METAMORPHOSIS

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Leto venus (Hepialidae) female
(Forewing length 60 – 70 mm)

LEPIDOPTERISTS' SOCIETY OF SOUTHERN AFRICA

EXECUTIVE COUNCIL

The **aims** of the Lepidopterists' Society of Southern Africa are to promote the scientific study and conservation of Lepidoptera in Southern Africa; and to promote the publication of original scientific papers as well as articles of a less technical nature in the journal, *Metamorphosis,* or other publications of the Society.

Membership of the Society is open to all persons interested in the study of Lepidoptera. There is no geographical limit to membership.

There are three categories of membership:

	Local	**Overseas**	
Full members	R55,00 p.a.	US$40,00 p.a.	UK £20
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Persons may become **Life Members** by paying eight hundred Rand (R800,00) locally and US$600.00 overseas.

Membership fees are due on **1 April**. Overseas rates are higher due to increased postage.

CORRESPONDENCE

The Hon. Secretary, P.O. Box 470, FLORIDA HILLS, 1716

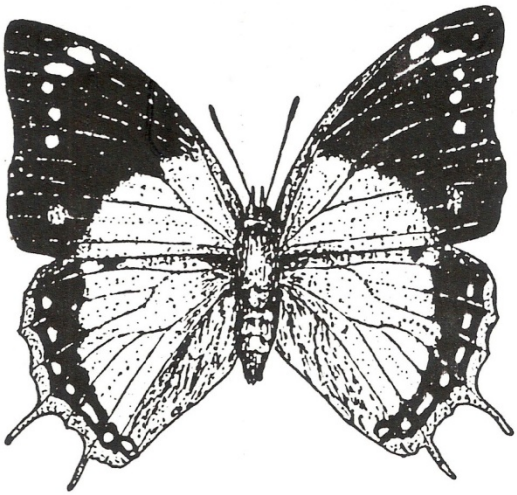
All drawings, unless otherwise stated, are by S.F. Henning.

EDITORIAL

Recently I have had some members enquiring why we had published articles on beetles in our journal concerned with butterflies and moths. I always answer by pointing out that most of our members are amateur enthusiasts who probably started studying and collecting butterflies because they are showy and conspicuous and have no knowledge of other insect groups. A knowledge of other insects groups helps us - get a better perspective of the problems involved in conservation of our flora and fauna . Once they have been introduced to other insect groups several members have gone on to study cicadas, beetles and antlions. Over the past few years, among the most popular contributions to our annual conference are talks by Invited experts on other insect groups. As a consequence of these talks several members suggested that we include a section in *Metamorphosis* on other insects groups that one is likely to encounter In the bush. We have published a few articles now on beetles. Would you like us to continue publishing introductory articles on other insect groups? They could be more formalized and deal with a different insect order or family per issue In the same vein as our current *Getting to know moths.* Please let me know what you think.

We are still short of articles for *Metamorphosis.* Please put pen to paper and tell us about your latest collecting trip, interesting captures and observations.

W.H. Henning



Charaxes phaeus female upperside

COMMENT BY THE PRESIDENT

September t994 must have set some sort of record in South African butterfly literature with the publication of two new books. These books cater for the extremes of the market. Mark Williams' delightful little book *Southern African Butterflies, A Field Guide* is an introductory book to help the layman get to know butterflies. Its small size allows it to be used in the field for identification of the commoner species. The identification of the various species is greatly simplified by grouping together in the colour plates all the butterflies of similar colouring and size, irrespective of their taxonomic relationships. This is certainly a great help to the novice who has no idea of butterfly families. At the price it is must for all beginners.

The second book is the long awaited second edition of *Pennington's Butterflies of Southern Africa* revised by G.A. Henning, E.L. Pringle and J.B. Ball. The text is still not what I would consider essential for a book of this type but is a great improvement on the first edition. Struik's unfortunately appears to have rushed the final proof reading and a number of small errors have crept In Including several picked up by the editors in their proof reading and not corrected. However, despite this the book is a must for every Southern African butterfly enthusiast as it deals with and illustrates all known species from our sub-region, including descriptions of 42 new species and subspecies. The illustrations include 40 life cycle paintings by Gowan Clark and 170 colour plates consisting of over 3500 specimens. It is well worth the R400 plus one has to fork out to buy it. .

Talking about books I think I should whet your appetite for what will (hopefully) be published next year. The Society is at the moment involved in the publication of *The Emperor Moths of Namibia* by Rolf Oberprieler which should hopefully appear In early 1995. The Society then hopes to follow this up by publishing *Gardening with Butterflies in Southern Africa* by A.J.M. Claassens & S. F. Henning which deals with the 50 most common species to be found in one's garden region by region. Each species and their most suitable foodplants to be planted in gardens are discussed in detail.

The final book to be published next year is *Southern African Butterflies - Their Ecology, Behaviour and Conservation,* Volume 1 - Hesperiidae, Pieridae, Papilionidae by G.A. Henning, S.F. Henning, J. Joannou and S.E. Woodhall. This is the first of five volumes covering in detail all the butterfly species in Southern Africa. There are keys for the identification of all species. Each species is described - male, female, egg, larva, pupa; foodplants listed; habitat, ecology, behaviour described; distribution given with distribution map; conservation status and measures taken to protect It discussed Each species has been photographed in the wild - male, female, and, when known, egg, larva and pupa. The illustrations are next to the appropriate text. This publication does not compete with *Pennington's Butterflies of Southern Africa* but compliments it. It deals with aspects not covered by Pennington's Book and will also be of interest to the general naturalist and conservationist. Volume 2 covering the Nymphalidae (Danainae, Satyrinae, Acraeinae, Nymphalinae, Charaxinae) will be published in 1996. Volumes 3 & 4 covering the Lycaenidae will be published in 1997 and 1998, with the final volume published in 1999. So there is a lot to look forward to over the next few years, so start saving up.

Stephen Henning

REGIONAL ROUNDUP

By this time most members have acquired the new revised edition of *Pennington's Butterflies of Southern Africa.* This edition will hopefully help you, to identify your specimens in your collections. The next step is that the Society wishes to compile an atlas of the butterflies and moths of the Transvaal and Orange Free State. As you well know the Natal Museum has undertaken to atlas the Natal butterflies under the guidance of Jason Londt. The South African Museum in Cape Town will atlas the Cape Province. In this way, and by dividing energies, the complete atlas of South African butterflies can be produced. At this stage the most we expect from our members is locality. collector and date of capture. We appreciate that this is an effort but would encourage members, even in small stages, to make this data available. Of particular interest would be localities not mentioned in Swanepoel's *Butterflies of South Africa* (1953). Please make the effort!

Please read the conservation proposals contained in the September *Metamorphosis* and contact me with any suggestions. We rely on you, the member, to guide us to a successful conservation strategy for the lepidopterists' Society.

From a collecting point of view the recent few months have been rather woeful for many collectors what with the drought in the early part of the season and lately the cloudy weather not encouraging long trips. I have been to the Natal midlands for *Lepidochrysops* and returned with only two browns. One of the trips was to search for *L. hypopolia* (Trimen & Bowker) in the foothills of the Berg, after not being seen for over 120 years. Perhaps I was slightly optimistic to expect a good days collecting. Needless to say the species is still extinct, maybe next year will be better.

A number of trips have been made into Namaqualand during September and October and some good species recorded. *Thestor dryburghi* Van Son was apparently out and in some cases causing confusion. An interesting dark form of *T. protumnus aridus·* Van Son from near the Namaqualand coast was at first thought to be *dryburghi. T. protumnus mijburghi* Dickson and Wykeham was also found north of Steinkopf as well as some beautifully coloured *Trimenia macmasteri mijburghi* Dickson. These were all collected by Andrew Mayer, Johan Greyling and Harold Selb. *Poecilmitis psyche* Pennington was also found in good numbers at Kotzesrus. They also found *Lepidochrysops badhami* Van Son in good numbers at Springbok.

Nolan Owen-Johnston and Bill Steele visited Namaqualand earlier and found the butterflies not as prolific as they would have liked, they journeyed further south to Sutherland where they found *Lepidochrysops jamesi jamesi* Swanepoel in good numbers and a few *Phasis* in the gullies.

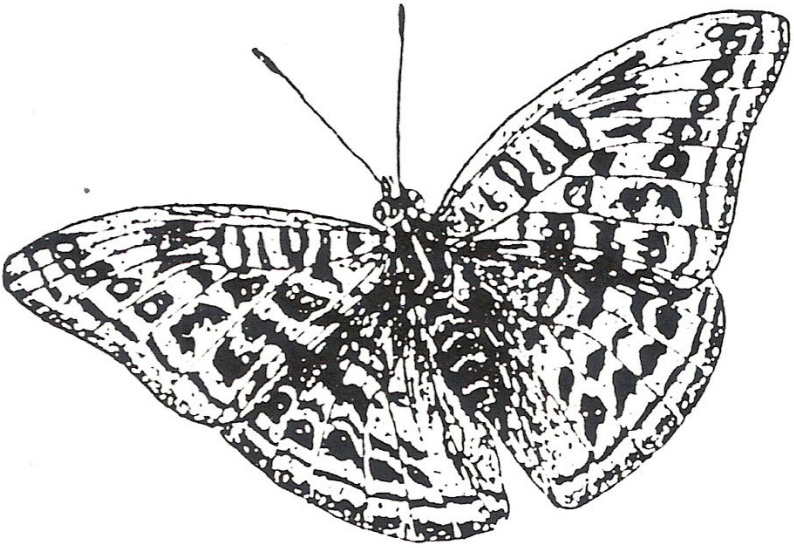
Steve Woodhall had a successful visit to Merrievale in the Natal midlands, finding *L. pephredo* (Trimen & Bowker) and *Orachrysops subravus* G.A. & S.F. Henning in good numbers. The object of his desires eluded him, this being .female *L. asteris* (Godart), and only a couple of males were found. *Dingana dingana dingana* (Trimen) were also out in good numbers. Steve then went down to Cape Town and, with Harold Selb visited the Piketberg where he caught *Trimenia wanengrenii gonnemoi* Ball in numbers and also *L. bacchus* Riley. They then went across to Dasklip Pass and again found *bacchus* along with *Trimenia argyroplaga cardouwae* Dickson & Wykeham.

Rudolf Swart and his son Jacque visited Zimbabwe at the end of September and beginning of October. They lost two days to bad weather and next time they will have to take their fishing rods. They were kindly shown around by John Daffue of Mutare, many thanks John! Rudolf noted that the eastern highlands have not yet recovered from the drought and that some forests on the Vumba mountains had been badly burned. They did, however, have a good trip with the following good captures being recorded:

Vumba - *Cymothoe vumbu1* Bethune-Baker; *Neptis swynnertoni* Trimen; *Aphnaeus erikssoni bamesi* Stempffer, males and females, also found at Mutare; *Aphnaeus marshalli*

Neave. Males and females, a complete series was collected *of* both this species and the previous one; *Anthene bamesi* Stevenson.
Inyanga - *Lepidochrysops violetta* Pinhey; *L. coxii* Pinhey; *L. ruthica* Pennington: *L. mashuna* (Trimen). All the foregoing species found in numbers and a complete series collected. *L. peculiaris hypoleucus* (Butler) female.
Mutare - *Bebearia orientis orientis* (Karsch); *Abantis zambesiaca* (Westwood).
Pungwe - *Euriphene achlys* (Hopffer), a very early female;
Alan Heath has been collecting various *Poecilmitis* through the Cape mountains *P. adonis* Pennington was collected on the Elandsberg, *P. nigricans zwartbergae* Dickson and *P.* swanepoeli near Seweweekspoort He also has kept *Oxychaeta dicksoni* (Gabriel) larva into the second instar. The larva was seen to beg for food from the ants! Alan will provide full details at a later time.
Please contact me on telephone (W) 474-1466 and (H) 768-1949 or fax 474-2985.

Graham Henning



Euryphura achlys male underside

BUTTERFLIES OF KLOOFENDAL NATURE RESERVE

By Stephen F Henning
5 Alexandra Street, Florida 1709

Abstract A description and history of the Kloofendal Nature Reserve with a checklist of the 109 species recorded on the reserve.

The Kloofendal Nature Reserve is an area of approximately 50 hectares situated north of Horizon and west of Christiaan de Wet Road, in Roodepoort. Its location is 27°52'E and 26° 09'S and occurs at an altitude of 1802 metres. In 1972 the Roodepoort City Council reserved this land for a festival park with an amphitheatre and picnic facilities at the main entrance and a nature conservation area over the remainder of the reserve.

The Kloofendal area was originally known as Struben's Valley after the Struben brothers who were two of the ear1iest prospectors to find gold on the Witwatersrand They worked along the ridges in this area and called the reef they discovered the Confidence Reef. The gold soon petered out The main reef was later discovered further to the south. The abandoned Struben Mine is found on the reserve .

The reserve is situated on the quartzite and shale rocks of the Lower Witwatersrand system. These sediments lie on rocks more than 3000 million years old. The area is bounded on its northern and southern borders by ridges of hard light-coloured quartzite separated by a valley of softer reddish shale. Dependent upon the soil types derived from these rocks, different types of vegetation are found. Other factors affecting the kind of plant life are the temperature, amount of rainfall and the protection offered by the southern ridges. In the lower lying areas of the reserve the vegetation is mainly grass with patches of *Acacia caffra*, while the grassy slopes are densely covered with *Protea caffra* and *P. roupelliae*. *Capys disjunctus* can be found breeding in the newer heads of *Protea caffra* The proteas are also heavily parasitized by *Tapinanthus rubromarginatus* the foodplant of *lolaus (lolaphilus) trimeni.* As you walk along these slopes you will notice a number of small aloes in the grass. These are *Aloe davyana* which are common along the ridges.

The area is crossed by a number of perennial streams which are densely wooded. Along the banks of the streams on the flats the dominant plants are *Leocosidea senicea* (Ouhout) and *Buddleia salvifolia* (Wild sage). There are 20 different species of trees in the dense vegetation of the kloofs These include *Rhus pyroides*, *R. dentata*, *Acacia caffra*. *Diospyros lycioides* and *Maytenus heterophylla*.

On the northern slopes there are also patches of *Dombeya rotundefolia* and the odd cabbage tree or Kiepersol (*Cussonia paniculata*). Growing on some of the rock faces are climbing figs, *Ficus ingens*, the foodplant of *Myrina silenus ficedula*. Along the top of some of the ridges in the open are low growing shrubs such as *Landolphia capensis* (Wild apricot) with its jasmine flowers and orange fruit and the well-known Stamvrug (*Bequartiodendron magaliesmontana*).

On the higher plateaus of the reserve the vegetation changes to more hardy plants that can stand the wind and frost like grasses and *Protea caffra*. The most comrnon grass is the thatch grass *Hyperrhenia hirta*. Along the ridges of the higher areas you will also find many hardy trees like *Nuxia congesta* (Boxwood), *Fagara capensis* (Knoppiesdoring) and *Brachylaena rotundata* (Vaalbos). Also along the ridges are various small succulent plants like *Cotyledon orbiculata* the foodplant or *Gonatomyrina henningi.*

Growing in the shade and in the shelter of some rocky outcrops are the yellow orchid *Eulophia weleitehii* and the white paint brush *Haemanthus hirsutus.*

Bill, Stephen and Graham Henning first visited the area in 1962 before the area was proclaimed for township development. This area was then visited virtually on a weekly basis for the next ten years and detailed knowledge was built up of the butterfly species that occurred there.

In October 1963 my brother Graham and I cycled up from our home in Florida one day during our school holidays and captured a small series of an *Aloeides* which we were unable to identify. These were sent to Charlie Dickson and were later described as *Aloeides henningi* by Tite and Dickson in 1973. Thus Kloofendal (as Struben's Valley) is the type locality of this species.

During the late sixties we bred a number of what we thought was *Gonatomyrina gorgas* from Kloofendal. However, when we compared the first instar larvae with those of *G. gorgias* we found them to be quite different. Comparison of the adults also revealed consistent differences. Soon after that Ivan Bampton knowing that we were interested and working on the group brought us some larvae of a *Gonatomyrina* he had collected in the garden of Jack Braine's house in Kombat, Namibia. These turned out to be identical to those from Kloofendal. All this material was sent down to Charlie Dickson who described the new species as *Gonatomyrina henningi* in 1976. However, in this case Dickson selected Kombat in Namibia as the type locality, not Kloofendal, although Kloofendal specimens were included in the type series.

Other exciting captures in those early days were *Acraea stenobea*, *A. lygus*, *Spindasis phanes*, *Lepidochrysops ortygia*, *L. ketsi*, *Aloeides molomo molomo*, *lolaus (I.) trimeni*, *Capys disjunctus*, *Caprona pillaana*, *Kedestes barberae* and *K. mohozutza*. One most unusual record was *Graphium angolanus* captured hilltopping on one of the ridges.

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TITE, G.E. & DICKSON, C G.C. 1973. The genus *Aloeides* and allied genera (Lepidoptera: Lycaenidae). *Bulletin of the British Museum (Natural History) (Entomology)* **29**: 225-280.

Myrina silenus ficedula male

Checklist of the Butterflies of the Kloofendal Nature Reserve

Superfamily PAPILIONOIDEA
Family NYMPHALIDAE
Subfamily DANAINAE
Danaus chrysippus (Linnaeus)
Subfamily SATYRINAE
Melanitis leda afrlcana Furhstorfer
Henotesia perspicua (Trimen)
Pseudonympha narycia Wallengren
Stygionympha wichgrafi Van Son
Subfamily ACRAEINAE
Acraea horta (Linnaeus)
Acraea neobule Doubleday
Hyalites rahira Boisduval
Acraea natalica Boisduval
Acraea stenobea Wallengren
Acraea lygus Oruce
Acraea axina Westwood
Acraea aglaonice Westwood
Subfamily CHARAXINAE
Charaxes jasius saturnus Butler
Subfamily NYMPHALINAE
Hamanumida daedalus (Fabricius)
Byblia ilithyia Drury
Hypolimnas misippus (Linnaeus)
Catacroptera cloanthe (Stoll)
Precis archesia (Cramer)
Junonia hierta cebrene Trimen
Junonia oenone (Linnaeus)
Junonia orithya madagascariensis Guenee
Vanessa cardui (Linnaeus)
Phalanta phalantha aethiopica (Rothschild & Jordan)
Family LYCAENIDAE
Subfamily MILETINAE
Lachnocnema bibulus (Fabricius)
Lachnocnema durbanl Trimen

Euchrysops dolorosa (Trimen)
Eicochrysops messapus mahallokoaena
Subfamily THECLINAE
Virachola dinochares Grose-Smith
Virachola antalus (Hopffer)
Myrina silenus ficedula Trimen
Hypolycaena philippus (Fabricius)
lolaus (lolaphillus) trimeni Wallengren
Spindasis natalensis (Westwood)
Spindasis mozambica Bertolini
Spindasis phanes (Trimen)
Spindasis ella (Hewitson)
Axiocerses tjoane (Wallengren)
Gonatomyrina henningi Dickson
Capys disjunctus Trimen
Aloeides molomo molomo (Trimen)
Aloeides taikosama (Wallengren)
Aloeides aranda (Wallengren)
Aloeides henningi Tite & Dickson
Subfamily POLYOMMATINAE
Anthene definita (Butler)
Anthene amarah (Guerin-Meneville)
Anthene butleri livida (Trimen)
Uranothauma nubifer (Trimen)
Cacyreus lingeus (Stoll)
Cacyreus virilis (Aurivillius)
Cacyreus marshalli Butler
Castalius hintza (Trimen)
Tarucus sybaris (Hopffer)
Lampides boeticus (Linnaeus)
Syntarucus pirithous (Linnaeus)
Syntarucus brevidentatus Tite
Pseudonacaduba sichela (Wallengren)
Lepidochrysops ketsi ketsi Cottrell
Lepidochrysops ortygia (Trimen)
Lepidochrysops plebeia (Butler)
Lepidochrysops patricia (Trimen)
Euchrysops osiris (Hopffer)
Euchrysops malathana (Boisduval)
Graphium antheus Cramer
Superfamily HESPERIOIDEA

(Wallengren)
Cupidopsis cissus (Godart)
Cupidopsis jobates (Hopffer)
Freyeria trochylus (Freyer)
Azanus ubaldus (Stoll)
Azanus jesous (Guerin-Meneville)
Azanus moriqua (Wallengren)
Zlzeeria knysna (Trimen)
Zizina antanossa (Mabille)
Zizula hylax (Fabricius)
Actizera lucida (Trimen)

Family PIERIDAE

Subfamily EUCHLOINAE

Pinacopteryx eriphia (Godart)

Subfamily COLIADINAE

Catopsilia florella (Fabricius)
Eurema brigitta (Cramer)
Colas electo (Linnaeus)

Subfamily PIERINAE

Colotis evenina (Wallengren)
Coloiis evippe omphale (Godart)
Colotis agoye bowkeri (Trimen)
Colotis eris (Klug)
Colotis subfasciatus (Swainson)
Belenois zochalia (Boisduval)
Belenois aurota (Fabricius)
Belenois creona severina (Stoll)
Pontia helice (Linnaeus)
Mylothris rueppellii haemus (Trimen)
Mylothris agathina (Cramer)

Family PAPILIONIDAE

Papilio demodocus Esper
Papilio nireus lyaeus Doubleday
Graphium angolanus (Goeze)

Family HESPERIIDAE

Subfamily COELIADINAE

Coeliades forestan (Stoll)
Coeliades pisistratus (Fabricius)

Subfamily PYRGINAE

Eretis umbra (Trimen)
Caprona pillaana Wallengren
Spialia asterodia (Trimen)
Spialia dromus (Plotz)
Spialia diomus ferax (Wallengren)
Spialia spio (Linnaeus)
Spialia mafa (Trimen)

Subfamily HESPERIINAE

Tsitana tsita (Trimen)
Kedestes mohozutza (Wallengren)
Kedestes barberae barberae (Trimen)
Platylesches ayresii (Trimen)
Platylesches neba (Hewitson)
Pelopidas thrax inconspicua (Bertolini)
Gegenes pumilio gambica (Mabille)
Gegenes niso (Linnaeus)

THE RAMBLINGS OF RUTH SOUTHEY - 1957

By Ruth Southey

P. O. Box 709, George 6530

The further 'ramblings of Ruth' through Rhodesia (Zimbabwe) and P.E A. (Mozambique) with Ken and Ruth Pennington in September 1957. A continuation of a most memorable trip written some years before I started my own collection. (See *Metamorphosis.* 1992, 3(4): 154-155)

9th September After a wonderful few days near Vila Gouveia we came back to Rhodesia through Umtali and up the Vumba Mountains. and on to the Cooksons who gave us a very warm welcome We had afternoon tea and later sundowners and dinner where I had my first savour of Rhenish wine, Liebfraumilch - soft and delicious - and so, pleasantly tired, to bed.

10th September Ruth and I had a terrific clean up, hair, clothing etc. and lazed in the sun. We looked over msasas all in their spring glory of deep red, purple and copper with coppery tints of green and yellow, an incredible sight and most beautiful. David Cookson climbed the hill and Harold and Ken went out with their nets looking for butterflies.

11th September. Ken and Ruth left at 3pm to spend two days with the well-known lepidopterist B. D. Barnes, Manchester Parkway. They had barely left when the bold, bearded, blue-eyed Jim Cookson arrived back from his Nyasa hunt for uranium. There was great joy in the family at his return: we heard tales of fun and adventure and saw coloured slides of his activities: we had a joyous dinner with the lovely Liebfraumilch wine again.

13th September. After a trip to Umtali in the morning and some biscuit and cake baking by me, we settled down to (believe it or not) sundowners. and a most interesting inspection of Jim's Geiger counter used in his uranium hunt. Dinner followed with the finest wines and conversation - floccipaucinihilipillfication!

14th September Harold Cookson, David and Jim all went to Umtali to collect Jim's Super Citroen after its servicing and to go butterflying Ruth and Ken returned from their visit with Mr Barnes and after tea Ken went into Umtali to have his car serviced and to get supplies for our trip to Mt Selinda. Ruth and I lunched alone. Jim returned soon after and he and I climbed at an incredible rate of knots the lower slopes of the great mountain and stopped 400ft short of the top of a great crag We viewed rnsasas of breath-taking beauty After surviving the downhill return Ken. Ruth and I packed and prepared for an early start for Mt Selinda the next day After sundowners and much gaiety we dined, and also wined with Mateus Rose - a delight.

15th September We rose early and were away by 6.30. We drove to St Johns church for early service, after which we met Mr and Mrs Fleming, he was headmaster of Umtali Boys High School They invited us to breakfast. and there I found that she was a school friend of well-known friends of mine in South Africa - how small the world can be After this delightful interlude we left for Mt Selinda. We lunched at Nyanadzi, the countryside was very dry and burnt up. We called in at the Clarksons at Chipinga and then on to Mr Finch, the forestry warden, for permission to camp Here we saw the magnificent cup-of gold creeper in full bloom, also a garden blazing with flowers of all sorts- and perfect paw-paws. At the back of the old house there is a pink bougainvillea in full flower draped over a whole building which is completely covered, the plant being bigger than anything any of us had ever seen. about 30 foot high by 50 foot wide and 30 foot around the side - a streaming cascade of unbelievable beauty. We carnped under a giant fig tree. All was set fine, but we were woken at 3 30 am by light rain.

This continued all day of the 16th, with heavy drops hitting us continuously from the fig tree and everthing was saturated. We went for two walks, one to the Swynnerton Memorial. We played cut-throat bridge to the point of near murder before retiring to bed.

17th September. We woke to heavy mist; this started to clear at 9.30. Ruth and I walked to the post office some two and a half miles distant. I netted a couple of skippers but they were of little use to Ken. It was a lovely day, and the forest beautiful, the birds and monkeys provided an endless chorus of raucous noises. The Director of Parks came to Mr Finch's house to decide the

fate of the old Swynnerton house. Sundowners, dinner and cut-throat bridge most vicious, and then bed.

18th September. Ken served coffee with the decision to spend the day at the Buzi River. Breakfast and my apologies to Ruth for my sullen behaviour of the previous night at bridge – I think cut-throat bridge must be off the menu for the rest of the trip as Ken's behaviour, and mine, is not conducive to happy relationships in our party! We packed a picnic basket and left at 9.00. Passing through the P.E.A. customs barrier Ken sought permission to collect from the officer at Espungabera. We drove down eight miles to the Buzi River - lovely country but with bad patches of burn; we crossed the wandering forest stream six times and so to the river which is crossed by ford, where the grasses were growing well over the top of the car. Daunted, we turned back, and parked at the third stream crossing among glorious forest trees. There were several felled red mahogany and a companion red giant. It was a notable day for several catches – *Deudorix dinomenes* Grose-Smith, *Coeliades libeon* Druce and others. We left for camp at 3.30 and were back at 4.30 when tea was very welcome. I made a new terylene net, then it was sundowner time to be followed by a delicious dinner and NO CUT-THROAT BRIDGE! Bed and a glorious night's sleep.

19th September. After a good night's sleep we all went out collecting and Ken was delighted to net three coveted females of *Uranothauma antinorii felthami* (Stevenson). I caught several - to me rare - butterflies; all of which turned out to be more than ordinarily common to Ken – such deflation. After sundowners we had dinner and tame bridge (cut-throat under control) then thankfully to bed. [Editor's note - one of the females mentioned above is pictured in Pennington's Butterflies)

20th September. We all went to Chipinga for bank and provisions. I had earlier hurt my right leg, and the journey was atonement, with the sciatic nerve a scorching seat of pain. Home for lunch and a lazy afternoon followed by the usual evening activities. In all our travels Celestine, a ZuIu woman \Mlo 'M>fi<ed for Ken and Ruth, accompanied us and was our very competent chef.

21st September. After breakfast Ken went off for the day to P.E.A., to the Umsiliziwe River. Ruth walked in the forest and nearly got lost, but happily found her *way* back to our camp. I wandered thereabouts and netted an *U. antinorii felthami* male and a male *U. poggei* (Dewitz) as well as a couple of skippers - all accepted - mirabile dicta! Ken returned at about 4.30, inordinately pleased with himself for having had a glorious bath at the Finch's; we were all invited to tea, bath and lunch tomorrow, and strawberries. Ken had had a poor day in P.E.A.; but did net two *Acraea satis* Ward and one *D. dinomenes.* At about 5.30 a night adder glided from under the caravan, through my tent verandah to the grass; Ken killed it and was highly amused at our horror, including Celestine's. Sundowners, dinner and bridge (calm) and so to bed after a heat rub to my injured leg.

BUTTERFLIES OF THE WILDERNESS LAKES AREA IN THE SOUTHERN CAPE, SOUTH AFRICA

F. C. Donnelly

P.O. Box 848, Highlands North, 2039

Most people in South Africa are aware of the scenic beauty of the Wilderness Lakes Area and may even have visited the area. but very few are aware of the wealth of butterflies which occur there. Of the ten families of butterflies found in Southern Africa, representatives of nine can be found in Wilderness. This Lake Area has a diverse plant life which plays host to all the different types of butterfly larvae - or caterpillars - which emerge each season. A butterfly, which has emerged from its pupa, often seeks out flowers on plants that are entirely different to those plants upon which it fed as a caterpillar. This abundance of plant life and its diversity ensures the survival of those species of butterfly that are found in this small and unique Lake Area.

Suggested areas in which butterflies may be seen are:

1 While driving slowly along roads such as White's Road, Lakes Road and Langvlei Road, enjoying the view at the same time.

2 Walking the Touw River and Duiwe River trails.

3 Sitting in the gardens of the t'NO National Parks Board rest camps.

4 Picnicing at the lagoon or Island Lake picnic areas. The best times of the year to see the various species are between the months of September (spring) to April (autumn).

In the spring, you will see the bright orange *Colias electo* sporting above the grass In the meadows, the violet hue of some of the Lycaenids amongst the red geranium flowers and the bright flash of the fast flying russet-and-pearl *Charaxes varanes* as It patrols. In summer *Papilio nireus lyaeus,* a large dark butterfly with irridescent blue on its wings, can be seen hovering daintily over the geraniums and pelargoniums. Over Christmas during the long warm summer days, the indigenous forest literally swarms with various members of the family Pieridae (the whites) as they carefully inspect each tree or plant they pass. As autumn approaches and the days begin to cool, large numbers of the brown *Dira clytus* flutter about in the more open areas, particularly the vleis, like so many leaves blown before the wind. When you see these butterflies, you may rest assured the winter is not far away.

Butterflies love sunshine. In fact, few creatures thrive on it more than butterflies. The best time to look for butterflies is between 10:00 and 14:00 - the cooler the morning, the longer you have to wait before you can expect to see signs or marked activity. If the day is dull, windy or rainy, don't expect to see anything, as butterflies take cover in thick vegetation to protect themselves from the elements. A butterfly's wings are easily damaged, so it is natural to see "tatty'" looking specimens flying about immediately after a day or two of cold rainy weather, as is common to the Cape coast with the passage of cold fronts. However, with the return of sunny skies, fresh specimens will hatch out and take wing, while the older, more battered specimens will soon die off, the rigours of nature having taken their toll.

Some butterflies, notably the Whites (Pieridae) will fly amazing distances across land and even out to sea. Wind direction plays an important role in these butterflies' lives. It is, therefore, not unusual for a ship, some distance out from shore, to have an exhausted butterfly or two aboard, apparently having appeared out of nowhere. By the same token, if you were to wander along the beach after one of these migrations has taken place, you would find waterlogged butterflies along the high tide mark where they have been washed ashore after having been carried by the sea for many kilometres.

Finally, an extremely important factor to consider when discussing certain members of the family Lycaenidae is that they are myrmecophilous (ant associated) and without the presence of certain ants, these butterflies would simply cease to exist. You will, therefore, only find this type of butterfly where its host plant and host ants occur together. Any separation of the two results in extirpation of the butterfly. An example of a myrmecophilous butterfly – which, of necessity, is very small - is the genus *Lepidochrysops,* common names of some of these being Trimen's Blue, Monkey Blue and Patrician Blue. Their host plant is the noxious *Lantana camara* (Verbenaceae), which is eradicated in many parts of South Africa. There are several stands of *Lantana* in the Wilderness residential area: one near Fairy Knowe Hotel, one near Karos Hotel tennis courts and a couple along Sands Road - all with resident butterflies and ants.

Some Lycaenidae larvae merely shelter in the host ant's nest during the day, leaving it at night in company with the ants to feed upon their foodplants, as well as aphids, coccids, Leaf hoppers and even the ant brood. The larvae have small glands on their skin which secrete a substance that acts as an ant-attractant, releasing pheromones which initiate the ants' own pheromones. In this manner, larvae are always protected by their host ants. The family Lycaenidae comprises more than one third of the total number of species of butterfly found in Southern Africa and is a very interesting family.

Study Area

The Wilderness Lakes area consists of three interconnected lakes, two rivers and an estuarine lagoon. The area lies on the Southern Cape coast approximately halfway between Cape Town and Port Elizabeth. Climatically, this area belongs to the temperate zone. It is not as cold and rainy as Cape ·Town nor as windy as Port Elizabeth. Wilderness enjoys predominantly good weather for most of the year, particularly over the Christmas season, which makes it popular with visitors. it Is often sunny in Wilderness while it is misty in nearby George.
For the purpose of this study, I have divided this area up into five zones. These are:

1. Indigenous Forest Zone:	This is found along the Northern sectors of the area, and is hilly
2. Fynbos Zone:	Typical Cape flora exists in this zone which mingles with vlei and dune
3. Meadows Zone:	Into this zone I have included picnic areas such as Island Lake where the grass is regularly cut
4. Garden Zone:	The two rest camps and the many gardens of the residential areas which contain mainly cultivated plants
5. Riverine Zone:	The Touw River and the Duiwe River, both of which begin as trails through the indigenous forest extending upward to cultivated farmland on higher ground

These zones intermingle with each other. However. I'm sure that residents of Wilderness will have no trouble In identifying each zone separatety.

Methods

Butterflies were collected by a sweep net and baited traps. Killing bottles were made up of ether soaked in cotton wool. Setting boards and storage bottles were also made up by the author. Specimens were collected in various parts of Wilderness in conjunction with daily activities carried out at each locality. The project was carried out between November 1986 and April 1989.

Results and Discussion

A total of 48 species were collected throughout the period, being a fair representative sample of species occurring at Wilderness. Unfortunately, several specimens were destroyed by insects, leaving a total of 43 specimens that could be set and labelled. A similar study was carried out by Hermann Staude at Carmel Guest Farm (about six kilometres from Wilderness) over the Christmas vacation, rendering 34 species. Most of these species were also encountered at Wilderness during this project. The species destroyed by bugs are listed next and those species identified visually but not captured (due to their elusiveness) are listed last.

1.	*Acraea horta*	Touw Mouth
2.	*Hyalites rahira*	Island Lake
3.	*Aeropetes tulbaghia*	Upper Touw
4.	*Amauris albimaculata*	Duiwe River
5.	*Amauris echeria*	Duiwe River
6.	*Belenois aurora*	Touw River
7.	*Belenois creona severina*	Touw River
8.	*Belenois gidica*	Duiwe River
9.	*Belenois zochalia*	Duiwe River
10.	*Bicyclus safitza*	Duiwe River
11.	*Catopsilia florella*	Upper Touw
12.	*Cassionympha cassius*	Island Lake
13.	*Cacyreus marshalli*	Upper Touw
14.	*Charaxes karkloof capensis*	Upper Touw
15.	*Charaxes varanes*	Duiwe River
16.	*Charaxes xiphares xiphares*	Duiwe River
17.	*Colias electo*	Old Airfield (Wilderness)
18.	*Colotis antevippe*	Duiwe River
19.	*Colotis evippe*	Duiwe River
20.	*Cynthia cardui*	Langvlei
21.	*Danaus chrysippus*	Langvlei
22.	*Dira clytus*	Rangers Garden
23.	*Dixeia charina*	Touw River
24.	*Eagris nottoana knysna*	Touw River
25.	*Eurema brigitta*	Touw River
26.	*Eurytela hiarbas angustata*	Duiwe River
27.	*Gegenes niso*	Touw River
28.	*Hypolimnas rrissippus*	Serpentine
29.	*Junonia hierta cebrene*	Langvlei
30.	*Lampides boeticus*	Island Lake
31.	*Metisella metis paris*	Duiwe River
32.	*Mylothris agathina*	Duiwe River
33.	*Papilio dardanus cenea*	Rangers Garden
34.	*Papilio nireus lyaeus*	Rangers Garden
35.	*Papilio demodocus*	Rangers Garden
36.	*Pinacopteryx eriphia*	Touw Mouth
37.	*Phasis thero thero*	Langvlei
38.	*Pseudonympha magus*	Island Lake
39.	*Stygonympha vigilans*	Island Lake
40.	*Tarucus thespis*	Serpentine

41. *Syntarucus pirithous*	Island Lake
42. *Zizeeria knysna*	Island Lake
43. Unidentified species (maybe *Cassionympha cassius)*	Island Lake

Some of the specimens destroyed by insects

1. *Zizula hylax*	Island Lake
2. *Cymothoe alcimeda*	Upper Touw
3. *Lepidochrysops patricia*	Karos
4. *Pontia helice he/ice*	Ebb & Flow
5. *Spialia spio*	Langvlei

Species visually identified but not caught

1. *Charaxes zoolina zoolina* (Wet season form). (Perched upon *Kiggelaria afrlcana*)	Upper Touw
2. *Charaxes achaemenes* (Sucking sap from *Brachylaena discolor)* (If not this species, then one very similar to it)	Ebb & Flow.

Conclusion

It was found that butterflies were practically absent on the wing during the cold winter months of the Cape. The summer of 1987 /88 appeared to be warmer with more hours of uninterrupted daylight than the fallowing summer, which was cooler and had more overcast windy days. A corresponding decrease in the general overall number of butterflies on the wing was noted during the summer of 1988/89 compared with the two previous summers.

Several species not previously recorded at Wilderness were netted. These species probably always occurred in Wilderness but were never formally located and recorded. Also, the boundaries of the Wilderness have never been formally defined and until the arrival of the National Parks Board several years ago, a fairly extensive area was loosely termed as "The Wilderness". Therefore, I have confined this study to the Wilderness Lakes Area now under the auspices of the National Parks Board and collectively known as the Wilderness National Park.

This study was primarily carried out in order to provide a checklist of species occurring within the Wilderness National Park.

Acknowledgements

I am grateful to the warden of Wilderness National Park, Mr S. G. Yssel for permission to carry out the study, and for his support. Thanks are also due to Brett Lawson and Peet Peens for the occasional loan of their photographic equipment. Finally, I must add a special word of thanks to Hermann Staude, C. G. C. Dickson, Ruth Southey and Dr Arthur Ryden for their notes, personal encouragement and comparisons, without which I would not have been as motivated as I was.

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COLLECTING *TORYNESIS ORANG/CA* AND *LEPIDOCHRYSOPS OOSTHUIZENI* NEAR TITANIC

By J.E. Terblanche

P.O. Box 255, Clarens 9707.

It rained relentlessly here in Clarens during the past collecting season (1993-1994) still, on 29 January I once again ascended the gentler northern slope towards a spot immediately above Titanic Rock where *Torynesis orangica* and *Lepidochrysops oosthuizeni fly* - but not with much hope. In fact, I anticipated another bad collecting day like the ones I reported In *Metamorphosis* 5 (1), and took my family along, carrying a baby in each arm for some distance, while Jennie took care of carrying the net.

It was a refreshing morning. Everything was literally soaking wet after the abundant rains. In his magic and poetic book, *Butterflies of South Africa,* David Swanepoel suggests that the Maluti Mountains should really be called the "Mirror Mountains ... Swanepoel (1953:266) writes: Most imposing are the glittering rocks along the slopes (of the Malutis) on sunny mornings after rains. More appropriately termed "Mirror Mountains" they are to me one of the most unforgettable sights in all Basutoland (now Lesotho)."

Indeed it was an unforgettable morning and reassuring to think that after more than forty years (since Oom David's remark had been published) the rocks were still mirroring the wet soul of the Malutis. And everything was fresh and soft, and the sky had been washed on this morning of January 29 to a deep, pure azure, and elongated, smooth edged quicksilver clouds were gliding slowly over peaks here and there.

From close by the glittering rocks Oom David refers to bulged like open, wet muscles In the earth and grasses. The scent of the soaked earth and grasses mingled with that of spring veld flowers and herbs. Puddles of crystal clear water formed In the deep, sharp-edged hollows In the rocks. In short it was breath-taking.

We set out early - not in the belief that the early bird catches the worm - and reached the ridge above Titanic in due time after two or three resting periods. As we crossed the ridge to the steeper southern slope looking down on Titanic a terrific gale directly from the south nearly swept us off our feet and the little ones cried with shock and fear.

We soothed them and wound our way parallel to the ridge towards the west along an old narrow footpath, each parent hiding a child under the wing facing north. Now and again, however, the little ones could not help but come out to point at this small hollow cave with ferns and trickling water drops or that *berglielie.* of which I have been unable to find the scientific name, bending with its long stem violet-blue flowers, or that little brown bird (unknown to me) clinging to a grass stem.

The wind plucked angrily at my net with its flimsy material and blue-gum stick loosely taped to a loop of 'bloudraad". Apart from this, Jennie was irritated with my hard-headedness in forcing them to join me on such a day. I had to convince her to move to a special spot ahead, since I fortunately knew of a comfortable hollow cave above the slope covered with *Merxmuellera* grasses where *T. orangica fly*.

I led them into the hollow cave. We had a magnificent view far exceeding the magnificent view the towns people refer to - they mean a safe, remote view of some mountain from a chair in the sitting room. Sometimes it seems they think the mountains are cardboard cut-outs propped up around the town in order to make properties worth more. All the depth and beauty of the frowning old cliffs seems lost to them.

*The grid reference of this spot above Titanic 28°29.5'S; 28°25.25'E.

We had a truly magnificent view of Titanic and two similar but less defined rocks watching over Clarens like a gigantic rock lion and two gigantic rock dogs, and the town itself, loose, minute houses clinging to the gentle slopes down there.

My son was afraid of the new surroundings, being only one year of age, and would not touch the sandstone, clinging to me. Soon, however. he discovered what fun it could be to chase his sister up and down the concave rock! In the meantime the gale had died down just as unexpectedly as it had sprung upon us earlier. For the first time that morning I cast an expectant eye over the slope immediately below our feet.

It is one of the most profound joys of a lepidopterist when the dark brown, velvet shadow of *T. orangica* suddenly bounces up from a half-grey, half-green patch of *Merxmuellera.* For a lack of words, there is something ancient about this sight. Which is what happened the next Instant – I raced down the slope and took the first catch of the morning.

It was an immaculate male. I went up to the cave to shout it to Jennie, who is an artist, and she was surprised by the artwork God had made of this fascinating little creature with its downy, dark appearance, the yellow triangles and eye-spots on the upperside, the amazing combination of colours and stark symmetrical patterns on the underside. In art, she said, those colours and patterns would never have worked, but in the butterfly it was a stunning combination.

Who can hold a delicate, rounded triangle like this between thumb and forefinger without trembling a little, on such a summer's day?

A familiar bank of heavy clouds appeared on the horizons of the taller Malutis to the south, as well as to the west. It was going to rain again and I was doubly careful because the *bambinos* were with us. I was especially apprehensive about the possibility of lightning.

On earlier occasions and specifically at the top of Generaalskop one day, it had happened that I was cornered by a thunder storm, an event that has one praying spontaneously in quick, fearful spurts while one is running down the slopes at break-neck speed, the thunder rumbling deeply and widely across the plains, echoing in the cliffs, resonating up one's spine.

Nevertheless, on the occasion described here, the sun was still out and I simply had to halt on the way back along the ridge in order to quickly scan a small pinnacle, where some *L. oosthuizeni* came whirling about with little intervals and where I found one - with a gap as big as half a moon in the hind-wings - on some previous occasion. *L. oosthuizeni* forms an unbelievable contrast with *T. oranges.* A metallic blue jewel flashes in erratic circles next to a besembos *(Rhus erosa*) situated close to, almost into, some dusty yellow boulders in a patch of gravelled earth. I soon succeeded in capturing one male. I was in a hurry, thinking back of those hurried descents - if one could call them that - down some the mountains in our area when the rain (and lightning) came up (or down), and thinking of the children. Still, the collecting day was far from over, even though hardly half an hour had passed since collecting the first *T. orangica* and my first *L. oosthuizeni.* (In the meantime, I had also added to my specimens of *T. orangica* - all males)

As we descended the gentler northern slope, literally handfuls of *L. oosthuizeni* came whirling up and down! I put down my little gin, sloshed through puddles and wet grass, chasing those impossible, freshly emerged small blue fires until I had no breath left. I took a male and a female in one sweep and added another male soon thereafter. I hoped in those impatient minutes, to find a female laying eggs and collect the foodplant – but in vain.

We reached the car safely, just in ·time for the rain drops to start hitting the roof. All in all, I had been a wonderful hour of collecting for me. And the children enjoyed it tremendously. It was a sensuous hour not unlike the experience I am encountering right now, scribbling on paper just a fraction less white than the snow covering Clarens currently, biting into pink fingers curled around a cold steel pen.

And as I look through the northern window next to my desk on the first floor. a thick layer of the purest white cream can be seen just below the sandstone rock containing the little hollow cave in which we hid from the wind and sun on that summer's day - that is. if you know where to find it.

And somewhere in the ice, ice cold and southern wind - unbelievably - *T. oranges* and *L. oosthuizeni* lie hibernating, waiting for the season to come.

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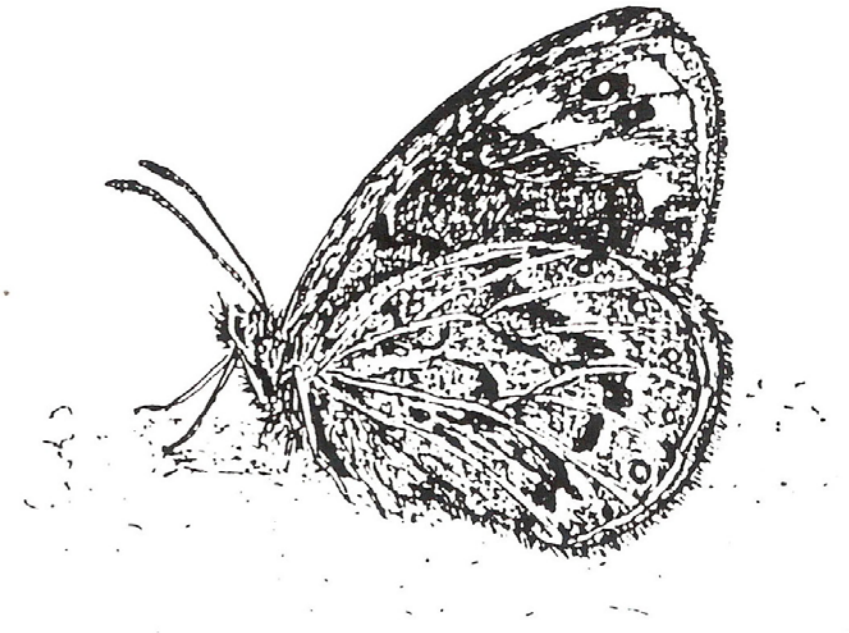

Torynesis orangica male underside

BUTTERFLIES OF THE MARIEPSKOP AREA

By G.A. Henning

1 7 Sonderend Street, Helderkruin 1725

Abstract. A comprehensive checklist of the 234 species of butterflies recorded from the Mariepskop area of the Eastern Transvaal

Area covered - from the Blyde river at Swadini in the north-west to the base of Mariepskop at an altitude of approximately 700 metres in the south-east.
(30• 48'- 30• 53· East; 24° 31' - 24° 30 South)

The western section of the area covered is part of the Blyderivierspoort Nature Reserve. Records are fromSwanepoel 1953, Henning Collection and research done in the Blyderivierspoort Nature Reserve by G.A. Henning and L. S. Beveridge, report dated 31 January 1987. Additional records are from personal communication.

This area incorporates four major habitat types:

1. Eastern facing mist forest (montane forest), to be found primarily at the higher altitudes from the Deneys-Reitz grave down the eastern side of the escarpment.
2. High altitude montane grassveld and macchia; between forest patches and at attitudes above the forest. Includes plants such as *Protea* etc.
3. Lowveld and bushveld on the northern and western slopes to the Blyde river.
4. Riverine forest along the banks of the Blyde River.

Habitat preferences as indicated above are given in square brackets behind each species (1,2,3,4).

SUPERFAMIL Y Papilionoidea

FAMILY Nymphalidae

SUBFAMILY Danainae

Danaus chrysippus aegyptius (Schreber) [1,2,3,4]
Amauris niavius dominicanus Trimen [1,4]
Amauris albimaculata albimaculata Butler [1,4]
Amauris echeria echeria (Stoll) [1,4]

SUBFAMILY Satyrinae

Melanitis leda helena (Westwood) [3,4]
Bicyclus safitza safitza (He\Vitson) [1,4]
Bicyclus anynana anynana (Butler) [4]
Henotesia perspicua (Trimen) [4]
Aeropetes tulbaghia (Linnaeus) [2]
Dira jansei (Swierstra) [2] - Red Data Species {Found on the south-eastern slope of Mariepskop as well as In the Blyderivierspoort Nature Reserve.}
Paralethe dendrophilus junodi (Van Son) [1]

Dingana dingana dingana (Trimen) [2]
Cassionympha cassius (Godart) [1 ,4]
Stygionympha scotina coetzeri G.A & S.F. Henning [2] {One female recorded, in type series.}
Stygionympha wichgrafi wichgrafi Van Son [2]
Coenyra hebe (Trimen) [3] {Series recorded from lower north-western slopes of Mariepskop and showing distinct reddish areas on upperside.}
Physcaeneura panda (De Boisduval) [3]
Ypthima asterope asterope (Klug) [3]
Ypthima impura paupera Ungemach [3]
Ypthima ganulosa Butler [3] {One female recorded, only Transvaal record, specimen recorded on the lower north-western slope of Mariepskop in the Blyderivierspoort Nature Reserve}

SUBFAMILY Acraeinae

Acraea horta (Linnaeus) [1]
Acraea neobule neobule Doubleday [3,4]
Acraea acara acara Hewitson [1,4]
Acraea barberi Trimen [3] {One female recorded along Blyde River.}
Acraea anemosa Hewitson [3]
Acraea natalica natalica De Boisduval [3]
Acraea calderena caldarena Hewitson
Acraea axina Westwood [3]
Acraea aglaonice Westwood [3]
Acraea nohara nohara De Boisduval [2]
Acraea violarum De Boisduval [2]
Bematistes aganice aganice (Hewitson) [1,4]
Hyalites esebria esebria (Hewitson) [1,4]
Hyalites eponina (Cramer) [3]
Hyalites cabira (Hopffer) [1,4]
Hyalites encedon encedon (Linnaeus) [3,4]
Hyalites obeira burni (Butler) [3]
Hyalites anacreon (Trimen) [2] {Long-winged form, not found in marsh habitat.}
Pardopsis punctatissima Trimen & Bowker [3]

SUBFAMILY Charaxinae

Charaxes varanes varanes (Cramer) [1,4]
Charaxes candiope candiope (Godart) [1 ,3,4]
Charaxes jasius saturnus Butler [3]
Charaxes castor flavifasciatus Butler [3] {Some females trapped in mist forest but not normal habitat}
Charaxes brutus natalensis Staudinger & Schatz [1,4]
Charaxes druceanus moerens Jordan [1]
Charaxes xiphares draconis Jordan [1]
Charaxes zoolina zoolina (Westwood) [3]
Charaxes jahlusa rex S. F. Henning [3]
Charaxes phaeus Hewitson [3]
Charaxes vansoni Van Someren [3]
Charaxes achaemenes achaemenes C. & R. Felder [3]

Charaxes marieps Van Sorneren & Jackson [1] - Red Data Species

SUBFAMILY Nymphalinae

Cymothoe alcimeda marieps Rydon [1] {Specimens from Mariepskop mist forest are larger than those from other localities to the west}
Hamanunida daedalus Fabricius [3]
Pseudacraea boisduvali trimeni Butler [1, 4]
Pseudacraea lucretia expansa Butler [1, 4]
Neptis saclava marpessa Hopffer [1,4]
Neptis laeta Overlaet [1, 4]
Sallya moranti morantii (Trimen) [1, 4] {One of the few known Transvaal localities.}
Sallya natalensis (De Boisduval) [1, 4]
Byblia anvatara acheloia (Wallengren) [3, 4]
Byblia ilithyia (Drury) [3]
Eurytela hiarbas angustata Lathy [1, 4]
Eurytela dryope angulata Aurivillius [1, 4]
Hypolimnas misippus (Linnaeus) [3]
Hypolimnas anthedon wahlbergi (Wallengren) [1, 4]
Protogoniomorpha parhassus (Drury) [1, 4]
Protogoniomorpha anacardii nebulosa (Trimen) [1, 4] {Commonly seen on mud along river banks}
Catacroptera cloanthe cloanthe (Stoll) [2,3]
Precls octavfa sesamus Trimen [1, 2, 3]
Precis archesia (Cramer) [2, 3]
Precis tugela tugela Trimen [1]
Precis terea elgiva (Hewitson) [1, 4]
Precis natalica natalica C. & R. Felder [3]
Precis hierta cebrene (Trimen) [3]
Precis oenone oenone (Linnaeus) [3]
Precis orithya madagascariensis Guenee [3]
Vanessa cardui (Linnaeus) [2, 3]
Antanartia dimorphica Howarth [1]
Antanartia schaeneia schaeneia (Trimen) [1]
Lachnoptera ayresii Trimen [1, 4]
Phalanta phalantha aethiopica (Rothschild & Jordan) [1, 3, 4]
Phalanta eurytis eurytis (Doubleday) [1, 4]

SUBFAMILY Libytheinae

Libythea labdaca laius Trimen [1, 4]

FAMILY Lycaenidae

SUBFAMILY Lipteninae

Alaena amazoula ochroma Vari [3]

Durbania amakosa ayresi Van Son [2] {Bred from rocks at Deneys-Reltz Grave.}

SUBFAMIL Y Miletinae

Lachnocnema bibulus (Fabricius) [3]

SUBFAMILY Theclinae

Iolaus bowkeri tearei (Dickson) [3]

Iolaus silarus silarus Druce [3]

Iolaus trimeni Wallengren [2, 3]

Hypolycaena caeculus caeculus (Hopffer) [3]

Hypolycaena philippus philippus (Fabricius) [3]

Leptomyrina hirundo (Wallengren) [3] {Found at picnic site on Mariepskop.}

Leptomyrina gorgias (Stoll) [2]

Capys alphaeus extentus Quickelberge [2]

Deudorix antalus (Hopffer) [3]

Deudorix dinochares Grose-Smith [3]

Myrina silenus ficedula Trimen [3]

Myrina dermaptera dermaptera (Wallengren) [4] {Found flying around *Ficus sycomorus* L.}

Spindasis natalensis (Westwood) [3]

Spindasis ella (Hewitson) [3]

*Axiocerses tj*oane (Wallengren) [3]

Axiocerses amanga (Westwood) [3]

Aloeides taikosama (Wallengren) [3]

Aloeides damarensis (Trimen) [3]

Poecilmitis aethon (Trimen & Bowker) [2]

Crudaria leroma (Wallengren) [3]

SUBFAMILY Polyommatinae

Anthene definita definita (Butler) [3]
Anthene amarah amarah (Guérin-Méneville) [3]
Anthene butleri livida (Trimen) [2, 3]
Anthene princeps Butler [3]
Anthene contrastata mashuna Stevenson [3]
Uranothauma nubifer (Trimen) [1, 2, 4]
Cacyreus lingeus (Stoll) [1, 2, 4}
Cacyreus virilis (Aurivillius) [2]
Cacyreus marshalli Butler [2, 3, 4]
Zintha hintza hintza (Trimen) [3]
Tuxentius melaena melaena (Trimen & Bowker) [3]
Leptotes pirithous (Linnaeus) [3]
Leptotes brevidentatus (Trte) [1, 4]
Leptotes babaulti (Stempffer) [3] - Red Data Species {Recorded on western slope of Mariepskop.}
Leptotes jeanneli (Stempffer) [1, 4]
Lampides boeticus (Linnaeus) [2, 3, 4]

Tarucus sybaris sybaris (Hopffer) [2, 3]
Tarucus bowkeri transvaalensis Quickelberge [2]
Pseudonacaduba sichela sichela (Wallengren) [3]
Eicochrysops hippocrates (Fabricius) [4]
Actizera lucida (Trimen) [3]
Zizeeria knysna (Trimen) [2, 3]
Zizula hylax (Fabricius) [2, 3]
Lepidochrysops plebeia (Butler) [3]
Lepidochrysops patricia (Trimen & Bowker) [3]
Lepidochrysops glauca (Trimen & Bowker) [3]
Orachrysops violescens G.A. & S.F. Henning [2]
Euchrysops osiris (Hopffer) [3, 4]
Euchrysops dolorosa (Trimen & Bowker) [2]
Euchrysops malathana (De Boisduval) [2, 3]
Eicochrysops messapus mahallakoaena (Wallengren) [2, 3]
Eicochrysops hippocrates (Fabricius) [3]
Cupidopsis cissus (Godart) [2]
Cupidopsis }obates jobates (Hopf fer) (2)
Azanus jesous (Guérin-Méneville) [3]
Azanus *moriqua* (Wallengren) [3]
Azanus mirza (Plotz) [3]
Freyeria trochylus (Freyer) [2, 3]

FAMILY Pieridae

SUBFAMILY Pierinae

Plnacopteryx eriphia eriphia (Godart) [3, 4]
Colas electo electo (Linnaeus) [2, 3, 4]
Catopsilia florella (Fabricius) [3, 4]
Eurema hecabe solifera (Butler) [1, 4]
Eurema brigitta brigitta (Stoll) [3]
Eurema desjardinsii marshalli (Butler) [1, 4]
Eronia cleodora cleodora Hobner [3]
Eronia leda (De Boisduval) [3]
Nepheronia arga variegata G.A. Henning [4] {Female forms variable and intergrading.}
Nepheronia thalassina sinalata (Suffert) [1, 4]
Colotis vesta argillaceus (Butler) [3]
Colotis celimene amina (Hewitson) [3] {Males found exhibiting typical hovering flight around big trees}
Colotis regina (Trimen) [3]
Colotis ione (Godart) [3, 4]
Colotis danae annae (Wallengren) [3]
Colotis auxo auxo (Lucas) [3]
Colotis antevippe gavisa (Wallengren) [3. 4]
Colotis evenina evenina (Wallengren) [3]
Colotis evippe omphale (Godart) [3, 4]

Colotis pallene (Hopffer) [3]
Colotis evagore antigone (De Boisduval) [3]
Colotis agoye agoye (Wallengren) [3]
Colotis eris eris (Klug) [3]
Colotis subfasciatus subfssciatus (Swainson) [3]
Belenois zochalia zochalia (De Boisduval) [1, 4]
Belenois aurota (Fabricius) [3, 4]
Belenois creona severina (Stoll) [3, 4]
Belenois gidica (Godart) [3]
Dixeia pigea (De Boisduval) [4]
Appias epaphia contracta Butler [1, 4]
Pontia helice helice (Linnaeus) [2, 3]
Leptosia alcesta inalcesta Bernardi [1, 4]
Mylothris rueppellii haemus (Trimen) [1, 3, 4]
Mylothris agathina (Cramer) [1, 3, 4]
Mylothris trimenia Butler [1] {May be plentiful in mist forest, one of a few Transvaal localities.}

FAMILY Papilionidae

SUBFAMILY Papiltoninae

Papilio dardanus cenea Stoll [1, 4]
Papilio echerioides echerioides Trimen [1]
Papilio euphranor Trimen [1] - Red Data Species
Papilio constantinus constantinus Ward [3]
Papilio demodocus demodocus Esper [1, 2, 3, 4]
Papilio nireus lyaeus Doubleday [3]
Papilio ophidicephalus ayresi Van Son [1]
Graphium angolanus angolanus (Goeze) [3]
Graphium morania (Angas) (3)
Graphium leonidas leonidas (Fabricius) [3, 4]
Graphium antheus (Cramer) [3, 4]
Graphium porthaon porthaon (Hewitson) [4]

SUPERFAMIL Y Hesperioidea

FAMILY Hesperiidae

SUBFAMILY Coeliadinae

Coeliades anchises anchises (Gerstaecker) [3] - Red Data Species
Coeliades forestan forestan (Stoll) [3]
Coefades pisistratus (Fabricius) [3]
Coeliades keithloa lorenzo Evans [4] {Sight record *only,* along Blyde river, subspecies not confirmed}

SUBFAMILY Pyrginae

Celaenorrhinus mokeezi separata (Strand) [1]
Tagiades flesus (Fabricius) [1, 4]
Calleagris krooni Vàri [1]
Eretis djaelaelae (Wallengren) [2]

Eretis umbra umbra (Trimen) [2, 3]
Sarangesa phidyle (Walker) [3]
Sarangesa seineri seinerl Strand [3]
Sarangesa motozi (Wallengren) [1, 4]
Leucochitonea levubu Wallengren [3]
Abantis tettensis Hopffer [3]
Abantis paradises (Butler) [3]
Spialia delagoae (Trimen) [3]
Spialia dromus (Plotz) [1, 3, 4]
Spiala diomus ferax (Wallengren) [3]
Spialia spio (Linnaeus) [3]
Gomalia elma (Trimen) [3, 4]

SUBFAMILY Hesperiinae

Metisella metis paris Evans [1, 4]
Metisella willemi (Wallengren) [2, 4]
Tsitana tsita (Trimen) [2]
Kedestes lepenula (Wallengren) [3]
Kedestes macomo (Trimen) [3]
Kedestes *callicles* (Hewitson) [3]
Parosmodes morantii (Trimen) [3]
Acleros mackenii (Trimen) [1, 4]
Andronymus caesar philander (Hopffer) {Sight record only along Blyde River, identification not confirmed} [4] - Red Data Species
Artitropa erinnys erinnys (Trimen) [1]
Platylesches galesa (Hewitson) [1]
Platylesches ayresii (Trimen & Bowker) [2]
Platylesches neba (Hewitson) [3]
Pelopidas mathias (Fabricius) [3]
Pelopidas thrax inconspicua (Bertoloni) [3]
Borbo fatuellus fatuellus (Hopffer) [4]
Borbo fallax (Gaede) [4]
Borbo borbonica (De Boisduval) [4]
Borbo gemella (Mabille) [3]
Gegenes *pumilio gambica* (Mabille) [3]
Gegenes *niso niso* (Linnaeus) [2, 3, 4]

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BUTTERFLIES OF THE RUIMSIG ENTOMOLOGICAL RESERVE ROODEPOORT TRANSVAAL

By S.F. Henning

5 Alexandra Street Florida 1709

Abstract. A description and history of the Ruimsig Entomological Reserve with a checklist of the 100 butterflies species recorded on the reserve.

This reserve is the first in Africa proclaimed to protect a unique grassland habitat for insects not commonly found on the Witwatersrand. Approximately 100 butterfly species have been recorded in the reserve.

This small twelve hectare reserve was established in 1985 by the Roodepoort City Council for the protection of the rare butterfly *Aloeides dentatis* (Swierstra) (Lycaenidae). This is one of the last known colonies of this butterfly. The butterfly is restricted to this locality since it requires both the presence of its host ant, an undescribed *Acantholepis* species and its larval foodplant, *Hermannia depressa* (Sterculiaceae).

Besides *Aloeides dentatis* there are some 100 other species of butterfly to be found on the reserve. The reserve is also the type locality of the butterfly *Aloeides trimeni* Tite and Dickson, and is also the home of several rare species of beetle and other insect groups.

Since its establishment the reserve has been fenced, all weather notice boards erected and an information Centre built. The money for all these projects was donated by the Roodepoort City Council, the Southern African Nature Foundation, the Wildlife Society of Southern Africa, the Lepidopterists' Society of Southern Africa and First National Bank.

The project was initiated by the Lepidopterists, Stephen and Graham Henning, the Lepidopterists' Society of Southern Africa and the Roodepoort Centre of the Wildlife Society of Southern Africa. The Information Centre was built by the Enviro Club of the Florida Park High School and opened by the Mayor of Roodepoort in January 1994.

This locality at Ruimsig was first investigated by Bill, Stephen and Graham Henning in 1962. This area was first called Witpoortjie In the literature as it was just below Witpoortjie Falls (now renamed Roodepoort Falls). When the area was proclaimed for township development it *was* named Ruimsig.

The colony of *Aloeides dentatis* was first discovered in December 1963. Initially the colony was found about one kilometre from the present site but during the late nineteen sixties this area became overgrown with *Acacia karoo* and the butterfly vanished. However, the following year it reappeared at the present site.

Another very common and variable *Aloeides* species was also found at the site. In the nineteen sixties it was known as *A. taikosama.* However, Tite and Dickson (1973) during their revision of the genus *Aloeides* found that the type of *A. taikosama* was the same as *A. orthrus*, another species found at Ruimsig. This meant that *A. orthrus* became a synonym of *A. taikosama* and what was known as *A. taikosama* for nearly a hundred years was unnamed. Tite and Dickson (1973) described this now unnamed species as *Aloeides trimeni* and selected specimens from the colony at Ruimsig (Witpoortjie) to be the types. They selected this colony because of the large number of specimens available and because it showed the full range of variation found in this species from those having a mainly orange upperside to those being almost completely black. This means that Ruimsig is the type locality of *Aloeides trimeni.*

At this stage the life history of *Aloeides dentatis* was unknown but in 1969 Graham Henning found a pupa under a stone in an ants' nest. The following year Stephen Henning discovered two advanced larvae in a similar nest. Over the following ten years the complete life history was fully

elucidated.

Between 1977 and 1979 Stephen Henning did extensive research on the ant associated lycaenid species, *Aloeides dentatis* and *Lepidochrysops ignota,* and one non myrmecophilous species *Euchrysops dolorosa,* at Ruimsig for his Masters' degree in Zoology. He was able to demonstrate using behavioural studies and gas chromatography of ant and butterfly glandular secretions that butterfly larvae mimic the pheromones of ants allowing them to insinuate themselves Into the ants' nests (see Henning, 1983a, 1983b, 1984, 1987a, 1987b).

In 1984 the area was proclaimed a township and named Ruimsig. Stephen and Graham Henning, with the backing of the Lepidopterists' Society and Wildlife Society of Southern Africa campaigned for the small area occupied by *Aloeides dentatis* to be declared a reserve. Thus this area was eventually proclaimed a reserve in 1985 by the Roodepoort City Council (see Henning, 1987c, S.F. & G.A. Henning, 1986 & 1989).

The area was fenced In and during Its first winter fire breaks were burnt around the perimeter to protect it from the threat of the normal highveld fires. The following season *A. dentatis* was absent in the reserve. It was eventually rediscovered on the firebreaks. It appears that the *A. dentatis* host ants prefer more open areas. In addition the foodplant *H. depressa* as its name implies lies flat on the ground and appears to be a pioneer plant growing quickly over bare patches in the veld. Where the veld is not burnt or disturbed it is completely shaded by the long dead veld grass and does not thrive at all.

This meant that this small twelve hectare reserve has to be managed quite closely to ensure the survival of the butterfly. Every winter the Roodepoort Parks Department has to come in and either bum or scrape parts of the reserve to provide suitable habitats for *Aloeides dentatis.* In addition, before the reserve was proclaimed and fenced residents from neighbouring areas dumped garden refuse on the reserve. Although a number of clean up campaigns have removed most of the tins and broken bottles, the weeds introduced have been more difficult to eradicate. The campaign to eliminate these weeds continues every year and we would welcome the help of anybody in our efforts to eradicate them.

We would also like to open up the reserve to the public as part of our campaign to educate people about butterfly and insect conservation. We are thinking of possibly opening it one Sunday or Saturday a month, with members of the Lepidopterists' Society being available to show people around and point out and name the species they come across. The neighbouring Roodepoort National Botanic Gardens which is open to the public throughout the year is prepared to advertise and take bookings for people who wish to visit the butterfly reserve. However, for this to be a success we would need knowledgeable lepidopterists to serve as guides on possibly one Sunday a month from September to April the main night period of most species. If anyone is Interested please contact us.

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Checklist of the Butterflies of the Ruimsig Entornological Reserve

Superfamily PAPILIONOIDEA

Family NYMPHALIDAE

Subfamily DANAINAE

Danaus chrysippus (Linnaeus)

Subfamily SATYRINAE

Melanitis leda africana Furhstorfer
Pseudonympha narycia Wallengren
Stygionympha wichgrafi Van Son

Subfamily ACRAEINAE

Acraea horta (Linnaeus)
Acraea neobule Doubleday
Acraea natalica Boisduval
Acraea stenobea Wallengren
Acraea axina Westwood

Subfamily CHARAXINAE

Charaxes jasius saturnus Butler

Subfamily NYMPHALINAE

Hamanumida daedalus (Fabricius)
Byblia ilithyia Drury
Hypolimnas misippus (Linnaeus)
Catacroptera cloanthe (Stoll)
Precis archesia (Cramer)
Junonia hierta cebrene Trimen
Junonia oenone (Linnaeus)
Junonia orithya madagascariensis Guene
Vanessa cardui (Linnaeus)
Phalanta phalantha aethiopica (Rothschild & Jordan)

Family LYCAENIDAE

Subfamily LIPTENINAE

Alaena amazoula Boisduval

Subfamily MILETINAE

Lachnocnema bibulus (Fabricius)
Lachnocnema durbani Trimen

Subfamily THECLINAE

Virachola dinochares Grose-Smith
Virachola antalus (Hopffer)
Myrina silenus ficedula Trimen
Hypolycaena philippus (Fabricius)
Spindasis natalensis (Westwood)
Spindasis mozambica Bertolini
Spindasis ella (Hewitson)
Axiocerses tjoane (Wallengren)
Gonatomyrina henningi Dickson
Aloeides taikosama (Wallengren)
Aloeides trimeni Tite & Dickson
Aloeides dentatis (Swierstra)
Aloeides aranda (Wallengren)

Subfamily POLYOMMATINAE

Anthene definita (Butler)
Anthene amarah (Guerin-Meneville)
Cacyreus lingeus (Stoll)

Cacyreus virilis (Aurivillius)
Cacyreus marshalli Butler
Castalius hintza (Trimen)
Tarucus sybaris (Hopffer)
Lampides boeticus (Linnaeus)
Syntarucus pirithous (Linnaeus
Syntarucus brevidentatus Tite
Pseudonacaduba sichela (Wallengren)
Lepidochrysops ketsi Cottrell
Lepidochrysops ignota (Trimen)
Lepidochrysops ortygia {Trimen)
Lepidochrysops plebeia (Butler)
Lepidochrysops patricia (Trimen)
Euchrysops malathana (Boisduval)
Euchrysops dolorosa (Trimen)
Eicochrysops messapus mahallokoaena (Wallengren)
Cupidopsis cissus (Godart)
Cupidopsis iobates (Hopffer)
Freyeria trochylus (Freyer)
Azanus ubaldus (Stoll)
Azanus jesous {Guerin-Meneville)
Azanus moriqua (Wallengren)
Zizeeria knysna (Trimen)
Zizina antanossa (Mabille)
Zizula hylax (Fabricius)
Actizera lucida (Trimen)

Family PIERIDAE

Subfamily EUCHLOINAE

Pinacopteryx eriphia (Godart)

Subfamily COLIADINAE

Catopsilia florella (Fabricius)
Eurema brigitta (Cramer)
Colias electo (Linnaeus)

Subfamily PIERINAE

Colotis vesta (Reiche)
Colotis regina (Trimen)
Colotis evenina (Wallengren)
Colotis agoye agoye (Wallengren)
Colotis agoye bowkeri (Trimen)
Colotis eris (Klug)
Colotis subfasciatus (Swainson)
Belenois aurota (Fabricius)
Belenois creona severina (Stoll)
Pontia helice (Linnaeus)
Mylothris agathina (Cramer)

Family PAPILIONIDAE

Papilio demodocus Esper
Papilio nireus lyaeus Doubleday
Graphium antheus Cramer

Superfamily HESPERIOIDEA

Family HESPERllDAE

Subfamily COELIADINAE

Coeliades forestan (Stoll)
Coeliades pisistratus (Fabricius)

Subfamily PYRGINAE

Eretis umbra (Trimen)
Caprona pillaana Wallengren
Spialia asterodia (Trimen)
Spialia dromus (Plotz)
Spialia diomus ferax (Wallengren)
Spialia spio (Linnaeus)
Spialia mafa (Trimen)

Subfamily HESPERllNAE

Metisella willemi (Warlengren)
Tsitana tsita (Trimen)
Kedestes nerva (Fabricius)
Kedestes barberae (Trimen)
Kedestes wallengreni (Trimen)
Platylesches ayresi (Trimen)
Pelopidas thrax inconspicua (Bertolini)
Gegenes pumilio gambica (Mabille)
Gegenes niso (Linnaeus)

THE LITTLE HAIRTAIL FROM THE KALAHARI

By R.F. Terblanche

P.O. Box 1104, Potchefstroom 2520

Abstract. The discovery of the unique Hairtail, *Anthene lindae* S.F. & G.A. Henning (Lepidoptera: Lycaenidae) from Witsand in the Northern Cape Province.

Approximately five kilometres after passing through Olifantshoek from the Kuruman side in the Northern Cape Province, one finds a signpost indicating a place called Witsand (White Sands) in a southerly direction. If you take this tum-off a wide gravel road will take you for 80 kilometres all along the western side of the Langeberg, which is a thin series of mountains stretching endlessly from north to south across this desolate wilderness, finally delivering you to your destination, if you were still able to grasp such a concept in such vastness. Suddenly the continual *Acacia* veld makes way for white, and later red, sand dunes. According to my brother Etienne it is as if the creator spilled some sea-sand on his way to the beach.

It was during the winter months of 1990 that Etienne and his wife Jennie introduced me to this curious place. At Witsand the farmer has erected some huts where one could stay at a very low tariff. It is a location where one can think in peace or be enthralled by the antics of the Kalahari insects. The winter thoughts kept returning to the possibility that such a peculiar location should produce some extraordinary butterflies in the summer months. Speculations about a new *Aloeides* in the area or other creatures, which only a lepidopterist's imagination can create, presented itself at regular intervals.

On 8th September 1990, Etienne and Jennie, my friend Gus Butler and myself camped there for the weekend. The early spring abounded with butterflies including *Spindasis phanes* (Trimen}, /o/*aus subinfuscata reynoldsi* (Dickson), *Aloeides molomo krooni* Tite & Dickson, *Aloeides simplex* (Trimen} and *Acraea trimeni* Aurivillius. On later occasions I found *Tuxentius melaena griqua* (Trimen & Bowker} also frequenting this sandy place.

The first thing Gus and I did was to investigate the highest point of the dunes and to visit a low ridge further on. Later in the afternoon the heat of the sun forced us all together for water in the vicinity of the camp. It had not been the best of days for me in the veld and the Kalahari sun had shrivelled us. In this condition I was stumbling back to the camp site. Just past a ragged camel thorn *(Acacia erioloba* E. Mey) a small butterfly sitting on a yellow flower caught my eye. It was simply impossible - I had never seen anything like it! It was the dream of every lepidopterist! It sat there almost like a very unusual little *Lepidochrysops,* it was a new species of *Anthene*! In a flash it was in my net. If I had not caught it none of my descriptions or explanations would have been believed. It was a female and the underside can be seen in Pennington's Butterflies (2nd Ed.) plate 157. Unfortunately that weekend no more were seen. The next weekend I took the specimen to the Hennings and it is wonderful how lepidopterists can share each other's enthusiasm.

The challenge, of course, was to find more. But would we find more at Witsand? And if not, where? What are the habits of this peculiar little butterfly? One instinctively hopes to find clues by looking at possible relatives. Bearing in mind the unpredictable appearances of an insect like *Anthene minima* (Trimen} (that was before the locality near Mkuze was made known by Hermann Staude) we feared the worst. On the other hand if it was related to the *Anthene otacilia* (Trimen) group then its appearance could be more predictable. That they can be found on flowers is a fact, but then any layman can tell you that about most butterflies.

Our first search at Witsand at the end of September was fruitless. On the weekend of 27th October 1990 we tried again. Again I searched all the highest points in the area and inspected

all the little flowers along the way. Every now and then I glanced at the distant Langeberg and wondered if there were a few males of this little hairtail gambolling about the peaks. I also carefully searched the strip of camel thorns growing amongst the grey camel thorn, *Acacia haematoxylon* Wild. After a long day's hard work in the veld I returned to the familiar camp site, exhausted. The first requirement was water and once I had had a refreshing drink I felt a bit better. Etienne, Jennie and Gus were in quite a good mood and kept asking me if I had collected one. I was contemplating whether the lack of rain since the beginning of the season had anything to do with the absence of the butterfly. As I sat there an envelope suddenly appeared before my eyes. In the right hand corner of the envelope was a little hairtail! Yes, Gus had collected a second specimen. The first thing that struck me was the pronounced dark markings on the underside. This specimen was also a female and proved to us that there are more at Witsand.

My brother Etienne waited until we arrived at Kuruman, where they were living at the time, before he revealed his secret! It was another one which he had collected after Gus's specimen, also close to the camp site. This time it looked like a male (holotype!).

Not long after that weekend we took the specimens to the Hennings and Graham discussed all the differences he could detect, especially the male genitalia which he compared to *A. rninima* which is the nearest relative. I was glad the Hennings could start so soon with the description and be able to describe it in the Second Edition of Pennington's Butterflies. It was named *Anthene lindae* S.F. & G.A. Henning.

In November 1990 I collected two more females, also in the late afternoon near the camp site. This time they were feeding on the yellow flowers of *Grewia flava* DC. Probably *Anthene lindae* comes down from their "playground" (the canopy of the *Acacia erioloba?)* to feed on flowers. Thus far only yellow flowers have been seen to be used. There are still many questions to be answered about this butterfly. What the life history and distribution will reveal should be of great interest.

The butterfly was named as a tribute in memory of Linda Terblanche (Botha) who died in a motorcar accident in April 1990. To the describers, I am very grateful for such a scrupulous description.

As I sit here and share such an event with my fellow lepidopterists, an *Anthene lindae* may sit quietly on a little yellow flower, utilizing the nectar, in the far Kalahari.

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BUTTERFLIES OF THE LEKGALAMEETSE NATURE RESERVE

By R. F. Terblanche
P. O. Box 1104, Potchefstroom 2520

and

G .A. Henning
17 Sonderend Street, Helderkruin 1725

Abstract. A checklist of the 183 species of butterfly from the Lekgalameetse Nature Reserve (formerly known as Malta Forest) in the foothills of the Transvaal Drakensberg.

This forested kloof in the foothills of the Transvaal Drakensberg was formerly known as Malta Forest This locality has been well frequented over the years by many collectors and was one of David Swanepoel's favourite collecting sites. Many of the following records came from his book published in 1953.

Lekgalameetse is a rare experience of nature with its tremendous diversity in ecosystems. It is a privilege to search for butterflies in such surroundings. Thoughts of people like Dr Georges Van Son and David Swanepoel spring to mind as one wanders along the stream bank beneath magnificent forest trees. It is a place where one wonders how Monet and other great artists would have captured those white and yellow speckles interrupted by a red-brown flash on a variegated green background.

The Lekgalameetse Nature Reserve was visited in April 1994 by Reinier Terblanche. The Malta Forest was first visited by Graham Henning over thirty years ago (January 1964) when he and his father and brother Stephen camped at the waterfall arid spent several idyllic days wandering along the road and down the forest paths. The locality has been visited by many lepidopterists over the years but new records are still to be made as indicated by the capture of *Eagris nottoana* (Wallengren) by Terblanche in April 1994.

We are thankful for the friendly considerate staff who now control this natural wonderland, especially Jurg van Loggerenberg and Hiadee Warburton who have become involved in butterfly research at the reserve.

The following are notes on interesting genera found in the reserve:

Satyridae: Genus *Stygionympha*

Two species of this montane grassveld genus have been found within the reserve. *Stygionympha wichgrafi wichgrafi* Van Son was found fluttering and bobbing in great numbers among the grasses and stones higher up above the Kerkbos Forest at an altitude of 1350-1500m when the locality was visited on 9th April 1994 by Reinier Terbtanche. No *Stygionympha scotina coetzeri* G.A & SF. Henning were seen at this locality. One worn female was recorded of this recently described subspecies on the 8th April 1994 on the opposite side of the road which passes Malta Forest at an attitude between 900-1000 metres.

Two of the Paratypes of *coetzeri* were collected at Malta Forest, one by Bill Teare on 8 July 1964 and the second by Graham Henning on 4 October 1966. Henning collected this specimen to the left of the old entrance gate to Malta Forest on the slopes of a grassy knoll amongst the Proteas. He was there with his brother Stephen and other collectors and noted at the time that the butterfly, which was flying in good numbers, lacked the underside spot of *wichgrafi.* He collected only a single specimen 'for the record'. This insect has a history of being found in numbers and only single specimens being taken, similar incidences having occurred at Abel Erasmus Pass and

Kowyns Pass.

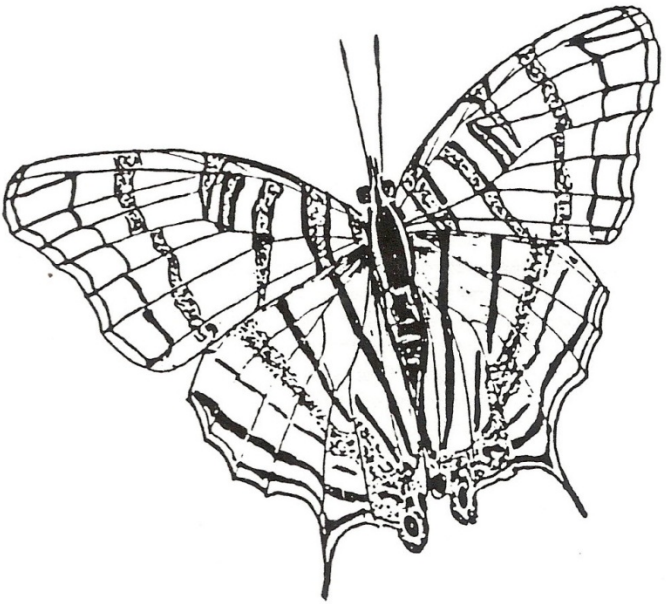
Pieridae: Genus *Appias*

Two species occur in the reserve. This is one of the finest localities to view *Appia epaphia contracta* Butler. A variety of female forms have been recorded from Malta Forest. The second species of the genus is the RED DATA BOOK species *Appias sabina phoebe* (Butler). This species is only known in South Africa from Lekgalameetse and Woodbush. The species was categorised as RARE in the *South African Red Data Book - Butterflies* S.F. & G.A. Henning, 1989. A number of specimens with an amazing array of female forms have been recorded.

Further research is required to ascertain if this population is a separate subspecies from that of the Kenyan subspecies *phoebe.* It is a relief that this butterfly is well protected in this reserve.

Hesperiidae: Genus *Eagris*

The single species of this genus which occurs in South Africa was only recorded from the Transvaal in recent years. Kloppers recorded the first specimen at Skukuza in the Kruger National Park, Coetzer collected three specimens on the Soutpansberg and Graham Henning found it along the Olifants River below the Abel Erasmus Pass. Terblanche collected a perfect male on 7th April 1994 at the Makhutsi Camp in the reserve thereby extending the range of this species further into the Transvaal. The significance of these occurrences indicates the coastal bush characters which some of the biotic communities on the north-eastern side of the Transvaal Drakensberg seem to display. Further research is necessary to formulate a hypothesis for this phenomenon.



Cyrestis pantheus sublineatus male upperside

Checklist of the butterflies of the Lekgalameetse Nature Reserve

SUPERFAMILY Papilionoidea

FAMILY Nymphalidae

SUBFAMILY Danainae

Danaus chrysippus aegyptius (Schreber)
Amauris niavius domlnicanus Trimen
Amauris albimaculata albimaculata Butler
Amauris echeria echeria (Stoll)

SUBFAMILY Satyrinae

Melanitis leda helena (Westwood)
Bicyclus safitza safitza (Hewitson)
Bicyclus anynana anynana (Butler)
Henotesia perspicua (Trimen)
Paralethe dendrophilus junodi (Van Son)
Cassionympha cassius (Godart)
Stygionympha scotina coetzeri G.A & S.F. Henning
Stygionympha wichgrafi wichgrafi Van Son
Ypthima impura paupera Ungemach

SUBFAMILY Acraeinae

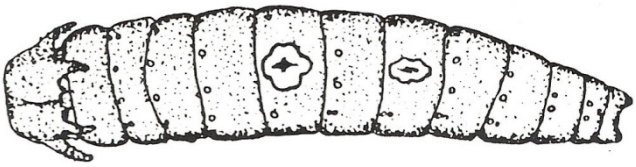
Acraea horta (Linnaeus)
Acraea neobule neobule Doubleday
Acraea acara acara Hewitson
Acraea boopis boopis Wichgraf
Acraea natalica natalica De Boisduval
Acraea caldarena caldarena Hewitson
Acraea oncaea Hopffer
Acraea aglaonice Westwood
Acraea nohara nohara De Boisduval
Acraea violarum De Boisduval
Bematistes aganice aganice (Hewitson)
Hyalites esebria esebria (Hewitson)
Hyalites eponina (Cramer)
Hyalites cabira (Hopffer)
Hyalites encedon encedon (Linnaeus)
Hyalites obeira burni (Butler)
Pardopsis punctatissima (De Boisduval)

SUBFAMILY Charaxinae

Charaxes varanes varanes (Cramer)
Charaxes candiope candiope (Godart)
Charaxes jasius saturnus Butler
Charaxes brutus natalensis Staudinger & Schatz
Charaxes druceanus moerens Jordan
Charaxes xiphares kenwayi Poulton
Charaxes zoolina zoolina (Westwood)
Charaxes achaemenes achaemenes C. & R. Felder

SUBFAMILY Nymphalinae

Cymothoe alcimeda transvaalica Rydon
Hamanumida daedalus Fabricius
Pseudacraea boisduvalii trimeni Butler
Pseudacraea lucretia expansa Butler
Neptis saclava marpessa Hopffer
Neptis laeta Overlaet
Cyrestis pantheus sublineatus Lathy {One Specimen collected by Swanepoel} - Red Data Book species



Charaxes xiphares kenwayi final instar larva

Sallya morantii morantii (Trimen)
Sallya natalensis (De Boisduval)
Byblia anvatara acheloia (Wallengren)
Byblia ilithyia (Drury)
Eurytela hiarbas angustata Lathy
Eurytela dryope angulata Aurivillius
Hypolimnas misippus (Linnaeus)
Hypolimnas anthedon wahlbergi (Wallengren)
Protogoniomorpha parhassus (Drury)
Protogoniomorpha anacardii nebulosa (Trimen)
Precis octavia sesamus Trimen
Precis archesia (Cramer)
Precis tugela tugela Trimen
Precis terea elgiva (Hewitson)
Precis natalica natalica C. & R. Felder
Precis hierta cebrene (Trimen)
Precis oenone oenone (Linnaeus)
Precis orithya madagascariensis Guenee
Vanessa cardui (Linnaeus)
Antanartia dimorphica Howarth
Antanartia schaeneia schaeneia (Trirnen)
Lachnoptera ayresii Trimen
Phalanta phalantha aethiopica (Rothschild & Jordan)
Phalanta eurytis eurytis (Doubleday)

SUBFAMILY Libytheinae

Libythea labdaca laius Trimen

FAMILY Lycaenidae

SUBFAMILY Lipteninae

Alaena amazoula ochroma Vári

SUBFAMILY Miletinae

Lachnocnema bibulus (Fabricius)

SUBFAMILY Theclinae

Iolaus silarus silarus Druce
Hypolycaena philippus philippus (Fabricius)
Capys alphaeus extentus Quickelberge
Deudorix dariaves Hewitson
Deudorix antalus (Hopffer)
Myrina silenus ficedula Trirnen
Myrina dermaptera dermaptera (Wallengren)
Spindasis natalensis (Westwood)
Spindasis mozambica (Bertoloni)
Axiocerses tjoane (Wallengren)
Aloeides taikosama (Wallengren)

SUBFAMILY Polyommatinae

Anthene definita definita (Butler)
Uranothauma nubifer (Trimen)
Cacyreus lingeus (Stoll)
Cacyreus virilis (Aurivillius)
Cacyreus marshalli Butler
Zintha hintza hintza (Trirnen)
Tuxentius calice calice (Hopffer)
Tuxentius melaena melaena (Trimen & Bowker)
Leptotes pirithous (Linnaeus)
Leptotes jeanneli (Sternpffer)
Lampides boeticus (Linnaeus)
Pseudonacaduba sichela sichela (Wallengren)
Euchrysops osiris (Hopffer)
Eicochrysops hippocrates (Fabricius)
Cupidopsis jobates jobates (Hopffer)
Actizera lucida (Trimen)
Zizeeria knysna (Trimen)
Zizula hylax (Fabricius)
Azanus jesous (Guérin-Méneville)
Azanus moriqua (Wallengren)
Azanus mirza (Plotz)
Freyeria trochylus (Freyer)

FAMILY Pieridae

SUBFAMILY Pierinae

Pinacopteryx eriphia eriphia (Godart)
Colias electo electo (Linnaeus)
Catopsilia florella (Fabricius)
Eurema hecabe solifera (Butler)
Eurema brigitta brigitta (Stoll)
Eurema desjardinsii marshalli (Butler)
Eronia cleodora cleodora Hübner

Nepheronia thalassina sinalata (Suffert)
Colotis vesta argillaceus (Butler)
Colotis ione (Godart)
Colotis danae annae {Wallengren)
Colotis auxo auxo (Lucas)
Colotis antevippe gavisa (Wallengren)
Colotis evenina evenina (Wallengren)
Colotis evippe omphale (Godart)
Colotis eris eris (Klug)
Belenois zochalia zochalia (De Boisduval)
Belenois aurota (Fabricius)
Belenois creona severina (Stoll)
Belenois gidica (Godart)
Dixeia pigea (De Boisduval)
Appias sabina phoebe (Butler) - Red Data Book species
Appias epaphia contracta Butler
Pontia helice helice (Linnaeus)
Leptosia alcesta inalcesta Bernardi
Mylothris rueppellii haemus (Trimen)
Mylothris agathina (Cramer)

FAMILY Papilionidae

SUBFAMILY Papilioninae

Papilio dardanus cenea Stoll
Papilio echerioides echerioides Trimen
Papilio euphranor Trimen - Red Data Book Species
Papilio constantinus constantinus Ward
Papilio demodocus demodocus Esper
Papilio nireus lyaeus Doubleday
Papilio ophidicephalus transvaalensis Van Son
Graphium angolanus angolanus (Goeze)
Graphium morania (Angas)
Graphium leonidas leonidas (Fabricius)
Graphium antheus (Cramer)
Graphium porthaon porthaon (Hewitson)

SUPERFAMILY Hesperioidea

FAMILY Hesperiidae

SUBFAMILY Coeliadinae

Coeliades forestan forestan (Stoll)
Coeliades pisistratus (Fabricius)

SUBFAMILY Pyrginae

Celaenorrhinus mokeezi separata (Strand)
Tagiades flesus (Fabricius)
Eagris nottoana nottoana (Wallengren)
Eretis djaelaelae (Wallengren)
Eretis umbra umbra (Trimen)
Sarangesa phidyle (Walker)
Sarangesa seineri seineri Strand
Sarangesa motozi (Wallengren)
Netrobalane canopus (Trimen)
Spialia dromus (Plotz)
Spialia diomus ferax (Wallengren)
Spialia spio (Linnaeus)
Gomalia elma (Trirnen)

SUBFAMILY Hesperiinae

Metisella metis paris Evans
Kedestes wallengrenii wallengrenii (Trimen)
Kedestes macomo (Trimen)
Parosmodes morantii morantii (Trimen)
Acleros mackenii (Trimen)
Andronymus neander neander (Plotz)
Artitropa erinnys erinnys (Trimen)
Platylesches galesa (Hewitson)
Platylesches ayresii (Trimen & Bowker)
Platylesches neba (Hewitson)
Platylesches moritili (Wallengren)
Platylesches picanini (Holland)
Zenonia zeno (Trimen)
Pelopidas mathias (Fabricius)
Pelopidas thrax inconspicua (Bertoloni)
Borbo fatuellus fatuellus (Hopffer)
Borbo fallax (Gaede)
Borbo gemella (Mabille)
Borbo holtzii (Plotz)
Gegenes pumilio gambica (Mabille)
Gegenes niso niso (Linnaeus)

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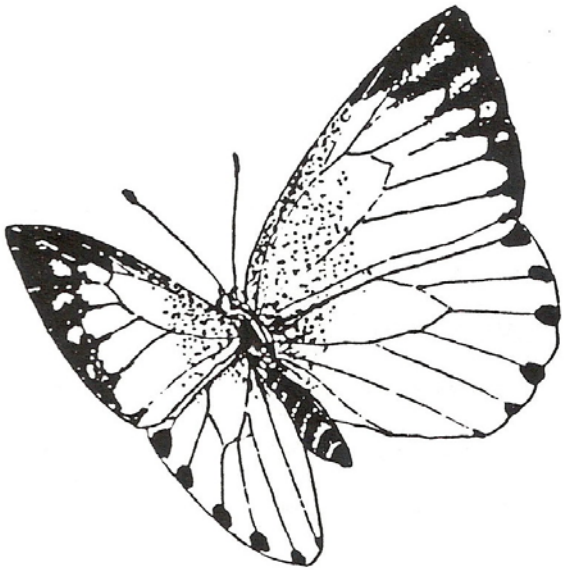


Appias sabina phoebe female upperside

HAZARDS OF BUTTERFL Y COLLECTING
-ALL IN A DAY FOR 'SKYPOWER' -
Nigeria, 1978

By Torben B. Larsen

358 Coldharbour Lane, London S.W. 9 -8PL, England

The Jos Plateau in Central Nigeria, despite intense environmental degradation, remains a most interesting place. Because of its appreciable altitude in otherwise lowland West Africa, it represents the westernmost bastion of fauna and flora otherwise more characteristic of eastern and southem Africa. Here I have found the westernmost colonies of butterflies like *Eronis leda, Colotis protomedia, Euchrysops subpallida* and *Cacyreus virilis.* Stuart Norman did even better in finding *Hypolycaena hatita* in a subspecies near the eastern ssp. *ugandae* (ssp. *anara* Larsen, 1986), though the nominate West African subspecies occurs a few hundred kilometres to the south - to my mind an excellent illustration that the subspecies category is a real and important one. Stuart Norman also found a splendid member of the genus *Capys* which remains undescribed; its *Protea* host plants also have their westernmost limit at Jos.

So even a brief visit was to be cherished, and I arranged to spend most of a Sunday in Jos, rather than sweating it out in Lagos. An uneventful early morning flight with 'Skypower' (Nigeria Airways) - mostly unusual since Skypower is usually full of surprises - brought me to Jos. And I immediately set out on foot from the hotel to collect. Very soon, I had bagged a good series of whites of the pierid genus, *Mylothris,* the taxonomic position of which had remained somewhat elusive, and which in principle should not have been at Jos at all, since it is a rainforest genus. One or two other goodies were also bagged, before I had to repair to the hotel for a meeting with other members of my team who arrived on the afternoon plane (after having sweated it out in Lagos).

Later that evening, I discovered that I had two distinct species of *Mylothris*, one of which proved to be an undescribed subspecies of *Mylothris rueppellii,* previously thought to go no further west than eastern Zaire and Uganda. I described this as *M. rueppellii josi* (1983 [1986] in *Bulletin de Institut Fondamental d'Afrique Noir*, A 45: 151-172), though strange to say I am still unsure of the exact taxonomic status of the one originally known from Jos. Not bad for a few hours' work.

Since my discovery of *Mylothris rueppellii josi.* Steve Collins from Nairobi upped me considerably. A few years ago, on a walk through the rocky hills a few hundred metres from the hotel, he came across a colony of a completely new member of the genus *Alaena,* no species of which are known closer to Nigeria than the Zaire/Rwanda border.

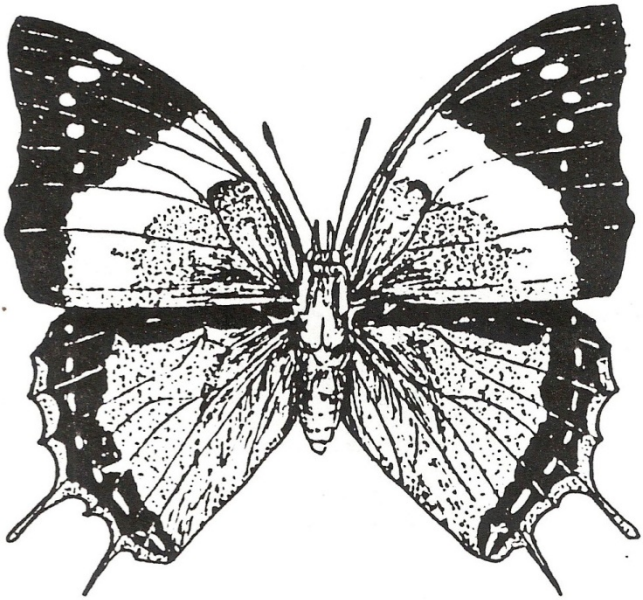
On my way back, after a few days of work, 'Skypower' had reverted to par. The ancient Fokker Friendship was hopelessly overbooked, the selling of additional boarding passes being a more secure source of income for airline staff than their salary, which the debt-ridden airline paid only irregularly. Being well-practised in the ways of Skypower, I had spotted that the rear cargo door was open, so when the ugly rush for the aircraft began, I vaulted up that instead of the main door, brandishing my boarding card.

The aircraft was soon filled to the last seat, and staff had great difficulties in fending off the twenty or so people with valid boarding passes still waiting. A bit of help from police and army soon sorted that out. Ready for take-off? Not quite' A flight attendant approached the aisle passengers in the last row to inform them that they would have to leave - the seats were reserved for cabin crew during take-off and landing. No response. Soon the captain came on the intercom: ·Ladies and gentlemen .. I am afraid that due to international regulations the cabin crew have to be seated during take-off.... would the passengers in seats 12b and 12c kindly leave the aircraft". They sat tight. The captain came to remonstrate. They were disinclined to listen. Back came the captain on the intercom: "Unless the passengers in seats 12b and 12c leave the aircraft immediately, I have no option but to call the authorities. Please leave the aircraft voluntarily". The poker faces in 12b and 12c set even deeper, the rest of us trying to suppress any hint of smugness.

A few moments later a squad of special police burst in with submachine guns and bundled off the recalcitrant passengers, who were at least wise enough not to resist. Soon the flight attendant was on the intercom: "Ladies and gentlemen. Welcome on board this Nigeria Airways Fokker Friendship bound for Kaduna, Ibadan, and Lagos. Our cruising altitude will be 21,000 feet. The estimated flying time to Kaduna is 55 minutes. We wish you a pleasant flight. Stoic lass - I don't think I could have resisted a slight change of script: “I hope those of you who are still with us have a pleasant flight"!

Ironically, in Kano a week later, I was faced with the opposite situation. A small Fokker F-28 had been replaced by a DC-10, seating four times the number of passengers. Sixty passengers, clutching mounds of luggage (sensibly refraining from placing it at the tender mercy of Skypower's baggage handling), ran for their lives across six hundred metres of heat-shimmering apron, to find themselves in a near-empty aircraft.

It is supposed to be better to travel hopefully than to arrive. Not with Skypower, in the 1980s, it wasn't. You hoped to travel - arrival was proof!



Charaxes manica female upperside

GETTING TO KNOW MOTHS
- SWIFTS, GHOST MOTHS -

By Stephen Henning

5 Alexandra Street, Florida 1709, South Africa

Ghost Moths belong to the family Hepialidae (Superfamily Hepialoidea). They are medium-sized to very large moths with very short antennae and long narrow wings well separated at their bases. The wings are of similar shape and are rather rounded at the ends, the hindwing is not overlapped by the forewing. The base of the forewing is extended into a jugum, and the wing venation is homoneurous. The mouth parts are reduced with the maxillary palpi minute, the proboscis absent or vestigial and the labial palpi short.

In most species the female usually scatters her eggs over the grass, while in others the eggs are laid in the soft earth round the stem or roots of the host tree or shrub. The larvae are mostly root feeders but some species are borers in the stems of trees and shrubs. The pupae are protruded from the larval tunnel before emergence of the adult.

Most species are rather drab moths, but the spectacular *Leto venus* Stoll (fig. 2) is exceptional in both size and colour. Its wingspan may be up to 150 mm in the female, which makes it one of the largest moths in southern Africa. The ground colour is salmon-pink with some purplish-brown shading and the forewings are covered with silver maculae. The larvae (figs 2 & 3) feed in the trunks of the keurboom, *Virgilia oroboides* (Berg.) Salter, and the species is confined to the southern Cape. It is regarded as rare by G.A. & S.F. Henning (1992).

The life histories of few other hepialids from southern Africa are known. Larvae of *Gorgopis libania* Stoll and *Eudalaca rofescens* (Hampson) feed on grass roots and may occasionally become pests in lawns, and those of *Gorgopis ptiloscelis* Meyrick and G. *crudeni* Janse have been found in tunnels in the ground.

There are about 68 species in southern Africa belonging to 6 genera. For detailed information on the group see Janse (1942). Pinhey (1975) discussed several common species.

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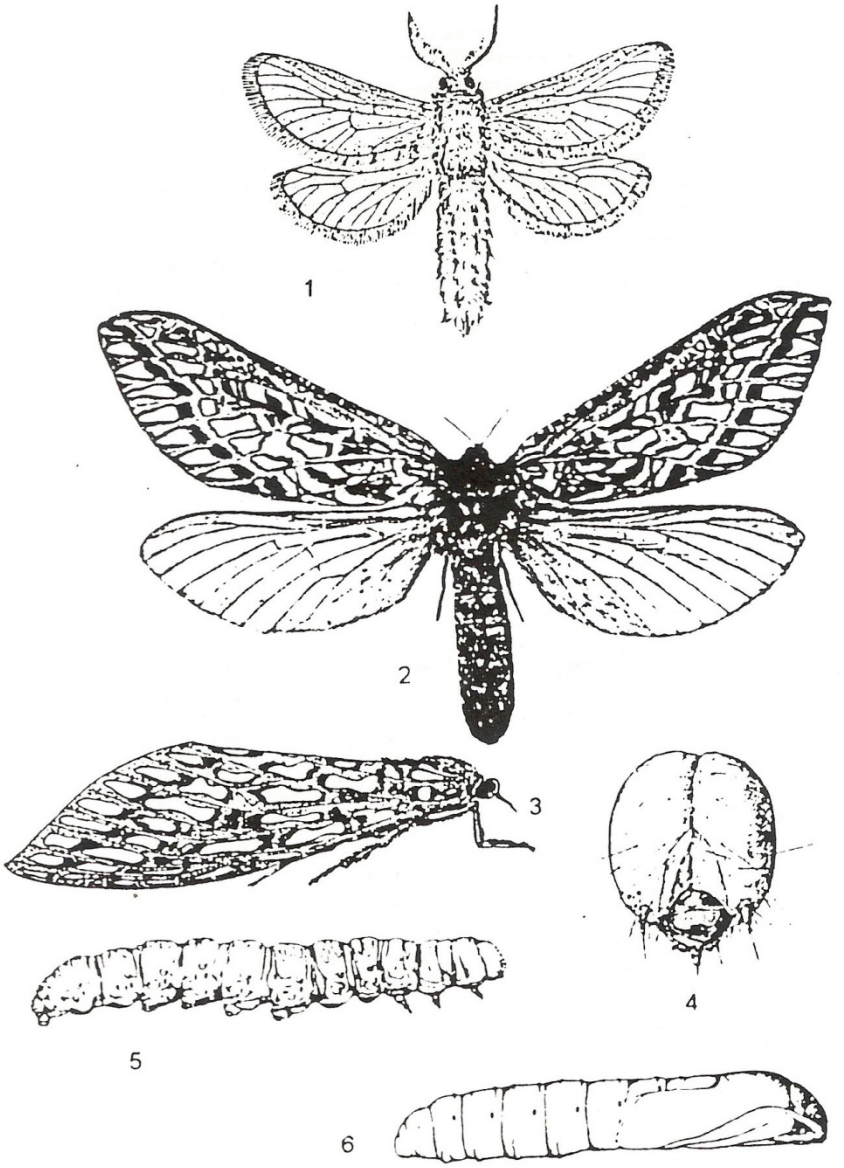

Ghost Moths (Hepialidae) . 1 *Gorgopis libania* Stoll male; 2-6 *Leto venus* Stoll 2. Female upperside: 3 Male in resting position, 4 Larval head; 5 Final instar larva: 6 Pupa

LETTERS TO THE EDITOR

I have received numerous letters over the years criticizing and praising articles in *Metamorphosis.* I have enjoyed reading them and have tried where ever possible to implement their suggestions. As the points of view expressed in these letters are occasionally humorous and often contentious t thought it was about time we published some of them. So I have introduced "Letters to the Editor" in which I will publish the most interesting and usually most contentious ones. The letters will not be published in full just the appropriate paragraphs.

Editor

Dear Editor

Thank you for your March 1994 edition of *Metamorphosis.* The article on “Hazards of Butterfly Collecting - driven out by drivers - Ghana 1993" made interesting reading, however, I was a little concerned about the fact that Kerosene was poured over the ants and then lit for "sweet revenge·. Although most of us use sprays and poisons in our homes I feel that, when we venture out into the wild, we should, as far as possible, respect the lives and habitats of the flora and fauna in that area - particularly those of us who belong to societies like the Lepidopterists’ Society. I, like most others, will kill the insects which bite me, however, where we can walk around a snake in the path and not kill it or take a detour for the sake of a spider and its web. Is it not our duty as nature lovers to do so?

Maybe I am wrong and I have made the mistake that this society is only concerned with butterflies and moths - but then why would we want articles on things like scarab beetles (*Metamorphosis.* Vol. 5, No.1).

Please let me know where the Society stands on this issue as the matter is important to me. If conservation of the flora and fauna is part of the societies aim then possibly something to that effect should be published to bring it to the attention of your members.

Mike Reed

One of the *major* aims of our Society is conservation and this is stated in our constitution. This concern about conservation and what we are doing about it has been brought to our attention in the past and Stephen Henning in his ·comment by the President" *(Metamorphosis,* 1994. Vol. 5(3): 90-92) discusses the Society’s contribution towards conservation. A general knowledge of insects helps to strengthen our arm when we want to get an area protected. A motivation for the establishment of, for example, a butterfly reserve is far stronger if we can name in addition rare species from other insect orders occurring in the area. The presence of the rare long horn beetle *Tragiscoschema bertoloni* (Cerambycidae) at Ruimsig in addition to *Aloeides dentatis* may have helped sway the decision in favour of establishing the Ruimsig Entomological Reserve.

Knowledge is strength, that is why I encourage articles that educate and increase the knowledge of our members.

Editor

BOOK REVIEW

Mark Williams, 1994. *Butterflies of Southern Africa - A Field Guide.* Southern Book Publishers, Halfway House.

Just when you thought innovation was a thing of the past, along comes a person with a fresh outlook on a well-trodden path. The field guide approach is used literally and this book could also be called a butterfly watchers guide. Mark Williams has used his years of field experience as an observer of natural history to develop a concept whereby immediate colour recognition leads the observer to the first step in identification. So often young naturalists lament that 'they don't know where to start' when identifying butterflies. Well this is the way to do it! Many a budding lepidopterist has been put off a rewarding lifetime of lepidoptery by not knowing where to start. This book can also be used by the merely inquisitive whoon their rambles through the bush want to identify all the natural wonders they come across.

The general information contained in Part 1 is good and concise. The friendly manner used by the author will obviously encourage the reader to progress further into the book.

In Part 2 Mark Williams has put his extensive knowledge of southern African butterflies and their biology to good use and the text is comprehensive for the species used The range of species are those most likely to be encountered on nature rambles and represent a fair proportion of the butterfly fauna. The grouping of related species is well presented. One thing missing is the distribution maps.

The author uses common names extensively which is an added boon for the young, and the not so young, naturalist. I did find the Afrikaans names superfluous in an English book and would rather have had the Afrikaans names cross-referenced at the back. The plates are adequate and the use of side views for field identification is essential. One complaint is that perhaps the side views are a little small in some cases. If one considers that the observer will largely use this aspect of the butterfly for identification of a settled specimen. I wonder how Plate 5 managed to progress so far without the numbers? The addition of a plate of day-flying moths is a fine idea but sadly lacking an explanatory passage or two in Part 1. The early stage figures are enough to whet the appetites of young naturalists and many a moth caterpillar will be compared to these paintings.

Part 3 contains habitat checklists, larval foodplant list, bibliography, glossary and indices. The habitat checklists can be used to prepare for particular hikes or trails. The foodplant list is comprehensive and gives insight into relationships between the groups of butterflies.

Natural history is a growth market in southern Africa and many of us appreciate what this country has to offer. A user friendly book such as this brings more meaning to the field experience and will help not only our own youth and interested adults but also overseas visitors to our shores.

This book is highly recommended to anyone with an interest in the natural history of southern Africa. The author is to be congratulated on his progressive and innovative approach.

Graham Henning

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