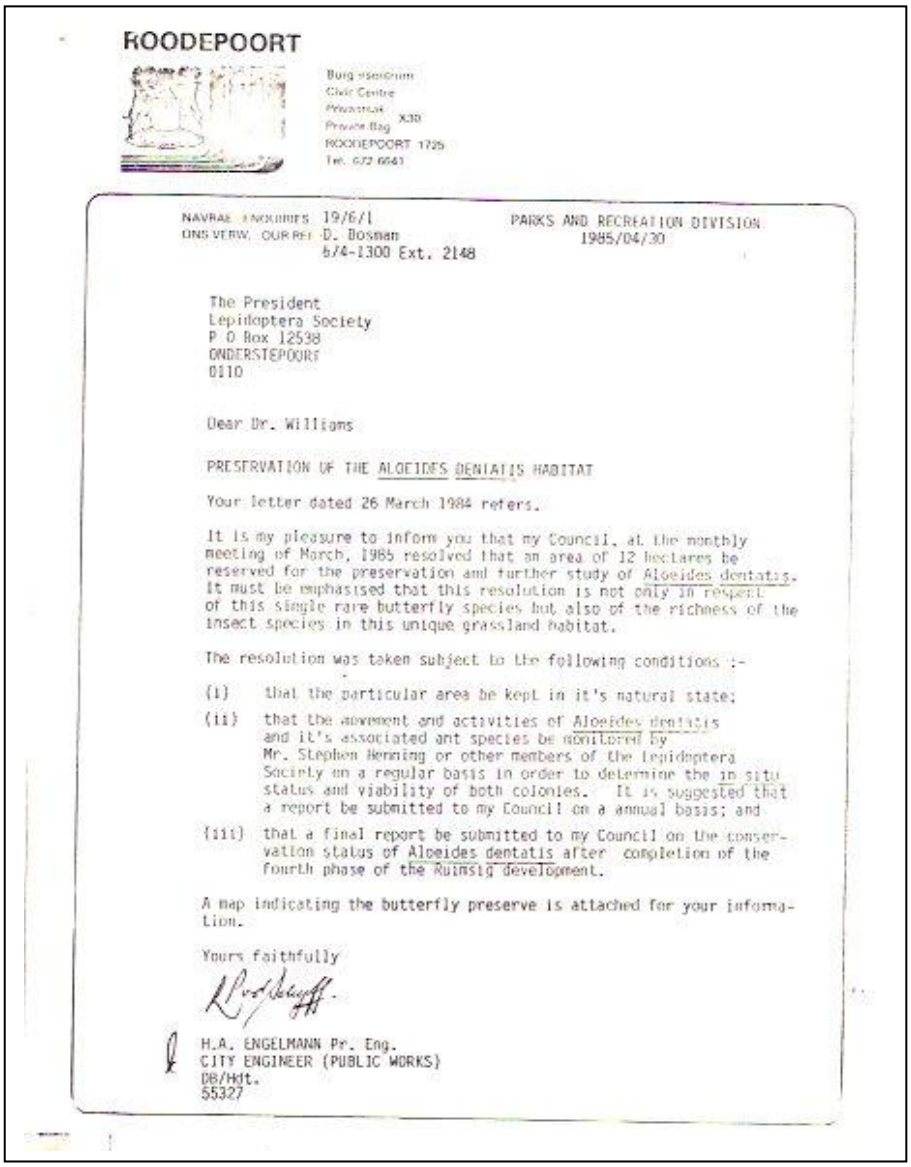
Newsletter of the Lepidopterists' Society of Southern Africa
Editor: M.C. Williams, P O Box 12580, Onderstepoort, 0110, RSA

Correspondence: The Hon. Secretary, Lepidopterists' Society of Southern Africa, 6 Verne Road, Florida North 1710.

Letter to the Editor

H.A. Engelmann

The following letter has been received from the Roodepoort City Engineer and represents a unique achievement for our Society. Your committee has worked hard for this concession, especially Stephen and Graham Henning and Rudi Mijburgh. (The latter was instrumental in organizing vital TV coverage of the issue). More about this and other conservation issues at our next conference and AGM in August.



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PARKS AND RECREATION DIVISION
1985/04/30

The President
Lepidoptera Society
P O Box 12538
ONDERSTEPOORT
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Dear Dr. Williams

PRESERVATION OF THE ALOEIDES DENTATIS HABITAT

Your letter dated 26 March 1984 refers.

It is my pleasure to inform you that my Council, at the monthly meeting of March, 1985 resolved that an area of 12 hectares be reserved for the preservation and further study of Aloeides dentatis. It must be emphasised that this resolution is not only in respect of this single rare butterfly species but also of the richness of the insect species in this unique grassland habitat.

The resolution was taken subject to the following conditions :-

(i) that the particular area be kept in it's natural state;

(ii) that the movement and activities of Aloeides dentatis and it's associated ant species be monitored by Mr. Stephen Henning or other members of the Lepidoptera Society on a regular basis in order to determine the in situ status and viability of both colonies. It is suggested that a report be submitted to my Council on a annual basis; and

(iii) that a final report be submitted to my Council on the conservation status of Aloeides dentatis after completion of the fourth phase of the Ruimsig development.

A map indicating the butterfly preserve is attached for your information.

Yours faithfully

H.A. ENGELMANN Pr. Eng.
CITY ENGINEER (PUBLIC WORKS)
DB/Hdt.
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Letter to the Editor

P. Chaplin

The Society has also 'made contact' with the National Botanic Gardens of South Africa through the person and efforts of Graham Henning. The letter below has been photocopied in the hope that other members will follow Graham's lead and help to promote the Society and its good name.

NATIONAL BOTANIC GARDENS OF SOUTH AFRICA

Transvaal
Botanic Garden
Roodepoort

Telephone: 662-1741

P.O. Box 2184

Wilropark 1731

Enquiries:

Mr G. Henning,
Lepidopterists' Society,
100 Kruger Avenue,
Selwyn,
Florida
1710

Your letter of | Your Reference | Our Reference | Date

1985/04/22

Dear Graham,

On behalf of the Gardens, I would like to extend our sincere appreciation for the fine display on the Roodepoort Butterflies, which you showed over the week-end.

The students and general public seemed to be very taken with it.

Hopefully by September, rotary will have donated a number of hermetically sealed display cabinets to us so that we will be able to take up your Society's kind offer of a permanent display at the Garden.

Trusting your Society's close association with the Garden will continue.

Kindest regards,

Yours faithfully

Peter

P.Chaplin
Curator.

The IUCN Red Data Book (RDB)

M.C. Williams

The Secretary of our Society has recently corresponded with Dr Mark Collins of the International Union for the Conservation of Nature and Natural Resources (IUCN). His job is to montor conservation issues concerning insects worldwide. This falls into two main sections, firstly keeping up with legislation, listings, published papers and expressions of conservation concern from around the world and secondly vetting the status of chosen groups of insects for an assessment of conservation requirements. This latter job is usually done for the production of books called "Red Data Books" (RDB's). Dr Collins has recently completed a book dealing with threatened swallowtail butterflies of the world and is now considering a RDB on African butterflies.

It was decided at a committee meeting held on 16th April 1985 that the Society should offer their help as this will establish the reputation of the Society internationally. For those interested in acquiring IUCN Red Data

Books the following information may be useful: "The swallowtail family of butterflies includes some of the most exotic and spectacular insects in the world, from the giant iridescent birdwings of South East Asia to the delicate, almost translucent, apollos of the Himalayas and Alps. The majority of the 77 swallowtail species reviewed in this latest Red Data Book are from tropical countries, where natural habitats are fast disappearing under the chain saw and mattock.

In the traditional and effective Red Data Book style, descriptions of habitat and ecology, threats and conservation measures are given for each threatened species. To make the volume more useful and attractive, eight colour plates by the senior author illustrate 40 threatened and rarely photographed species.

This volume on swallowtails is the first worldwide assessment of the conservation needs of any invertebrate group. A complete list of the 573 species is included, with up-to-date distributional data and notes on conservation status, including local threats, Red Data Book listings and legislation. A geographical index enables conservationists in every country in the world to compile a list of their local swallowtails and identify those of international concern.

Distributional analyses have identified countries with particularly significant swallowtail faunas. Five countries: Indonesia, Philippines, China, Brazil and Madagascar, contain over half of the world's swallowtail species. Add a further five: India, Mexico, Taiwan, Malaysia and Papua New Guinea, and over two thirds are included. It is suggested that at least these countries should consider swallowtails in their conservation strategies, using the butterflies as indicators of important regions for gazetting of protected areas.

Swallowtails figure largely in the worldwide trade in butterflies and no Red Data Book would be complete without considering the impact of this in conservation terms. The value of legislation, monitoring and restraint in collecting are discussed in detail.

The *IUCN Invertebrate Red Data Book*, published in 1983, set the scene for invertebrate conservation. A wide range of animals and threats were described in an attempt to draw attention to these little studied but all-important groups. In *Threatened Swallowtail Butterflies of the World* the message is reinforced in a thorough and authoritative style that cannot be ignored. With nearly 14 per cent of the world's swallowtail butterflies now listed in the IUCN threatened categories, the time for remedial action has arrived."

Available from: IUCN Conservation Monitoring Centre, 219c Huntingdon Road, Cambridge CB3 QDL. Price £15.00 + postage. N. Mark Collins and Michael G. Morris.

A new Zimbabwean *Aloeides*

Ian Mullin

I unwittingly collected the first male on the 16th November 1983 on the Nyanga Downs while in the company of Rob Paré of Bindura. Although we

searched the same area on the two succeeding days and on subsequent trips during 1983, Rob collected the second male approximately one kilometre west of the initial capture in the same type of habitat. A further search two days later again was unfruitful. On this occasion we were accompanied by Kit Cottrell who remained in Nyanga for a further three days and found the species in large numbers on a mountain a couple of kilometres northwest of the original location. Rob and I returned to the area on the 14th of September and found the colony very strong and at this time both of us obtained good series. My wife Sue, and I, returned on the 29th of September with a view to photographing the insect in its natural habitat. On this occasion it was not as plentiful and many of the specimens were worn. However, a few fresh males were seen.

The species is on the wing from about 09h00, becoming more conspicuous at about 11h00 and disappearing by 14h00. Even on very windy mornings specimens could be found in sheltered places. As the wind died and the sun became hotter males could be seen flying to prominent rocky places from lower leeward areas. On these outcrops they played, chasing each other and members of other species who happened upon their territories. They generally settled on bare ground or rocks although a few specimens were observed feeding at certain flowers, however, not all were favoured.

The flight of the male is very brisk when disturbed and it can be difficult to follow with the eye. Almost invariably, however, they return to the same spot within seconds and do not present much difficulty in capture. The female has a slower fluttering flight and can soon be recognised by this. Females were observed feeding at small yellow flowers and generally wandering about 'feeling' objects with their antennae, no doubt searching for the presence of the foodplant and ant species, which are likely to form an integral part of the life cycle. We have not, as yet, observed oviposition despite following a number of females around.

Pairing takes place on the ground and lasts approximately fifteen minutes. The courtship flight, a fluttery affair, ends with the female alighting, followed by the male who continues to beat his wings very rapidly as he moves towards her. Having moved beside the female pairing takes place with both partners remaining in the same position until the act is completed, whereupon the male disengages and one of the two partners flies away.

Kit Cottrell is in the process of describing the species, therefore I will not attempt a detailed description, which would probably be, to say the least, amateurish. Suffice to say that the species belongs to the *thyra* group and is metallic orange with black apices and wing margins. The underside forewing is orange with a certain amount of spotting and a brownish apex. The hindwing is of mixed dark colouration with gold spotting. [This species was described as *Aloeides mullini* by Henning & Henning in 1996 (*Metamorphosis* **7** (1):9) – Ed.]

Hill-topping: a sexual phenomenon?

Ernest Pringle

Stephen Henning's article in *Metamorphosis* **1** (8) has provoked considerable response among Cape collectors: generally, we agree that some of the assertions made therein should be questioned, since they have not been

conclusively proven. But don't get me wrong: I am not writing this article from a standpoint of superior knowledge (Stephen is far more knowledgeable than I am!). In fact, I accept that any alternative viewpoint which I might put forward is every bit as speculative as those already raised. All I would like to do is to stimulate some thought among field-workers, in order that they themselves might observe this phenomenon more closely, and (hopefully) come to their own conclusions.

Based on my own observations in the field, I do not accept that hill-topping is a sexual function. Firstly, it is not a phenomenon which is confined to low density species: some of the bushveld *Charaxes* which are fond of hill-topping (such as *saturnus*) are hardly low-density species. Many of the Cape species which swarm in certain localities (such as *Lepidochrysops robertsoni*) will nevertheless still indulge in hill-topping. The theory that hill-topping is necessary in order to assist in mate-location therefore does not seem to hold for these species.

But my second point is even more important. In my span of collecting, I have had the great pleasure of observing nearly all of our South African butterflies in the field, but have hardly ever seen a female coming to a hill-top – even when the females of a particular species have been common in the area. And on only one occasion have I ever seen courtship behaviour between a male and female ever take place on a hill-top: this is not an impressive record for an accredited form of mate location.

Rather, when looking for females, it has been my experience that one must move off the hill-tops and attempt to locate the breeding areas of the butterflies. These are usually located lower down, on the slopes of the hills, or at their bases. In this way, we have had much success with some of our rare female butterflies, such as, for example, *Aphnaeus hutchinsoni*. In the Cape, after observing some of our species of blue *Lepidochrysops* closely, I found that the males tended to stay in the vicinity of the breeding colonies (and the females) for the initial part of the day, and only worked their way up to the nearest hill-top fairly late in the day – from about 11 o'clock onwards. This affords the males plenty of time to find and court any fresh females in the vicinity of their breeding areas, where the specimens are emerging. After about 2.30 pm the males start leaving the hill-tops, and work their way down to the breeding areas again, where they undoubtedly roost.

This type of mating behaviour makes far more sense than the method suggested by Stephen in his article. After all, why should the female abandon the foodplant and the breeding areas to search for a male? Females are generally slower flighted than their male counterparts, and such behaviour on the part of the female would expose her unnecessarily to predators.

Thus, I am suggesting that the females stay in the vicinity of established breeding areas, and that the males return to these areas at set times to search for mates: it does not happen the other way round. This is definitely the case with the blue *Lepidochrysops* of the Cape, since we (myself, my father & my wife) have observed this at first hand. This case is supported by that of *Harpendyreus notobia*, where we have observed hundreds of females remain in the vicinity of their foodplants, while the males work their way up to the higher ground in the area. In the latter case, the only males observed with the females around the foodplants have either been *in copula*, or have been

engaged in courtship. The females of *notobia* have never been observed to wander away from the foodplant in search of errant mates. If this is the case in the aforementioned two examples, then why does it not also apply to other hill-toppers?

Then, you may ask, why do the males leave the breeding areas to go to the hill-tops? It is my contention that the answer to this lies somewhere other than in sexual behaviour. Although insects are a very primitive form of life, why should every behaviour pattern be ascribed to primary functions, such as feeding and sex? Could it not be that the hill-toppers, which are usually drawn from the most vigorous and fast-flighted species, work their way to the hill-tops simply to take maximum advantge of the sun? After all, a hill-top does usually get longer exposure to sunlight during the course of a day than do the surrounding low-lying areas. But this is simply conjecture on my part: we won't find reading answers to all the secrets of Nature, and any alternative theory (such as that suggested by Stephen) must also accept its short-comings. It is for us to keep our minds open, and attempt to discover the truth.