing (about 60%). Forewing radial veins limited to 1 or 2 branches.

Key to the genera of African Ypthimina

1. Forewing vein R1 arising from cell before or from upper angle 2
 - Forewing vein R1 arising from radial stalk well beyond upper angle of cell 11
2. Forewing vein R2 arising before upper angle of cell *Coenyra*
 - Forewing vein R2 arising from radial beyond upper angle of cell 3
3. Forewing subcostal vein swollen at base 4
 - Forewing subcostal and lower median swollen at base 13
4. Forewing vein R1 arising from near upper angle of cell; antennal club not broad or abrupt 6
 - Forewing vein R1 arising from well before upper angle of cell; antennal club broad and fairly abrupt 5
5. Forewing lower and medial discocellulars about equal in length *Pseudonympha*
 - Forewing lower discocellular about twice as long as medial *Melampias*
6. Upper median vein of hindwing arising opposite base of precostal spur 7
 - Upper median vein of hindwing arising well before base of precostal spur 9
7. Tibial spurs absent *Physcaeneura*
 - Tibial *spurs* present 8
8. Male foreleg tarsus completely fused to tibia *Strabena*
 - Male foreleg tarsus not fused to tibia *Cassionympha*
9. Forelegs of female not greatly reduced, five times as long as minute male forelegs *Neita*
 - Forelegs of female greatly reduced, slightly longer than minute male forelegs .. 10
10. Hindwing lower discocellular as long as medial *Stygionympha*
 - Hindwing lower discocellular much longer than medial *Paternympha*
11. Subcostal vein swollen at base 12
 - Subcostal and lower median veins swollen at base *Ypthimomorpha*

-
12. Male genitalia with falces present *Neocoenyra*
- Male genitalia with falces absent *Coenyropsis*
13. Antennae short, less than a quarter the length of the forewing costa *Mashuna*
- Antennae long, considerably more than a quarter the length of the forewing costa
.... *Ypthima*

Note: The genera *Strabena* (Madagascar) and *Neocoenyra* (East Africa) are not represented in southern Africa.

Genus *Pseudonympha* Wallengren, 1857.

K. svenska Vetensk Akad. Handl. (N.F.) 2(4): 31.

Type species: *Papilio hippia* Cramer, 1782 (selected by Butler, 1868 (*Entomologist's Monthly Magazine* 4: 194)).

The genus *Pseudonympha* Wallengren is an endemic southern African genus. It is the largest genus of the subfamily Satyrinae in the subregion.

Antennae 30-38 jointed, club distinct, broad and spoon shaped, shaft thin. Palpi with second segment four times as long as first. Male anterior legs extremely reduced, tibia much shorter than femur, tarsus half length of tibia. Female anterior legs four times longer than in male. Walking legs small and slender, tarsi with paronychialia absent but pulvilli present.

Wing venation. [Abbreviations: UDC, MDC, LDC = Upper, median and lower discocellular veins; UFW = Upperside fore wing; LHW = Underside hind wing.]

Forewing, only SC distinctly swollen near base; R1 arises from cell well before upper angle, R3-R5 stalked from upper angle, M1 from very near upper angle, M3 from lower angle, MDC more than four times length of UDC, LDC a little shorter than MDC, Cu1 arises nearer to M3 than to Cu2. Hindwing, precostal arising well beyond upper median.

UDC half length of MDC, and LDC about the length of MDC.

There are fifteen species in southern Africa, thirteen of which are found in South Africa.

Key to the species groups within the genus *Pseudonympha*

1. LHW veins conspicuously white *trimenii* species group
- LHW veins not conspicuously white 2
2. Hindwing anal margin white *hippia* species group
- Hindwing anal margin not white 3
3. LHW ocellate spots absent or vestigial *southeyi* species group
- LHW ocellate spots not absent or vestigial 4
4. LHW orange area large, extending far into the cell *magus* species group
- LHW orange area small, not extending far into the cell 5
5. LHW with faint white along the veins *paludis* species group
- LHW without faint white along the veins *varii* species group

Key to the species of genus *Pseudonympha*

1. LHW veins conspicuously white 2
- LHW veins not conspicuously white 5
2. UFW orange-red area continuous to base *poetula*
- UFW orange-red area not continuous to base 3
3. Hindwing anal margin white *trimenii*
- Hindwing anal margin grey 4
4. LHW silvery-grey irroration broad *gaika*
- LHW silvery-grey irroration narrow *paragaika*
5. Hindwing anal margin white *hippia*
- Hindwing anal margin not white 6
6. LHW ocellate spots absent *southeyi*
- LHW ocellate spots present 7
7. LHW with ocellate spot in area M3 absent 11
- LHW with ocellate spot in area M3 present 8
8. LHW ocellate spots heavily edged with dark brown, forming a band *varii*
- LHW ocellate spots not heavily edged with dark brown 9
9. UFW orange area large, extending into cell *machacha*
- UFW orange area small, not extending into cell 10

-
10. UFW orange area very small *paludis*
- UFW orange area not very small *penningtoni*
11. Forewing with a distinct subterminal line above and below *magus*
- Forewing without distinct subterminal line 12
12. UFW orange area small or absent, not extending into the cell, signa present 13
- UFW orange area large, extending into the cell, signa absent 14
13. UFW orange area small *swanepoeli*
- UFW orange area absent *arnoldi*
14. Outer margin of forewing rounded, LHW without white along veins in marginal area *cyclops*
- Outer margin of forewing not rounded, LHW with white along veins in marginal area *magoides*

Species within species groups of the genus *Pseudonympha*

HIPPIA GROUP -

Pseudonympha hippia (Cramer)

Papilio hippia Cramer, 1779. *Uitl. Kapellen* **3**: 48, pl.222, figs C,D.

Type locality: 'Kaa de goede Hoop', [South Africa].

PALUDIS GROUP -

Pseudonympha paludis Riley

Pseudonympha magus f. paludis Riley, 1938. *Trans. R. ent. Soc. Lond.* **87**: 237.

Type locality: Giant's Castle, [KwaZulu-Natal].

Pseudonympha penningtoni Riley

Pseudonympha penningtoni Riley, 1938. *Trans. R. ent. Soc. Lond.* **87**: 235.

Type locality: Bushman's Pass, [KwaZulu-Natal], South Africa.

Pseudonympha machacha Riley

Pseudonympha machacha Riley, 1938. *Trans. R. ent. Soc. Lond.* **87**: 235.

Type locality: Machacha, [Lesotho]

MAGUS GROUP -

Pseudonympha magus (Fabricius)

Papilio magus Fabricius, 1793. *Syst. Ent.* **3**(1): 223.

Type locality: Not stated.

Pseudonympha magoides van Son

Pseudonympha magoides van Son, 1955. *Transv. Mus. Mem.* **8**: 121.

Type locality: Kastrol Nek, Wakkerstroom, [Mpumalanga], South Africa .

Pseudonympha cyclops van Son

Pseudonympha *_cyclops* van Son, 1955. *Transv. Mus. Mem.* **8**: 127.

Type locality: Butler North, [Mutare District, Zimbabwe].

VARIII GROUP -

Pseudonympha varii van Son

Pseudonympha varii van Son, 1955. *Transv. Mus. Mem.* **8**: 123.

Type locality: Greytown, [KwaZulu-Natal], South Africa.

Pseudonympha swanepoeli van Son

Pseudonympha swanepoeli van Son, 1955. *Transv. Mus. Mem.* **8**: 125.

Type locality: Woodbush Village (Houtbosdorp), [Limpopo Province].

Pseudonympha arnoldi van Son

Pseudonympha arnoldi van Son, 1955. *Transv. Mus. Mem.* **8**: 129.

Type locality: Inyanga, [Zimbabwe].

SOUTHEYI GROUP -

Pseudonympha southeyi (Pennington)

Melampias southeyi Pennington, 1953. *J. ent. Soc. sth. Afr.* **16**: 95.

Type locality: Witteberg Mountains, [Eastern Cape], South Africa.

Pseudonympha southeyi wykehami Dickson.

Pseudonympha southeyi wykehami Dickson, 1967. *Entomologist's Rec. J. Var.* **79**: 93.

Type locality: Western Wagenboomsberg, between Matroosberg and Eendracht, [Western Cape], South Africa.

Pseudonympha southeyi kamiesbergensis Dickson

Pseudonympha southeyi kamiesbergensis Dickson, 1967. *Entomologist's Rec. I Var.* **79**: 95.

Type locality: Kamieskroon, [Northern Cape], South Africa.

TRIMENII GROUP -

Pseudonympha poetula Trimen

Pseudonympha poetula Trimen, 1891. *Trans. R. ent. Soc. Lond.* **1891**: 169.

Type locality: Natal Drakensberg, [KwaZulu-Natal].

Pseudonympha trimenii trimenii Butler

Pseudonympha trimenii Butler, 1868. *Cat. Diurn. Lepid. Satyridae Br. Mus.*: 94.

Type locality: Cape Town, [Western Cape].

Pseudonympha trimenii ruthae Dickson

Pseudonympha trimenii ruthae Dickson, 1966. *Entomologist's Rec. J. Var.* 78: 85.

Type locality: Steynsburg, Eastern Cape, South Africa.

Pseudonympha trimenii namaquana van Son

Pseudonympha trimenii namaquana van Son, 1966. *Ann. Transv. Mus.* 25: 88.

Type locality: Garies (Namaqualand), [Northern Cape], South Africa.

Pseudonympha trimenii nieuwwveldensis Dickson

Pseudonympha trimenii nieuwwveldensis Dickson, 1966. *Entomologist's Rec. J. Var.* 78: 273.

Type locality: Molteno Pass, Nieuwveld Mountains, [Western Cape], South Africa.

Pseudonympha gaika Riley

Pseudonympha trimenii gaika Riley, 1938. *Trans. R. ent. soc. Lond.* 87: 234.

Type locality: 'Gaika Kop', [Eastern Cape].

Pseudonympha paragaika Vári

Pseudonympha paragaika Vári, 1971. *Ann. Transv. Mus.* 27: 212.

Type locality: Golden Gate Highlands National Park, [Free State], South Africa.

Remarks

In addition to the papers mentioned in the introduction, a specific species group within *Pseudonympha* was investigated by Curle & Curle (1995).

Many species in endemic butterfly groups in other butterfly genera in South Africa are characterised by currently still being distinctly isolated over the range of the species group, indicating that the separation is either relatively recent or that there has been limited major climatic fluctuations in montane habitats to mix the species concerned.

In *Pseudonympha* most of the species within the groups proposed here fill the characteristic of currently being allopatric. An exception in *Pseudonympha* is the species group *paludis* that consists of three species which can be found sympatrically. These appear to be high altitude relicts, with two only being found clinging to the highest peaks. While all three can be found sympatrically *paludis* is quite widespread at lower altitudes and *machacha* is not only found at the great heights as is *penningtoni*. It is postulated that these three taxa may have been isolated by altitudinal barriers rather than the geographical barriers evident in other groups. Subsequent changes have contracted their habitats and brought them together at the limits of their altitudinal range.

Another feature noted among the species groups is the reduction in the orange-red patches in the forewing upperside as the species in the group are found further north.

These notes have been prepared to enable other workers to assess my conclusions with regard to the relationships within the Satyrinae.

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Checklists of the butterflies of the Ndumo, Tembe and Kosi Bay Nature Reserves, KwaZulu-Natal, South Africa

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Historical background

Prior to the 1970's, very little butterfly research had been done in Maputaland, mainly because of its relative inaccessibility. Pennington visited Kosi Bay in 1929, and found that *Acraea acrita acrita* Hewitson occurred there, as well as *Borbo micans* (Holland) (of which he took a single specimen). The coastal area, however, was difficult to reach, due to poor roads that traversed both thick sand and swamp, so that most lepidopterists confined their work to the more gravelly areas of the Lebombo Mountains, further inland. In August 1973 and April 1974, when V.L. and E. L. Pringle started exploring Kosi Bay, the journey required the use of a Landrover; even this did not prevent mishaps, and on one occasion they were stuck in a bog near Pelindaba for several hours, chopping wood to insert under the wheels in order to extricate themselves from the evil-smelling mud! These expeditions, however, established the fact that *Charaxes protoclea azota* (Hewitson), *C. etesipe tavetensis* Rothschild, as well as *Ypthima granulosa* Butler, occurred in this area: these species had up till then not been recorded from within South Africa.

During the 1980's, two important changes occurred to this area: the proclamation of the Tembe Elephant Reserve, and the tarring of the road from Jozini to Kwangwanase (for reasons of state security). Before these events took place, an attempt was made by the Nationalist government, through Dr. Piet Koornhof, to hand the entire area over to Swaziland. Fortunately, this did not succeed.

In 1988, Clive Quickelberge stunned South African African collectors with the news that he had caught *Euriphene achlys* (Hopffer) in the Manguzi Forest; until then, the only known South African specimens were those taken by Pennington and Cookson in the Ongoye Forest in 1952. He followed this up by recording *Fresna nyassae* (Hewitson) within South Africa for the first time in 1993. Other collectors subsequently also noted the occurrence of the rare *Acraea rabbaiae perlucida* G. A. & S. F. Henning at Manguze and at Tembe.

In 1996, with the permission of the new Kwazulu-Natal Conservation Services, the first serious attempt to document the butterflies of the three northern Maputoland nature reserves was undertaken by E. L. Pringle and R. G. Kyle. Work by Pringle in Tembe soon revealed that *Acraea rabbaiae perlucida*, *Charaxes protoclea azota*, *Charaxes*

etesipe tavetensis, *Ypthima granulosa*, *Gegenes hottentota* (Latreille), *Euriphene achlys* and *Fresna nyassae* were all widespread, and at times locally common, within the Reserve. Kyle subsequently found *E. achlys* and *F. nyassae* in the nearby Sileza Reserve, and in 2000 Pringle and Kyle found *E. achlys* at Kosi Bay. Prior to this, during the late 1990's, *Borbo micans* had been rediscovered by collectors in swamps near Kwangwanase and Kosi Bay, flying in the company of *Neptis jordani* Neave. This *Neptis* had, up till then, only been recorded twice within South Africa, on both occasions from single specimens - one at Manguzi Forest (C. Ficq) and another at Tembe (Pringle). These specimens were erroneously assumed to be nonbreeding migrants.

Some doubt still exists regarding the status of *Acraea machequena* Grose-Smith and *Cigartis appelles* (Oberthür) within South Africa. Kyle recorded a single specimen of *appelles* near Kosi Mouth, and he has recorded five male *machequena* from Kosi Bay. It is still uncertain whether these two species are permanent residents of the area. Of great interest is the fact that the ubiquitous *Colias electo electo* (Linnaeus) has so far not been recorded from this area of Maputoland. The assumption that the butterfly occurs everywhere within our zone is clearly incorrect.

The checklists indicate that most of the more unusual butterflies occur either at Kosi Bay or at Tembe (or, more often, both), with sand providing a vital link between the forests of these areas. The clayey soils of Ndumo clearly exclude many of these species from within thickets, and provide instead a strong savannah component, linking it to Swaziland.

The checklist data for Ndumo and Tembe Elephant Reserve apply solely to species noted from within the Reserves, while the data for Kosi Bay includes species found outside the Reserve, as far inland as the village of Kwangwanase.

FAMILY NYMPHALIDAE

| | KOSI | TEMBE | NDUMO |
|---|------|-------|-------|
| SUBFAMILY DANAINAE | | | |
| <i>Danaus chrysippus aegyptius</i> (von Schreber) | X | X | X |
| <i>Amauris ochlea ochlea</i> (de Boisduval) | X | X | X |
| <i>Amauris niavius dominicanus</i> Trimen | X | X | X |
| <i>Amauris albimaculata albimaculata</i> Butler | X | X | X |
| SUBFAMILY SATYRINAE | | | |
| <i>Melanitis leda helena</i> (Westwood) | X | X | X |
| <i>Bicyclus safitza safitza</i> (Westwood) | X | X | X |
| <i>Bicyclus anynana anynana</i> (Butler) | X | X | X |
| <i>Henetosia perspicua perspicua</i> (Trimen) | X | X | X |
| <i>Coenyra hebe</i> (Trimen) | | X | |
| <i>Physcaeneura panda</i> (de Boisduval) | X | X | X |
| <i>Ypthima impura paupera</i> Ungemach | X | X | X |
| <i>Ypthima granulosa</i> Butler | X | X | X |

| SUBFAMILY ACRAEINAE | KOSI | TEMBE | NDUMO |
|--|------|-------|-------|
| <i>Bematistes aganice aganice</i> (Hewitson) | X | X | X |
| <i>Acraea neobule neobule</i> Doubleday | X | X | X |
| <i>Acraea machequena</i> Grose-Smith | X | | |
| <i>Acraea rabbaiaae perlucida</i> S. & G.Henning | X | X | |
| <i>Hyalites igola</i> (Trimen & Bowker) | X | | |
| <i>Hyalitis eponina</i> (Cramer) | X | X | X |
| <i>Hyalitis cabira</i> (Hopffer) | X | X | |
| <i>Hyalitis esebria</i> (Hewitson) | X | X | X |
| <i>Hyalitis encedon encedon</i> (Linnaeus) | X | X | X |
| <i>Acraea acrita acrita</i> Hewitson | X | X | X |
| <i>Acraea natalica natalica</i> de Boisduval | X | X | X |
| <i>Acraea oncaea</i> Hopffer | X | X | X |
| <i>Acraea acara acara</i> Hewitson | X | X | X |
| <i>Acraea anemosa</i> Hewitson | | X | |
| <i>Acraea violarum</i> de Boisduval | | X | |
| <i>Acraea petraea</i> de Boisduval | X | X | X |
| <i>Pardopsis punctatissima</i> (de Boisduval) | X | | |
| SUBFAMILY CHARAXINAE | | | |
| <i>Charaxes varanes varanes</i> (Cramer) | X | X | X |
| <i>Charaxes candiope candiope</i> (Godart) | X | X | X |
| <i>Charaxes protoclea azota</i> (Hewitson) | X | X | |
| <i>Charaxes jasius satumus</i> Butler | X | X | X |
| <i>Charaxes castor flavifasciatus</i> Butler | X | X | X |
| <i>Charaxes brutus natalensis</i> Staudinger | X | X | X |
| <i>Charaxes cithaeron cithaeron</i> C. & R. Felder | | X | |
| <i>Charaxes zoolina zoolina</i> (Westwood) | X | X | X |
| <i>Charaxes jahlusia argynnides</i> Westwood | X | X | X |
| <i>Charaxes etesipe tavetensis</i> Rothschild | X | X | X |
| <i>Charaxes achaemenes achaemenes</i> C. & R. Felder | | X | X |
| <i>Charaxes ethalion ethalion</i> (de Boisduval) | X | X | X |
| <i>Charaxes phaeus</i> Hewitson | | | X |
| <i>Euxanthe wakefieldi</i> (Ward) | X | X | X |
| SUBFAMILY LIMENITINAE | | | |
| <i>Euryphura achlys</i> (Hopffer) | X | X | |
| <i>Euphaedra neophron neophron</i> (Hopffer) | X | X | X |
| <i>Hamanumida daedalus</i> (Fabricius) | X | X | X |
| <i>Pseudacraea boisduvalii trimenii</i> Butler | X | X | X |
| <i>Pseudacraea expansa</i> Butler | X | X | X |
| <i>Neptis saclava marpessa</i> Hopffer | X | X | X |
| <i>Neptis goochii</i> Trimen | X | X | X |

| | | | |
|---|---|---|---|
| <i>Neptis laeta</i> Overlaet | X | | X |
| <i>Neptis jordani</i> Neave | X | X | |
| <i>Sevenia boisduvali boisduvali</i> (Wallengren) | X | X | X |
| <i>Sevenia natalensis</i> (De Boisduval) | X | X | X |
| <i>Byblia anvatarata acheloia</i> (Wallengren) | X | X | X |
| <i>Eurytela hiarbas angustata</i> Lathy | X | X | X |
| <i>Eurytela dryope angulata</i> Aurivillius | X | X | X |
| SUBFAMILY NYMPHALINAE | | | |
| <i>Hypolimnas misippus</i> (Linnaeus) | X | X | X |
| <i>Hypolimnas deceptor deceptor</i> (Trimen) | X | | |
| <i>Hypolimnas anthedon wahlbergi</i> (Wallengren) | X | | |
| <i>Salamis parhassus</i> (Drury) | X | X | X |
| <i>Salamis anacardii nebulosa</i> Trimen | X | X | X |
| <i>Catacoptera cloanthe cloanthe</i> (Stoll) | | X | |
| <i>Precis ceryne ceryne</i> (de Boisduval) | X | | |
| <i>Precis terea elgiva</i> (Hewitson) | X | X | |
| <i>Precis natalica natalica</i> C & R Felder | X | X | X |
| <i>Precis hierta cebrene</i> (Trimen) | X | X | X |
| <i>Precis oenone oenone</i> (Linnaeus) | X | X | X |
| <i>Precis orithya madagascariensis</i> (Guenée) | X | X | X |
| SUBFAMILY ARGYNNINAE | | | |
| <i>Lachnoptera ayresii</i> Trimen | X | | |
| <i>Phalantha phalantha aethiopica</i> (Rothschild & Jordan) | X | X | |
| <i>Phalantha eurytis eurytis</i> (Doubleday) | X | X | X |
| SUBFAMILY LIBYTHEINAE | | | |
| <i>Libythea labdaca Laius</i> Trimen | | | X |
| FAMILY LYCAENIDAE | | | |
| SUBFAMILY PORITINAE | | | |
| <i>Pentila tropicalis tropicalis</i> (de Boisduval) | X | X | X |
| <i>Ornipholidotos peucetia penningtoni</i> (Riley) | X | | |
| <i>Teriomima zuluana</i> van Son | X | X | |
| <i>Baliochila aslanga</i> (Trimen) | X | X | X |
| <i>Deloneura millari millari</i> Trimen | X | | |
| MILETINAE | | | |
| <i>Lachnocnema bibulous</i> (Fabricius) | | X | X |
| <i>Lachnocnema durbani</i> Trimen & Bowker | | X | |

| SUBFAMILY LYCAENINAE | KOSI | TEMBE | NDUMO |
|---|------|-------|-------|
| <i>Iolaus bowkeri tearei</i> (Dickson) | X | X | |
| <i>Iolaus silarus silarus</i> Druce | | X | X |
| <i>Iolaus pallene</i> (Wallengren) | X | X | |
| <i>Iolaus sidus</i> Trimen | | | X |
| <i>Hypolycaena philippus philippus</i> (Fabricius) | X | X | X |
| <i>Hypolycaena lochmophila</i> Tite | X | X | |
| <i>Hypolycaena buxtoni buxtoni</i> Hewitson | X | X | |
| <i>Hypolycaena caeculus caeculus</i> (Hopffer) | | | X |
| <i>Leptomyrina hirundo</i> (Wallengren) | X | X | X |
| <i>Deudorix diocles</i> Hewitson | | X | |
| <i>Deudorix dariaves</i> Hewitson | X | X | |
| <i>Deudorix dinomenes</i> Grose-Smith | X | X | X |
| <i>Deudorix dinochares</i> Grose-Smith | X | X | |
| <i>Deudorix antalus</i> (Hopffer) | X | X | X |
| <i>Deudorix vansoni</i> Pennington | | X | |
| <i>Myrina silenus ficedula</i> Trimen | X | | |
| <i>Myrina dermaptera dermaptera</i> (Wallengren) | X | | |
| <i>Cigaritis natalensis</i> (Westwood) | X | X | X |
| <i>Cigaritis apelles</i> (Oberthür) | X | | |
| <i>Cigaritis ella</i> (Hewitson) | | X | |
| <i>Axiocerses tjoane tjoane</i> (Wallengren) | X | X | X |
| <i>Axiocerses amanga amanga</i> (Westwood) | | X | |
| <i>Aloeides taikosama</i> (Wallengren) | | X | |
| <i>Aloeides aranda</i> (Wallengren) | | X | X |
| <i>Anthene lemnos lemnos</i> (Hewitson) | X | | |
| <i>Anthene amarah amarah</i> (Guérin-Méneville) | X | X | X |
| <i>Anthene kersteni</i> (Gerstaecker) | X | X | X |
| <i>Anthene princeps</i> (Butler) | X | | X |
| <i>Cacyreus lingeus</i> (Stoll) | X | X | |
| <i>Cacyreus marshalli</i> Butler | X | X | |
| <i>Tuxentius melaena melaena</i> (Trimen & Bowker) | X | X | X |
| <i>Leptotes pirithous</i> (Linnaeus) | X | X | X |
| <i>Leptotes brevidentatus</i> (Tite) | X | X | X |
| <i>Leptotes babaulti</i> (Stempffer) | X | | |
| <i>Lampides boeticus</i> (Linnaeus) | X | X | X |
| <i>Pseudonacaduba sichela sichela</i> (Wallengren) | X | | |
| <i>Lepidochrysops patricia</i> (Trimen & Bowker) | | X | |
| <i>Euchrysops osiris</i> (Hopffer) | X | X | |
| <i>Euchrysops barkeri</i> (Trimen) | X | X | |
| <i>Euchrysops malathana</i> (de Boisduval) | X | X | |
| <i>Eicochrysops messapus mahallakoena</i> (Wallengren) | X | X | |

| | KOSI | TEMBE | NDUMO |
|---|------|-------|-------|
| <i>Eicochrysaps hippocrates</i> (Fabricius) | X | | |
| <i>Cupidapsis cissus</i> (Godart) | X | | |
| <i>Cupidapsis jobates jobates</i> (Hopffer) | | X | |
| <i>Actizera lucida</i> (Trimen) | | X | |
| <i>Zizeeria knysna</i> (Trimen) | X | X | X |
| <i>Azanus jesous</i> (Guérin Méneville) | X | X | X |
| <i>Azanus natalensis</i> (Trimen & Bowker) | X | X | X |
| <i>Azanus moriqua</i> (Wallengren) | X | X | |
| <i>Azanus mirza</i> (Plotz) | X | | |
| <i>Chilades trochylus</i> (Freyer) | | X | |
| <i>Zizula hylax</i> (Fabricius) | | X | |

FAMILY PIERIDAE

SUBFAMILY COLIADINAE

| | | | |
|---|---|---|---|
| <i>Catapsilia florella</i> (Fabricius) | X | X | X |
| <i>Eurema hecabe solifera</i> (Butler) | X | | |
| <i>Eurema brigitta brigitta</i> (Stoll) | X | X | X |

SUBFAMILY PIERINAE

| | | | |
|---|---|---|---|
| <i>Pinacopteryx eriphia eriphia</i> (Godart) | | X | X |
| <i>Eronia cleodora cleodora</i> Hübner | X | X | X |
| <i>Eronia leda</i> (de Boisduval) | X | X | X |
| <i>Nepheronia argia variegata</i> G.Henning | X | X | X |
| <i>Nepheronia buquetii buquetii</i> (de Boisduval) | X | X | X |
| <i>Nepheronia thalassina sinalata</i> (Suffert) | X | X | X |
| <i>Colotis amata calais</i> (Cramer) | | | X |
| <i>Colotis vesta argillaceus</i> (Butler) | | X | X |
| <i>Colotis ione</i> (Godart) | | X | X |
| <i>Colotis regina</i> (Trimen) | | X | X |
| <i>Colotis danae annae</i> (Wallengren) | | X | X |
| <i>Colotis auxo</i> (Lucas) | | X | X |
| <i>Colotis antevippe gavisia</i> (Wallengren) | X | X | X |
| <i>Colotis evippe omphale</i> (Godart) | X | X | X |
| <i>Colotis pallene</i> (Hopffer) | | X | X |
| <i>Colotis evagore antigone</i> (de Boisduval) | X | X | X |
| <i>Colotis eris eris</i> (Klug) | | X | X |
| <i>Colotis subfasciatus subfasciatus</i> (Swainson) | | X | X |
| <i>Belenois thysa thysa</i> (Hopffer) | X | X | |
| <i>Belenois aurota aurota</i> (Fabricius) | X | X | X |
| <i>Belenois creona severina</i> (Stoll) | X | X | X |
| <i>Belenois gidica abyssinica</i> (Lucas) | X | X | X |
| <i>Dixeia pigea</i> (de Boisduval) | | | X |

| | | | |
|--|---|---|---|
| <i>Dixeia charina charina</i> (de Boisduval) | X | | |
| <i>Dixeia spilleri</i> (Spiller) | X | | X |
| <i>Appias epaphia contracta</i> (Butler) | X | X | X |
| <i>Pontia helice helice</i> (Linnaeus) | X | | |
| <i>Leptosia alcesta inalcesta</i> Bernardi | X | X | X |
| <i>Mylothris agathina agathina</i> (Cramer) | X | X | X |

| | KOSI | TEMBE | NDUMO |
|---|------|-------|-------|
| SUBFAMILY PAPILIONIDAE | | | |
| SUBFAMILY PAPILIONINAE | | | |
| <i>Papilio dardanus cenea</i> Stoll | X | X | X |
| <i>Papilio constantinus constantinus</i> Ward | X | X | X |
| <i>Papilio demodocus demodocus</i> Esper | X | X | X |
| <i>Papilio nireus lyaeus</i> Doubleday | X | X | X |
| <i>Graphium angolanus angolanus</i> (Goeze) | X | X | |
| <i>Graphium morania</i> (Angas) | | X | |
| <i>Graphium leonidas leonidas</i> (Fabricius) | X | X | |
| <i>Graphium antheus</i> (Cramer) | X | X | |
| <i>Graphium policenes policenes</i> (Cramer) | | X | |
| <i>Graphium porthaon porthaon</i> (Hewitson) | X | X | |
| <i>Graphium colonna</i> (Ward) | X | X | |
| FAMILY HESPERIIDAE | | | |
| SUBFAMILY COELIADINAE | | | |
| <i>Coeliades libeon</i> (Druce) | X | | |
| <i>Coeliades pistratus</i> (Fabricius) | X | X | X |
| <i>Coeliades forestan forestan</i> (Stoll) | X | X | X |
| <i>Coeliades lorenzo</i> Evans | X | X | X |
| SUBFAMILY PYRGINAE | | | |
| <i>Celaenorrhinus mokeezi separata</i> (Strand) | X | | |
| <i>Tagiades flesus</i> (Fabricius) | X | X | |
| <i>Eagris nottoana nottoana</i> (Wallengren) | X | X | X |
| <i>Sarangesa phidyle</i> (Walker) | | X | |
| <i>Sarangesa motozi</i> (Wallengren) | X | X | X |
| <i>Netrobalane canopus</i> (Trimen) | X | X | |
| <i>Leucochitonea levubu</i> Wallengren | | X | |
| <i>Abantis venosa</i> Trimen & Bowker | | X | |
| <i>Abantis paradise</i> (Butler) | X | X | |
| <i>Spialia confusa confuse</i> (Evans) | | X | |
| <i>Spialia delogoae</i> (Trimen) | | X | |
| <i>Spialia dromus</i> (Plötz) | X | X | |
| <i>Spialia diomus ferax</i> (Wallengren) | | X | |
| <i>Spialia spio</i> (Linnaeus) | X | | |
| <i>Gomalia elma elma</i> (Trimen) | | X | |
| SUBFAMILY HESPERIINAE | | | |
| <i>Tsitana tsita</i> (Trimen) | X | X | |

| | KOSI | TEMBE | NDUMO |
|--|------|-------|-------|
| <i>Kedestes mohozutza</i> (Wallengren) | X | | |
| <i>Kedestes wallengrenii wallengrenii</i> (Trimen) | X | | |
| <i>Kedestes macomo</i> (Trimen) | | X | |
| <i>Kedestes callicles</i> (Hewitson) | | X | |
| <i>Acleros mackenii</i> (Trimen) | X | X | |
| <i>Parosmodes morantii morantii</i> (Trimen) | X | | |
| <i>Moltena fiara</i> (Butler) | X | | |
| <i>Zophopetes dysmephila</i> (Trimen) | X | X | |
| <i>Fresna nyassae</i> (Hewitson) | | X | |
| <i>Platylesches moritili</i> (Wallengren) | X | X | X |
| <i>Platylesches neba</i> (Hewitson) | X | X | |
| <i>Platylesches ayresii</i> (Trimen & Bowker) | X | | |
| <i>Pelopidas mathias</i> (Fabricius) | X | X | |
| <i>Pelopidas thrax inconspicua</i> (Bertoloni) | X | X | X |
| <i>Borbo lugens</i> (Hopffer) | X | X | |
| <i>Borbo fatuellus fatuellus</i> (Hopffer) | X | X | |
| <i>Borbo fallax</i> (Gaede) | X | X | X |
| <i>Borbo detecta</i> (Trimen) | X | X | X |
| <i>Borbo micans</i> (Holland) | X | | |
| <i>Borbo ferruginea dondo</i> Evans | X | | |
| <i>Borbo borbonica borbonica</i> (de Boisduval) | X | | |
| <i>Borbo gemella</i> (Mabille) | X | X | X |
| <i>Parnara monasi</i> (Trimen & Bowker) | X | | |
| <i>Gegenes niso niso</i> (Linnaeus) | X | X | X |
| <i>Gegenes hollentota</i> (Latreille) | | X | X |
| | 176 | 176 | 116 |

Conclusion

The total of 221 species recorded from the research area, which covers roughly 80,000 hectares, is greater than the number recorded from the Kruger National Park (219 species). The latter encompasses an area of over a million hectares. There is little doubt that this region is the richest butterfly area in South Africa as regards both species diversity and butterfly densities. The only other area which is comparable is the Soutpansberg – Pafuri area of the Northern Province.

This research has brought to light the occurrence of many strikingly beautiful and unusual butterflies within northern Mapotoland. Without the co-operation of the KZN Wildlife Services and their Reserve personnel, this information would not have come to light. Before biodiversity can be protected, it is necessary to obtain the required database from which to work; this is why it is vital that projects of this nature be encouraged.

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Further notes on the Genus *Euryphura* Staudinger (Lepidoptera: Nymphalidae)

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Abstract

Euryphura is considered to include seven species and seven subspecies. *E. athymoides* Berger, stat.n. is raised to species level. *E. isuka* Stoneham and *E. kiellandi* Hecq are newly placed as subspecies of *E. chalcis* (C. & R. Felder). *E. fontainei* Hecq is newly placed as a subspecies of *E. porphyryon* (Ward). *E. plautilla* ab. *aereofasciata* Schultze, *E. jolyana* Hecq and its replacement name *E. hecqui* (Ackery) are placed as new synonyms of *E. chalcis chalcis*. *Cymothoe lisidora* Aurivillius, *E. plautilla aurimarginata* Suffert and *E. p. albimargo* form *neoalbofasciata* van Someren are transferred from the synonymy of *E. chalcis* to that of *E. plautilla* (Hewitson).

Introduction

It has long been recognised that the taxonomy of *Euryphura* Staudinger has been in a state of chaos. This is in large part due to the frequent misidentification of species in the past, combined with a high degree of variability and the consequent multitude of names in the literature. Even its generic status has been questioned, being sometimes placed, without adequate justification, as a subgenus of *Euriphene* Boisduval (e.g., Ackery *et al.* 1995). The following notes are designed to supplement an earlier review (Hancock 1990), in which five species were recognised. In particular, the status of the taxa *E. isuka athymoides* Berger, originally described as an ab. by Schultze (1920), and *E. plautilla* ab. *aereofasciata* Schultze are discussed and four additional species described by Hecq (1990) are reviewed. Three synonyms incorrectly attributed to *E. chalcis* (C. & R. Felder) by Hancock (1990) are transferred to *E. plautilla* (Hewitson).

Abbreviations used: TL = Type locality; ♂ = male; ♀ = female.

Euryphura Staudinger

Euryphura Staudinger, 1891: 105. Type-species *Euriphene porphyryon* Ward, 1871.

This is a small genus of forest-dwelling butterflies. Seven species and seven subspecies are here recognized. Until the relationships between *Euriphene*, *Euryphura* and similar taxa (including *Crenidomimas* Karsch) are better understood, *Euryphura* should be maintained as a distinct genus. As noted by van Son (1979), *Euryphura* differs significantly from *Euriphene* in wing shape, particularly in males.

***Euryphura achlys* (Hopffer)**

Harma achlys Hopffer, 1855: 641 (♀). TL Kerimbas Island, Mozambique.

Both sexes of this east and southeast African species appear to be essentially monomorphic green. As noted by Hancock (1990), it differs from green forms of *E. chalcis* by the two medial dark patches in spaces 1a - 1b on the upperside of the forewing, close together in *achlys* and far apart in *chalcis*.

***Euryphura athymoides* Berger, stat. n.**

Euryphura plautilla f. ab. *athymoides* Schultze, 1920: 703, fig. 23 (♀). TL Nginda, Yukaduma & Man, S. Cameroon. Infrasubspecific name.

Euryphura isuka athymoides Berger, 1981: 137, pl. 106, figs 5-6 (a). Raised from form.

This species is known from southern Cameroon, Central African Republic, Congo and Democratic Republic of the Congo. Originally described by Schultze (1920) as a female ab. of *E. plautilla*, it was considered a form of *E. chalcis* by Hancock (1990). However, further investigation suggests that it is distinct, as noted by Berger (1981), who validated the name by raising it to subspecific level. It differs from *chalcis* in both sexes by the more basal position of the dark inner medial spots in forewing spaces 1b-2 [♂ the spot in 3 absent] or 1b-3 [♀] (with those in 2 and 3 being nearly vertical rather than chevron-shaped) and a less distinctly curved dark band around the hindwing discal cell (see illustrations in Berger 1981). The distinct (dark) black and white female pattern is also unlike anything seen in *chalcis*, particularly marginally. In *E. c. isuka* Stoneham, with which it was associated by Berger (1981), the white areas in the female are more extensive, the submarginal spots are smaller and the wing margins paler, as in typical *chalcis*. Both sexes of *E. athymoides* appear to be monomorphic.

***Euryphura chalcis* (C. & R. Felder)**

This is a widespread species, polymorphic in both sexes. Based on the various forms present, which suggests genetic as well as geographic separation, three subspecies appear to be recognisable. Although one of these, *E. c. kiellandi* Hecq, has been regarded as a species (Hecq 1990, Kielland 1990), similar pattern characteristics in it, *E. c. isuka* and *E. c. chalcis* suggest that these subspecies are not worthy of specific rank.

***E. chalcis chalcis* (C. & R. Felder)**

Harma chalcis C. & R. Felder, 1860: 234 (♀). TL "Guinea".

Euryphene doralice Hewitson, 1865: 46, pl. 23, fig. 18 only (♀). TL Old Calabar, Nigeria.

Harma claudianus Druce, 1874: 157 (♀). TL Cameroon.

Euriphura plautilla f. var. [ab.] *albofasciata* Staudinger, 1896: 214 (♀). TL Barombi Station, W. Cameroon. Infrasubspecific name.

Euryphura oliva Suffert, 1904: 112 (♀). TL Togo.

Euryphura oliva albula Suffert, 1904: 113 (♀). TL Togo.

Euryphura ochracea Bartel, 1905: 146 (♀). TL Mukenge, Congo-Gebiet, Democratic Republic of the Congo].

Euryphura fulminea Bartel, 1905: 147 (♀). TL “West Africa”.

Euryphura euthalioides Schultze, 1916: 160 (♀). TL Feintschang, upper Cross Rivers region, NW Cameroon.

Euryphura plautilla f. ab. *versicolora* Schultze, 1920: 703 (♀). TL Molundu, S. Cameroon. Intrasubspecific name.

Euryphura plautilla m. ab. *aereofasciata* Schultze, 1920: 706 (♂). TL Sangmelima, S. Cameroon. Intrasubspecific name. **Syn. n.**

Euryphura plautilla f. form *albimargo* Joicey & Talbot, 1921: 63, pl. 11, fig. 20 (♀). TL Ituri Forest, [Democratic Republic of the Congo]. Intrasubspecific name.

Euryphura plautilla albimargo van Someren, 1939: 59 (♀). Raised from form.

Euryphura plautilla albimargo f. form *neoliva* van Someren, 1939: 62, pl. 20, fig. 5 (♀). TL Budongo, Uganda. Intrasubspecific name.

Euryphura plautilla albimargo f. form *bicolor* van Someren, 1939: 64, pl. 21, fig. 14 (♀). TL Budongo, Uganda. Intrasubspecific name.

Euryphura vansomereni Jackson, 1956: 68, pl. 7, figs 7, 8; pl. 8, figs 7, 8 (♀). TL Kigezi, Uganda.

Euryphura jolyana Hecq, 1990: 38, fig. 2 (♀). TL Mbandaka, [Democratic Republic of the Congo]. **Syn. n.**

Euriphene (Euryphura) hecqui Ackery, in Ackery *et al.* 1995: 398 (♀). Replacement name for *Euryphura jolyana* Hecq, 1990, a junior secondary homonym of *Euriphene jolyana* Hecq, 1987. **Syn. n.**

This subspecies is known from Guinea and Sierra Leone to Cameroon, Congo, Democratic Republic of the Congo, northwestern Zambia and western Uganda. It was also recorded (as *ochracea*) from Kigoma in northwestern Tanzania by Kielland (1990). This is the most variable subspecies, the above synonymy reflecting the plethora of names in the literature. Males may be brown, green, partially green, orange or reddish on the upperside and yellowish-ochre, pale brown, orange-brown or red-brown on the underside, with or without an opalescent sheen. Females are exceptionally variable and also occur with or without an opalescent sheen on the underside.

The name *chalcis* is based upon a green form of the female and many other names refer to green (*oliva*, *neoliva*), partially green (*fulminia*), bluish-green (*euthalioides*) or white and green (*albofasciata*, *albula*) female forms. Other female forms are largely brown to orange-brown, mostly white (*albimargo*, *bicolor*), mostly reddish with a brown forewing apical area (*claudianus*) or with the hindwing mostly orange (*doralice*, *versicolora*). The name *ochracea* is based on a brown male with ochraceous underside and a reddish-brown female with violet-brown underside. Three taxa are newly synonymised here. The name *aereofasciata*, overlooked in the literature since its description (Schultze 1920), refers to a

Partially green male. The name *hecqi* (= *jolyana*), described as a species by Hecq (1990) refers to green forms of both sexes with no specifically distinct characters; the largely grey, opalescent undersides appear to be no more than an example of further variation.

***E. chalcis isuka* Stoneham stat. n.**

Euryphura isuka Stoneham, 1935: 1 (♀). TL. Malawa Forest, [Kenya].

Euryphura isuka ithako Stoneham, 1935: 2 (♀). TL Kakamega, [Kenya].

Euryphura plautilla albimargo van Someren, 1939: pl. 20, fig. 4 only (♀). Misidentification.

Euryphura plautilla albimargo f. form *conformis* van Someren, 1939: 62, pl. 20, fig. 8 (♀). TL Jinja, Uganda. Intrasubspecific name.

Euryphura plautilla albimargo f. form *ithako*; van Someren 1939: 63, pl. 21, figs 11-12 (♀).

Euryphura plautilla albimargo f. form *neoathymoides* van Someren, 1939: 64, pl. 21, fig. 13 (♀). TL Kampala, Uganda. Intrasubspecific name.

Eurtpura albimargo; Larsen, 1991: 306 (♀). Misidentification.

This subspecies occurs in eastern Uganda and western Kenya. The male is brown and apparently monomorphic. The female is essentially dimorphic, with brown (*conformis*) or brown-and white (*ithako*, *neoathymoides*) forms. The lack of the extensive variation seen in typical *chalcis* suggests that this population is at least subspecifically distinct, but other characters are insufficient to separate it at the species level.

***E. chalcis kiellandi* Hecq, stat. n.**

Euryphura kiellandi Hecq, 1990: 38, fig. 4 (♀). TL Mpanda, W. Tanzania; Kielland, 1990: 117, pls 36, 66 (♀).

This subspecies is known only from the Mpanda district of western Tanzania. The male is brown and apparently monomorphic. The female is variable in colour but the basic pattern, with a brown basal area on both wings and paler discal areas, appears to be relatively uniform. Kielland (1990) illustrated orange and orange-brown forms and also a blue form unknown elsewhere in *chalcis*. Both Hecq (1990) and Kielland (1990) considered *kiellandi* to be a distinct species and the existence of the blue form suggests this may be warranted. However, as with *E. c. isuka*, there appear to be no characters sufficient to separate non-blue forms from *chalcis* at the species level.

***Euryphura ducarme* Hecq**

Euryphura ducarme Hecq, 1990: 35, fig. 1 (♀). TL Kisangani, [Democratic Republic of the Congo].

This species is known only from the Kisangani area, Democratic Republic of the Congo. Both sexes differ from *E. chalcis* and *E. plautilla* in overall appearance (see illustrations in Hecq 1990) and, although known from very few specimens, are presumably monomorphic.

***Euryphura nobilis* Staudinger**

Euryphura nobilis Staudinger, 1891: 107, pl. 1, fig. 3. TL Sierra Leone.

Hancock (1990) recognised two subspecies of this distinctive species, *E. n. nobilis* from Sierra Leone, Ivory Coast, Central African Republic and Congo and *E. n. viridis* Hancock from southern Democratic Republic of the Congo.

***Euryphura plautilla* (Hewitson)**

Euryphene plautilla Hewitson, 1865: 47, pl. 24, figs 14, 15 (♂). TL Old Calabar, Nigeria.

Euryphene doralice; Hewitson, 1865: 46, pl. 23, figs 19-20 only (♀). Misidentification.

Cymothoe lisidora Aurivillius, 1891: 214 (♀). TL Cameroon. **Syn. rev.**

Euryphura aurantiaca Aurivillius, 1898: 179 (♀). TL Umangi, [NW Democratic Republic of the Congo].

Euryphura plautilla aurimarginata Suffert, 1904: 114 (). TL Barombi Station, W. Cameroon. **Syn. rev.**

Euryphura plautilla albimargo; van Someren, 1939: pl. 20, fig. 3 only (♂). Misidentification.

Euryphura plautilla albimargo f. form *neoalbofasciata* van Someren, 1939: 62, pl. 21, fig. 10 (♀). TL Budongo, Uganda. Infrasubspecific name. **Syn. rev.**

This species is known from Nigeria, Cameroon, Congo, Democratic Republic of the Congo and western Uganda. It differs from *E. chalcis* in the less deeply concave forewing margin and the straighter dark band around the hindwing discal cell, being much more incurved towards the wing base in *chalcis* than in *plautilla*. The male also has the hindwing less distinctly produced at the tornus and the female is generally brown with a subapical white patch on the forewing.

Both sexes are weakly dimorphic, the marginal part of the hindwing being brown (*plautilla*, *aurantiaca*, *neoalbofasciata*) or yellow (*lisidora*, *aurimarginata*). The name *lisidora* was applied by Aurivillius (1891) to the specimens of *doralice* misidentified

by Hewitson (1865). The names *lisidora*, *aurimarginata* and *nealbofasciata* were incorrectly placed in the synonymy of *E. chalcis* by Hancock (1990) and Ackery *et al.* (1995).

***Euryphura porphyron* (Ward)**

Euryphene porphyron Ward, 1871: 118 (♀). TL Cameroon.

Bernardi (1965) and Hancock (1990) recognised four subspecies: *E. p. togoensis* Suffert from Sierra Leone to Nigeria, *E. p. porphyron* from Cameroon, *E. p. grassei* Bernardi from Gabon and Congo and *E. p. congoensis* Joicey & Talbot from northeastern Democratic Republic of the Congo. An additional subspecies, described as a species by Hecq (1990), is added here.

***E. porphyron fontainei* Hecq, stat. n.**

Euryphura fontainei Hecq, 1990: 36, fig. 3 (♀). TL Sankuru, Kato-Kombe, [central Democratic Republic of the Congo].

This subspecies is known only from central Democratic Republic of the Congo. It appears to be closely allied to *E. p. porphyron* and I am unable to find sufficient characters to separate it at the species level. The locality given for the holotype of *E. p. congoensis*, 'Upper Kasai district' [originally ex Druce collection (Bernardi 1965)], appears to be an error as that subspecies is otherwise known only from localities to the northeast of *E. p. fontainei*.

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