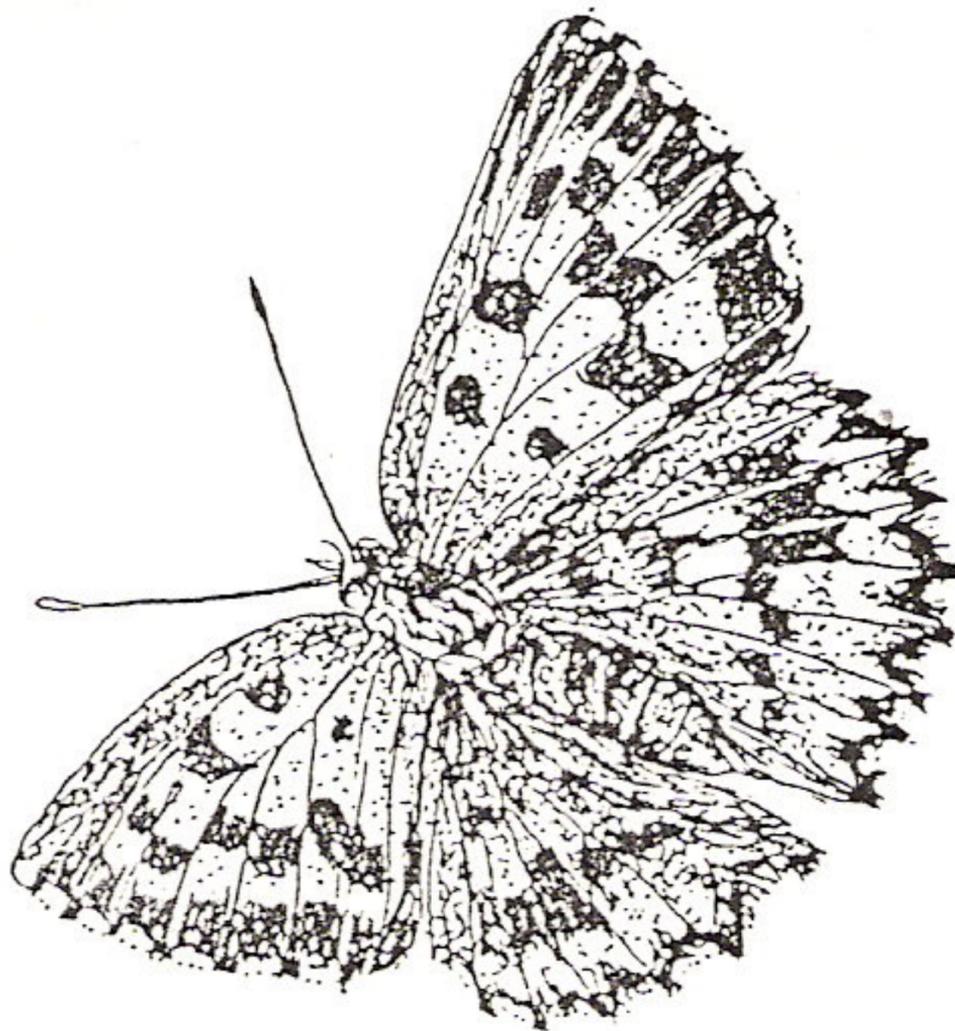


LEPIDOPTERISTS' SOCIETY

OF SOUTHERN AFRICA

METAMORPHOSIS

18



Newsletter of the Lepidopterists' Society of Southern Africa

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Field outing of the Society to Suikerbosrand Nature Reserve

Anonymous

For some months now we have been planning co-operative research on Lepidoptera in nature reserves under the jurisdiction of the Transvaal Nature Conservation Division. Thanks to the enthusiasm and tireless energy of Koos de Wet, who is in charge of insect conservation for this body, we have the go-ahead to survey the Suikerbosrand N.R. near Heidelberg (Transvaal).

Our first outing to the reserve on the 14th September 1986 was the beginning of what will hopefully eventually lead to the accumulation of a large amount of information about the status of nature reserves in southern Africa. About 30 members of the Society met at the Diepkloof rest area in the north-western corner of the reserve and were issued with folders, pens, worksheets and miscellaneous paraphernalia. After dividing ourselves into five groups we headed for different areas of the reserve. After some four or five hours of work in the field we all regathered at the meeting point and had a most enjoyable braai and chat (inevitably butterflies was a major topic of conversation).

One of the groups (led by Kit Cottrell) made the very important discovery that *Poecilmitis aureus* does in fact occur within the reserve – up until now there was no proof that this rare butterfly occurred in the reserve. In addition to this 'highlight' at least six previously unrecorded butterflies were added to Douglas Kroon's checklist for Suikerbosrand. All in all a most productive outing. The information collected has been collated by Graham Henning and a copy sent to the Tvl. Nature Conservation authorities. This data will also be distributed to all members.

Earthlink Expo 1986

Mark Williams

An outdoor and conservation heritage exposition, as part of the Johannesburg centenary celebrations, was held at Wemmer Pan, south of Johannesburg, from the 10th to the 19th of October 1986. Our Society, as a conservation-oriented body, was invited to stage an exhibition at the show. Your Committee thought it would be an ideal opportunity to promote and enhance our public image (most people regard butterfly collectors as being anti-conservationists!).

A lot of organization went into the setting up and manning of our exhibit and we had on show, cases of pinned Lepidoptera and other insects, live larvae of butterflies in a 'lepidopterarium', a slide show with accompanying taped comment, posters with conservation themes, and block-mounted blow-ups of 35 mm colour slides. I am very proud of the way our stand turned out and it certainly was extremely well supported by the public.

Thanks to all those who helped to make it such a success – in particular John Joannou, Stephen and Graham Henning, Colin Meano, Suzette Madden, Nolan Owen-Johnston and Steve and Jayne Woodhall. Also our grateful thanks to those who gave of their time to man the exhibition – especially Douglas Kroon, who spent a number of days at the stand promoting the Lepidoptera checklist with his usual enthusiasm.

***Junonia hierta cebrene* Trimen breeding in the Cape Peninsula in 1986, with notes on territorial expansion of some Lepidoptera. Part I**

A.J.M. Claassens, 203 High Level Road, Sea Point 8001

Sightings of *Junonia hierta cebrene* in the Cape Peninsula have been recorded by Claassens and Dickson (1980), and by Claassens (1984a). Many new records of this insect from the extreme south western Cape have since become available and in the summer and autumn of 1986 the butterfly was found breeding in two separate localities in the Cape Peninsula. Timothy Waters kindly supplied the following sightings of *J. h. cebrene* by himself, his parents and Harold Selb.

Somerset West: One male and one female, both in perfect condition, on 27th February 1985; 11 specimens on various occasions between 10th January and 8th February 1986, of which some in perfect condition.

Rondebosch: Three specimens (two males in perfect condition at Bishops) between 23rd January and 5th March 1986.

Greyton: One male and one female in good condition on 10th January 1986.

Kleinmond: Eight specimens, all in perfect condition near Kleinmond on 19th February 1986.

Futher sightings of *J. h. cebrene* were recorded by various observers from the following localities:

Ceres: A.J.M. Claassens observed two males in worn condition in the Ceres Nature Reserve, early April 1986.

Sea Point: Claassens caught a fairly fresh specimen in his garden on 27th March 1985 and he saw a fresh specimen in his garden on 4th February 1986 and another specimen a few days later.

Tokai (Silvermine Nature Reserve): A.B. Brinkman saw five specimens, of which at least three in good condition, in January 1986. He suggested that they might have bred locally, but failed to find the foodplant in that area.

Claremont: Brinkman saw two specimens, one of which in his garden, in April 1986. Mrs N.D. Wykeham recorded nine specimens from her garden, in which much *Barleria* grows, on five separate occasions between 29th January and 11th March 1986.

Hout Bay: Brinkman saw one worn specimen in early April 1986.

Pinelands: Dr J.B. Ball saw two specimens in good condition between 15th and 20th March 1986.

Melkbosstrand: A. Heath caught a perfect specimen 2-3 km inland from Melkbosstrand on the 27th December 1985.

Tamboers Kloof (Cape Town): In the garden of 'Blencathra'. After having sighted one female in relatively fresh condition on 15th February 1986, C.G.C. Dickson saw a female ovipositing on *Barleria obtusa* on 27th February 1986. From 27th February to 7th March he counted 27 eggs on these plants and from 27th February to 20th April he found 30 larvae. Two further larvae were found by Claassens and another two by V. and C.W. Wykeham. Some of this material was used for breeding purposes and the remainder of the larvae were left on the foodplants where they developed, pupated and eventually gave rise to imagines. Dickson saw one freshly emerged male on 17th March and one female on 27th April in his garden, which almost certainly represented specimens bred in his garden.

Camps Bay (Blinkwater Gorge): Dickson saw one male in moderately good condition on 25th March 1985; one male on 27th December 1985; two males and five females, mostly in worn condition, on 28th January 1986; 20 males and two females, and seven specimens without sexes being differentiated, between 13th February and 30th May 1986; and two males in entirely fresh condition on 7th June 1986. Some of these specimens were also seen by Claassens, between mid-April and mid-June. Claassens discovered larvae of various instars on *B. obtusa* plants in a garden next to Blinkwater Gorge on 18th April 1986. This discovery was confirmed by Dickson, who in addition, found more larvae, also on *B. obtusa*, in the gorge itself on 21st April. In these two localities larvae occurred throughout May and June. Five larvae, one in 2nd instar, were still found on the foodplants on 23rd June 1986. One fresh male specimen was seen on the wing in the gorge on that day.

The fresh specimens of *J. h. cebrene* seen in the gorge between March and June, and in a few cases even earlier than March, were undoubtedly the offspring of early migrants which passed through the gorge or its immediate vicinity. The present observations seem to justify the suggestion made in earlier publications that *J. h. cebrene* may, occasionally, have bred in the extreme south western Cape in the past. It is of particular interest to note that the January migrants (or earlier ones) produced at least two local generations of imagines. Another point of interest, that may be mentioned, is the obvious numerical advantage of males over females in the locally bred population. Or do females, after mating, tend to wander off more readily than males, in search of more foodplants? It remains to be seen whether the insect in either its larval or pupal stage will survive and produce a spring or even later winter population of imagines, which would be able to keep the Blinkwater Gorge colony going for another year or even longer.

The following two observations provided definite proof that *cebrene* can survive the winter months in the Cape Peninsula. I found a damaged but very fresh male in Main Road, Sea Point on 19th September 1986. It was obviously killed by the traffic. Mr C.G.C. Dickson saw two freshly emerged males in Blinkwater Gorge on 29th September 1986.

B. obtusa is a leafy shrub, which produces bluish-mauve flowers in autumn. This plant, which is endemic to the Eastern Cape, Natal, Zululand and the

Transvaal, is a popular garden plant in the Peninsula and the extreme south western Cape generally. Several species of *Barleria* are grown in gardens in the Peninsula e.g. *B. purpurea*, *B. reptans* and others. These species were not favoured by the larvae taken from *B. obtusa*, although they did adapt to *B. purpurea* in the absence of *B. obtusa*. *B. obtusa* seems to be a new foodplant record. For the most extensive list of foodplants of *J. h. cebrene*, see Van Son (1979).

A remarkable feature of the larvae of *J. h. cebrene* is their obvious disregard for predators. They crawl over the foodplant and eat from it in very exposed positions, especially during the warmer hours of the day. During unfavourable weather the larvae tend to occupy more sheltered positions on the plants.

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Paradise found

Alf Curle, 14 Strandloper Road, Teremure, Kempton Park 1620

(The following interesting account was submitted by Alf Curle, without title - so, with apologies to Milton, we have provided one. Eds)

Perhaps paradise is defined by each individual in his or her own particular way. For those collectors who have easy access to Zululand the incident I now relate is probably insignificant, yet to my brother Neville and myself it felt, that one hot day last October (1985) in Zululand, we really had stumbled into paradise.

A small valley surrounded by coastal scrub hid the most remarkable vegetation. Ferns grew in huge patches. In other places the ferns had grown up the trunks of the trees. One common species of tree was a very large spreading fig (possibly *Ficus vogelii*). Many large roots grew down from the outstretched branches, sometimes forming an arch through which we could pass in an upright position. A thick carpet of leaves made it an ideal home for the Gaboon Viper (fortunately none were seen!). A stream made a feeble attempt to push its way down the valley, stopping every so often in stagnant pools. Here and there the scene almost resembled a mangrove swamp.

The sun filled some patches, like an extra large spot-light, while in others the sunlight found it difficult to penetrate. It was in this magical atmosphere that we came across what we believe is the true playground of *Euphaedra neophron* (Hopffer). Here and there three or four males gambolled about each other, two feet above the ground, before gliding off in different directions. To watch these creatures glide swiftly in and out of the undergrowth and suddenly alight in a patch of sunlight is truly wonderful. Females were not as common as the males, but nevertheless, a number were observed at close quarters.

A peculiar act was performed before us on several occasions. A male would locate a female and fly in rapid circles no wider than a metre in diameter around her. She would then settle and open and close her wings fairly rapidly. The male would then settle 10 cm behind her and face in the same direction as her. They would then both sit absolutely still with wings closed, showing the leaf-like camouflage of the underside. Other males would glide over them, inches away, without detecting them. Neville spent 15 to 20 minutes waiting for the next act but nothing happened. Time, and other insects, called him away so it would be of interest if some other collector could finish the story for us.

Another observation was that several males would fly up the banks of a gully and spend some time flying around an area on higher ground. Could this be hill-topping in a strange way? It reminded us of our relatively unsuccessful ventures with this butterfly at the Dukuduku picnic spot. We now believe that the true home of the species is in the lower, overgrown streams that surround the 'hill' or rise on which the picnic spot is situated. Unfortunately the area is certainly the home of the Gaboon Viper if you wish to crawl around in the very thickest vegetation and when you are out in the open the Forester may have the last word if you do not have a permit.

Males are often found in the picnic area, only to dart away into the undergrowth when approached. Females observed there have been fresh (perhaps virgins) with one exception. Hill-topping may not apply and it is difficult to state if the species has a high or low numerical density. Certainly, in our 'paradise' it was a common insect. Perhaps males were forced into higher, less luxurious, areas in order to establish territories of their own.

Back to 'paradise' - two of the other species to attract our attention were *Myrina dermaptera* (Wallengren) and *Protogoniomorpha anacardii nebulosa* (Trimen). Four females of the latter being observed, while the two taken were damaged and obviously ready to lay eggs. They were released in the hope that when we return again to 'paradise', perhaps slightly earlier in the year, the population of perfect specimens will be greatly increased.

Vlindervangers en vissermanne

D.A. Swanepoel

D.A. Swanepoel vertel hier een van die vele argumente wat soms tussen vissermanne en skoelapper versamelaars plaasvind.

Ai tog dié vissermanne!

Piet - Die superioriteit van visvang teenoor ander sportsoorte gemeet, en behalwe ander voordele, lê in die misterie wat dit inhou. Wanneer jy jou hoek in 'n poel water of die Vaaldam ingooi weet jy nooit wat jy gaan uittrek nie.

Jan - Miskien die Vaaldammonster?

Piet - Ek het eenkeer die grootste karp in die Koolrivierdam gevang.

Jan - Toe het jy seker in elke kroeg en kafee gesit en 'brag'.

Piet - Ons hou daarvan om oor ons prestasies te gesels. En wat maak julle ou skoelapper versamelaars? Mens kan julle monde op afstande hoor.

Jan - Daar word algemeen gepraat dat vistermanne visvang as 'n verskoning voorhou om daar by die viswaters te gaan sit en dop.

Piet - Nonsies! Nie alle visvangers dop nie! Wat van daardie ou wat altyd 'n botteltjie in sy gatsak gedra het kastig om van die voggies by die gistende piesangs te voeg wanneer hy loknette vir skoelappers ophang. Een ou het hom glo smoordronk by sy loknet gekry. Op sy snor was daar interessante skoelappers, wat sy maat sorgvuldig verwyder het voor hy hom wakker gemaak het. 'n Hewige argument oor wie se skoelappers dit was het daarna gevolg.

Jan - Julle sit gedurig in die warm son om die bottel dop en dowwertjies dop te hou, terwyl ons in heerlike koel lug op die bergkruine rondloop.

Piet - Die dop laat ons drome droom wanneer die vis nie wil byt nie. Maar watse opknikker het julle as julle nie skoelappers kan vind nie?

Jan – Ons? Jy weet nog niks nie ou. Daar bo op daardie berge hyg ons soms na ons asem oor die onbeskryflike bergtonele wat opduik terwyl ons daar rondstap.

Piet – Dit kannie so mooi wees nie. Om na die water te kyk is net so mooi.

Jan – Word julle nooit moeg om uur na uur, dag na dag, of nag na nag, na die onveranderlike watertoneel te kyk nie?

Piet – NEE. Ons sien krappe, watervoëls, paddavissies en wat nie alles ook.

Jan – Daars nie eers pragtige blomme en kranse nie soos op die berge om na te kyk nie. Maar ek het vergeet die dop laat julle allerhande blomme en asters in julle verbeelding sien, nie waar nie?

Piet – Daars niks so kalmeerend vir 'n mens se senuwees as om stil en rustig langs die viswaters te sit nie.

Jan – Piet ou maat laat ek jou nou 'n ding of twee vertel. Wyd en suid oor Suid Afrika se vlaktes en berge vlieg daar na genoeg 600 soorte skoenlappers. 'n Uur of 'n lewenstydperk mag bestee word om hulle te vang. Maar probeer almal vang! Tot dusver het niemand daarin geslaag nie. Dis een van die aantreklikhede van skoenlapper vangery: 'n altyd uitbreidende jag vir die laaste paar van 'n skaars soort. Maak geen fout omtrent die opregte skoenlappervanger nie! Syne is geen gerieflike tydverdrijf nie. My kennisse onder versamelaars sluit in boere, dokters, skoolmeesters, diplomate, polisiemanne, stoeiers, bankiers, kroegmanne en vele ander. Vir almal van hulle is die stokperdjie 'n verandering in hulle daaglikse lewe, dit bring ook mee uitstekende liggaamsoefening en wek 'n langdurige kulturele belangstelling. Hulle moet die eksemplare in die ope lug gaan soek, in die sonlig. Hul stokperdjie dring na 'n studie van die klimaat, aardrykskunde en plantkunde en wat nie alles nie. Dit vereis reise per voet wat die uithou vermoë van die strekstes op proef stel en die geduldige wagte van die kranke sou beloon. Die stokperdjie dryf jagters na die hoogste kranse van die Drakensberg, na die dorre bossiesvlaktes van die Karoo en die byna ondeurdringbare bosse langs Natal se kus of die Transvaal se berge. Nee ou maat as jy regtig na skoenlappers soek, kan jy lag vir die grootpraterige avonture van die visvanger of grootwildjagter. Laasgenoemde loop gewoonlik rond belaaï met gewere en ammunisie, genoeg om 'n klein leertjie mee uit te rus. Daarenteen loop die skoenlapper jagter net met sy net rond; en hy kom nie altyd skoenlappers tee nie!

Piet – Dit lyk my ek sal my visstok moet verander en ook skoenlappers begin versamel. Alles wat jy my vertel het klink so interessant. Ek sal maar 'n rugsak aanskaf met voggies daarin, ingeval my hart moeilikheid gee wanneer ek probeer om bo op die betowerende berge, waarvan jy praat te kom.

Jan – Geluk ou maat! Pasop dat die bobejane nie jou botteltjie in die hande kry nie. Daar word vertel van 'n skoenlapperversamelaar wat 'n hengse onderonsie met 'n dronk bobbejaan gehad het. Die dier het glo te veel van die gistende vrugtesap uit die bakkie van die loknet gedrink en toe die versamelaar daar opdaag was die bobbejaan net lekker hoenderkop. Dis toe dat die twee mekaar onder klippe gesteek het.

Hill-topping - yet again!

E.L. Pringle, Huntley Glen, P.O. Box 59, Bedford 5780

Before turning to my main objections to the theory of hill-topping as a mate-locating function, let me just repeat what I said in my original article on the subject (*Metamorphosis* 1 (15)). Notwithstanding what J.A.S. Scott, O. Shields and Stephen (*Metamorphosis* 1 (8 & 14)) say on the subject, their theory of the causes of this behaviour must be seen for what it is: a theory. The matter is by no means as open and shut as suggested, and it is suggested that field workers keep an open mind on the subject while observing butterflies on the hill-tops. Remember that, on the strength of one man's thesis, a theory might be accepted by a number of leading disciples for a number of years: and then, another brilliant worker will arrive on the scene and overturn that theory, replacing it with another. This has happened time and again in the world of science and scientists. And I wish to re-emphasise the point that there are other theories to explain this form of behaviour.

By the way, I might just mention that I am evidently not alone in my "unimpressive record of observation" on this subject in the field. I have since corresponded with two of our greatest living field-workers, namely C.G.C. Dickson and D.A. Swanepoel, concerning this matter, and they both feel that there is very little evidence to back the theory of hill-topping as a mate-locating function. It is interesting that K.M. Pennington did himself also not find anything in his fifty years of field-work to enable him to connect hill-topping with mate-location behaviour.

That is not to say that females will never come to the hill-tops. Provided that their breeding areas are near the hill-tops (which is usually the case), isolated examples of females crossing the hill-tops will, of course, occur. And some of these instances may also result in courtship: again, this is hardly surprising. But the exception surely does not prove the rule.

So, let us examine the facts, then. The fact is that experienced field workers have themselves not taken cognisance of any marked degree of sexual activity on hill-tops. This is highly significant, especially when one bears in mind the fact that in nature the females are normally almost as plentiful on emergence as are the males. (Anyone who doubts this should spend some time breeding a species like *Princeps dardanus cenea*, he would note that the ratio of males to females from breeding is approximately 60:40 - considerably higher than the ratio one encounters in the field). If one accepts this to be the case, then one must surely encounter the 'mate-locating' females on the hill-tops with regular consistency. But this is simply not the case.

As I mentioned in my earlier article - and, again, I am not alone in this observation - if one is looking for the apparently rare mate of a hill-topping male, one must forsake the hill-tops and search the lower-lying areas for the breeding grounds of the species. Once you have found these you will be assured of success. In this way, for example, I found the females of *Lepidochrysois wykehami* without any great difficulty.

It is also interesting to see how theorists will do contortions to a factual situation in order to ensure that it fits into their theoretical framework. Thus, we are told that "high-density" and "low-density" species make use

of hill-topping for different reasons. The former, the theory goes, come to the hill-tops because they are displaced from their colonies, while the latter do so because they are mate-locating. On what basis are such dividing lines drawn? In my experience, for example, *Charaxes jasius saturnus* is as densely populated in most areas of the Transvaal as are the vast majority of the Cape *Lepidochrysops* in their own habitats. And yet we are told that the former is a "low-density" species, while the latter are all "high-density" species. For my part, I see no real merit in this type of classification.

The fact is that all species of butterfly which indulge in hill-topping must do so for the same basic reasons – be they "high-density" or be they "low-density" species. And I also do not agree that the males of certain "low-density" species will not be able to locate their mates unless they congregate on the hill-tops. In my experience, most butterflies – even those with widely-scattered foodplants – do not breed just anywhere. Instead, they have certain preferred breeding areas. And it is in these areas that the males and females can usually be found together, and be seen to interact. The Great Saltpan is a good example of such an area: here both males and females of a great number of "low-density" bushveld *Charaxes* can be seen flying together. It is a known breeding area for a number of such species – and it is not situated on a hill-top! The males of these species certainly do not require a hill-top to locate the females in this area.

Perhaps the key to this issue lies in field observation. I have watched the habits of our hill-topping species *Lepidochrysops ortygia* quite closely over a number of years, and have noticed that, in this instance, there are always males patrolling the breeding areas. Other males, however, show a tendency to congregate on nearby hill-tops. Depending on the weather conditions, the number of males remaining in the breeding area will vary: so I do not believe that it is entirely correct to say that the males on the hill-tops are excess males which have been "displaced". Instead, it appears that there is simply a tendency for a portion of the males to disperse during the heat of the day, from approximately 11h00 to 14h00 and the warmer and calmer the day, the greater the proportion of males which disperse in this way.

The case of *Harpendyreus notoba* is perhaps even more to the point. In this instance, the tendency for males to disperse from the breeding areas is so pronounced that virtually no males are left – notwithstanding the fact that there are usually large numbers of females which remain there. The females never move from their breeding areas, and so make no effort to locate their errant mates. In this case, it is quite obviously incorrect to talk about males left behind to "patrol the area around the foodplant", or, for that matter, about the other "excess" males being "displaced" from the area. There are virtually no males, and one finds oneself walking almost exclusively amongst vast numbers of females. Let us just say that the odd male which remains behind (usually in copula) has not a hope of coping with his harem! And yet it is quite obvious that the males which have dispersed must return from time to time to locate their mates (and not *vice versa*, as suggested by Stephen).

Now I suggest that the same rules apply to all our hill-topping species. Depending on weather conditions, the vast majority of males of these species disperse during the heat of the day from the breeding areas, and congregate on nearby hill-tops. A small proportion of these males will

either remain behind, or return to the breeding areas during the midday hours to indulge in mate location. It is, in fact, highly likely that a great deal of the daily mate-locating behaviour takes place before it becomes hot, and the males disperse.

Then why do these species go to the hill-tops? The answer to this possibly lies in two facts: firstly, that generally only vigorous, fast-flighted species indulge in hill-topping; and secondly, that generally the hill-topping behaviour is limited to the hottest hours of the day. The first fact is relevant insofar as it enables the males of these species to wander quickly and efficiently between the breeding areas and the nearby peaks. The second fact is possibly even more vital. In my earlier article, I suggested that these species behave in this manner to take maximum advantage of the sun. I would like to take this a step further, to suggest that these insects are, in fact, hill-topping in order to take maximum advantage of the generally kinder weather conditions on the peaks. On a hot, windless day, the male butterflies in the valleys attempt to escape the oppressive conditions of the low-lying areas. It is well-known that butterflies do not like extremes of heat and cold (for different physiological reasons), and the hill-tops (as every collector knows) provide some relief from these. So it is that, on a cool day, the peaks will be warmer; and on a hot day, the peaks will be cooler. Provided, that is, that there is no excessive wind, which will, of course, affect the peaks most. On such days, one can expect few hill-toppers.

Then why do the females not hill-top? For precisely the reason that Stephen has suggested: their stongest instinct requires that they perform their biological function and they are not as expendable as are the males. For these reasons, and also because of the fact that they are generally slow-flighted and more vulnerable to predators, they seldom leave their breeding areas.

Are my theories implausible? Possibly. But certainly no less plausible than the mate-locating theory of hill-topping.

Requests and tidbits

The following is a letter received from Mr Koos de Wet of the Transvaal Nature Conservation Division, dated 30th October 1986.

Hy skryf die volgende:

“Ek is hierdie seisoen besig met opnames van *Erikssonia acraeina* in die Waterberg. Die doel van my opnames is om te probeer vasstel hoe groot die bevolking is en of daar enige faktore bestaan wat die bevolking bedreig. Ek besoek daardie lokaliteit ongeveer twee dae per week om die nodige data in te samel.

Die boer op wie se grond die skoenlapper voorkom is versoek om geen versamelaar daar toe te laat nie. Ek wil dan ook deur middel van *Metamorphosis* 'n versoek rig tot lede van die vereniging wat weet waar hierdie lokaliteit is om nie enige skoenlappers tot verdere kenningsgewing daar te gaan versamel nie.”

Checklist of southern African Lepidoptera by L. Vári and D. Kroon

This series of cross-referenced indices is an absolutely essential publication for all butterfly and moth collectors to have. It is a joint publication of the Lepidopterists' Society of southern Africa and the Transvaal Museum. Support us by ordering your copy today from the Transvaal Museum.

NB. Dr Kroon has asked me to let those who have the publication know about an error in the spelling of one of the butterfly species names: *Baliochila aslauga* (Trimen) is apparently incorrect and should be spelt as *B. aslanga*.

Dr Lajos Vári, who over the years has always been more than willing to help keen but struggling amateurs by giving unstintingly of his valuable time, has now retired as head of the Lepidoptera Department at the Transvaal Museum. In addition, he has just celebrated being an entomologist for 50 years! Our best wishes to him for the future. Dr Kit Cottrell arrived from Zimbabwe on the 1st of April 1986 to take over as head of this department and we wish him well in his new post.

Gross error

Your editor, in his ignorance, inadvertently made a manuscript change to Rob Paré's article on the life-history of *Iolaus australis* Stevenson, which he would, with apology, like to correct (see *Metamorphosis* 1 (16)).

In the article the foodplant of the larva of *I. australis* is given as *Tieghemia quinque nervia*. This is not correct. The correct foodplant, as given in the original manuscript, is *Tapinanthus quinquegulus*. Please correct this in your copy of *Metamorphosis* 1 (16) so as to avoid possible confusion in the future.

***Belenois aurota* 1986/87 migration**

The annual migration of *B. aurota* has come and gone. In order to build up a national picture of this phenomenon the Society needs to collect as much data as possible. Only by the collection of vast amounts of data can the full details of these migrations be documented. Any information on the migration is important, please fill in the attached questionnaire and send it back to the Society. Your participation in this project is greatly appreciated.

South African Red Data Book - Butterflies

Stephen and Graham Henning

The C.S.I.R. [Council for Scientific and Industrial Research] has asked Messrs Stephen and Graham Henning to do the official South African red data book on butterflies. It will be published as one of the South African National Scientific Programmes Reports.

Mr A.A. Ferrar of the C.S.I.R. had heard from Dr Mark Collins of the International Union for Conservation of Nature and Natural Resources (IUCN), that Stephen and Graham Henning were doing a publication on the rare and endangered butterflies of southern Africa. He contacted them to

ask whether they would be interested in collaborating with them in doing an official red data book on butterflies.

The preparation of the Red Data Book is well under way and it is hoped that it will be published in late 1987. If any members of the Society have any suggestions with regard to species they might like to see included in the book or any threats they may know to butterfly populations in their area, please contact either Stephen or Graham Henning.

Let us give them all the cooperation we can in this worthwhile project.

Nylsvley's new butterfly

Ernie Grei

(From *Fauna and Flora* **44**, 1986)

"On 10 January 1983, a butterfly bearing a superficial resemblance to *Graphium (Arisbe) morania* was collected at the Council for Scientific and Industrial Research's station at Nylsvley. After a cursory glance it was identified as such; only during subsequent comparisons did the extensive dissimilarities between it and *morania* become manifest. Having failed to identify it from available literature, it was taken to Dr Vári, Chief Lepidopterist of the Transvaal Museum. His comment was: "Nobody has ever seen a butterfly like this before." It was also shown to Dr Mark Williams, chairman of the Lepidopterists' Study Group of Southern Africa, who declared himself equally unfamiliar with it.

Although random specimens of butterflies have been collected at Nylsvley since 1976, it was only towards the end of 1981 that a concerted effort to compile a checklist of the butterflies of the Nylsvley Nature Reserve which led to this discovery was made. Absence of substantive evidence in the form of at least one more identical specimen precludes laying claim to having discovered a new species. I describe it therefore as a variety of *morania* on the advice of Dr Vári, as follows:

DESCRIPTION

Graphium (Arisbe) morania var. *holoplaga* var. nov., pl. 1:1-2.

Length of forewing: 35,5 mm.

Groundcolour black with white maculae, which in *morania* are slightly more creamy coloured.

Forewing (upper side): Most prominent taxonomic feature is the total confluence of the two white maculae in a single discoidal cell; basal macula in this cell more reduced than in *morania*; distad the next two subcostal maculae are almost confluent and the macula directly below the terminal extremity of this confluence is spatulate instead of elongate as in *morania*; also more reduced are the next four maculae extending downward from the median section of latter confluence; the following three maculae between second median nervule and inner-margin differ from those in *morania* in three respects: smaller, white instead of ochreous, and more prominently transected by A1 and Cu2; extending from apex to tornus are nine heteromorphic maculae as in *morania*, but differ from latter in that the two at

tornal angle are less clearly defined; proximal portion of discal cell less albescent than in *morania*.

Hindwing (upper side): venation much more clearly defined than in *morania*; proximal maculae between costa and innermargin coalescent as in *morania* but greatly reduced, resulting in a much broader black band between their lateral extremities and termen; distal extremities of first two subcostal maculae more elongate than in *morania*; ochreous spot at base of 3A almost indistinguishable, unlike in *morania*; two minute maculae extending from subtornal area towards apex instead of four as in *morania*; extending from apex to tornus six submarginal maculae which differ from those in *morania* as follows: first elongate, parallel to costa, and almost confluent with distal extremity of first sub-costal macula, unlike in *morania* where it is orbicular and more reduced; second as first but not confluent with subcostal macula; third larger and more orbicular; fourth also larger but more reniform; fifth and sixth more pronounced; termen dentate but first four processes extending upward from tornus more elongate than in *morania*.

Forewing (under side): as the holotype shows some slight asymmetry, particularly in the maculae of the hindwings, the description will be confined to the wing described in the preceding paragraph, i.e. the right. Ground colour of forewing: apical and subapical areas: similar to but more ochreous than in *morania*; area between subterminal and subtornal areas and termen: black instead of brownish-black as in *morania*; subcostal maculae as described except the small median macula between Cu1 and M3 and those extending from apex to tornus, all of which display more prominently than in *morania*; proximal portion of distal cell and cubitus and costa of a deeper red than in *morania*, and the ovate black patch distad to red area is larger.

Hindwing (under side): venation more pronounced than in *morania*; the six submarginal maculae between median nervule and base compare with those in *morania* as follows: first elongate not round as in *morania*; second a little elongate; third and fourth more rounded; fifth and sixth slightly reduced; the ochreous band extending from base to eye-spot at base of 3A has a median white stria separating it medianly from A1; basal half of inner margin finely edged with black, not present in *morania*; three small maculae extending toward apex from subtornal area, unlike in *morania* where there are four.

Abdomen: as the abdomen in *morania* displays considerable variation it will not be regarded as a basis for comparison; the ensuing description is therefore confined to *holoplaga*. Dorsal view: A broad, black middle line, laterally with a white macula on each segment. Ventral view: A narrower black middle line tapering toward terminal segments due to the progressively larger lateral maculae.

Female Holotype: Transvaal, Boekenhout, Nylsvley, 10.1.1983 E. Grei.

REMARKS

Nylsvley is a provincial nature reserve situated halfway between Nylstroom and Naboomspruit in the Northern Transvaal. The Council for Scientific and Industrial Research's research station for the Savanna Ecosystem Project is situated in the reserve. This station forms an integral part of the

Foundation for Research Development, and is concerned primarily with the study of environmental factors influencing the ecology of the ecosystem, among others defoliation by caterpillars of the Order Lepidoptera (moths and butterflies), as well as the collection of these insects for study purposes. An interesting question now arises: will, at some time in the future, one or more identical specimens be found to justify a claim that a new species of *Graphium (Arisbe)* exists? Whatever the outcome, it cannot be denied that a new addition to one of the best known families of butterflies, the Papilionidae, is indeed a remarkable find.

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GLOSSARY

A1	- 1 st anal vein
A3	- 3 rd anal vein
Acerate	- needle-shaped
Albescent	- growing whitish
Apex	- top corner of wing
Apical	- top
Asymmetry	- lacking in symmetry
Costa	- margin of wing
Cu2	- 2 nd primary vein
Cubitus	- primary vein
Dentate	- toothed
Discal	- cross-vein between 3 rd and 4 th longitudinal veins
Discoidal	- disc-shaped
Distad	- away from body
Distal	- furthest from body
Dorsal	- upperside
Fascia	- band-like structure
Heteromorphic	- differently shaped at different times
Holotype	- type specimen
Lateral	- situated at a side
M3	- 3 rd median vein
Maculae	- spots or patches of colour
Nervule	- terminal portion of (wing) rib
Ochreous	- ochre-coloured
Orbicular	- round
Ovate	- egg-shaped
Proximal	- nearest body
Reniform	- kidney-shaped
Spatulate	- spoon-shaped
Stria	- narrow line

Subapical	- nearly at apex
Subcostal	- below (wing) ribs
Subtornal	- below tornus
Taxonomic	- relating to classification
Termen	- outer edge between apex and tornus
Terminal	- situated at end
Tornal angle	- angle formed by inner margin and termen
Tornus	- bottom corner of wing
Venation	- system of veins
Ventral	- underside
Vestigeal	- small or imperfectly developed

Expeditions to Lapalala Wilderness

Steve Woodhall

Lapalala is a large chunk of bushveld to the north-west of Vaalwater. It is run as a reserve and wilderness training school by the Endangered Wildlife Trust. The Society made contact with the Trust at Earthlink Expo. This led to a group of members visiting Lapalala in mid-December 1986, accompanied by a teacher from the school.

We were able to explore the terrain and vegetation, and recorded 69 species of butterfly and several moths. A report has been prepared and copies are available from me. I have arranged for a series of visits to take place over the course of a year, to get a full picture of the species present. The next visit has been provisionally set for the weekend of 13-15 March. One objective of this visit will be to explore an interesting area of riverine bush. We will also be looking for *Charaxes* species.

The procedure at Lapalala is the same as that employed at meetings at the Suikerbosrand - we split into groups and survey an area, recording all species seen and captured, and noting their behaviour and, if possible, foodplants.

I have arranged for the Munadu camp to be made available to us again. Members will not be charged for admission or accommodation, but are asked to bring bedding, cooking gas and charcoal. The camp is a tented one beside a stream, and I can personally vouch for its freedom from mosquitoes! It sleeps 10, although 12 can be squeezed in at a pinch.

If you are keen to spend a convivial weekend in the bushveld, exploring a little-known area from a lepidopterist's point of view, please contact myself, Steve Woodhall, at (011) 892-2882 (w), or my wife Jayne at (011) 605-2345 (w). Our home no. is (011) 58-2609. Reservations will be on a first-come, first-served basis. We will be staying for free, so Lapalala have reserved the right to change our booking if the camp is needed due to heavy demand. If this happens, they will liaise with me and 'maak 'n plan'. We will drive up on the Friday evening and return late on Sunday. The camp has a fire with a boma, perfect for a bush braai on Saturday night.

Suikerbosrand Nature Reserve

Anonymous

As you all know the Society is involved in doing research in the Suikerbosrand Nature Reserve. To date we have organised three outings to the reserve and the results have been most impressive. We have made several new records for the reserve, the most notable being *Lepidochrysops tantalus* and *Poecilmitis aureus*. The official reports of these first few field trips will be sent to members in the near future.

As the response of members to participate in these field trips has been very poor to date, the Council has decided to set dates well in advance for all the 1987 outings. This should enable members to make arrangements in advance to come on one or more of these outings. The dates for 1987 are: 22nd March 1987, 17th May 1987, 20th September 1987, 22nd November 1987.

Members will meet at 09h00 at the Diepkloof Visitors Centre. For any further information please phone Mr Stephen Henning at (011) 672-1608 or Mr Graham Henning at (011) 672-6000.

Brief comment on mate location

Graham Henning

Territorial behaviour is an established mating phenomenon. A butterfly is the sexual phase of the insect; it has two prime functions in life. 1. To mate. 2. To feed (to build up strength to mate). Female butterflies mate once e.g. sphragum on female acraeas. Dominant males should mate with females (gene selection).

In the case of hill-topping the following has been recorded: The virgin female arrives at the top of the hill in the late afternoon and flies directly to the most prominent position. The males have battled all day and the dominant male is at the prominent position. The female picks up the male and he follows her down the hillside where mating occurs. The female is only on the hill-top for a couple of seconds. The female spends the rest of her life laying eggs. The male returns to the hill-top as he can mate many times as long as he can hold his dominant position.

Territories are not only established on hill-tops but can be virtually anywhere conspicuous e.g. *Poecilmitis lysander* - sandy patch on bottom of gully; *Tuxentius hintza* - prominent tree on edge of donga; *Aloeides* species - sandy patch on upper edge of rocky ridge.