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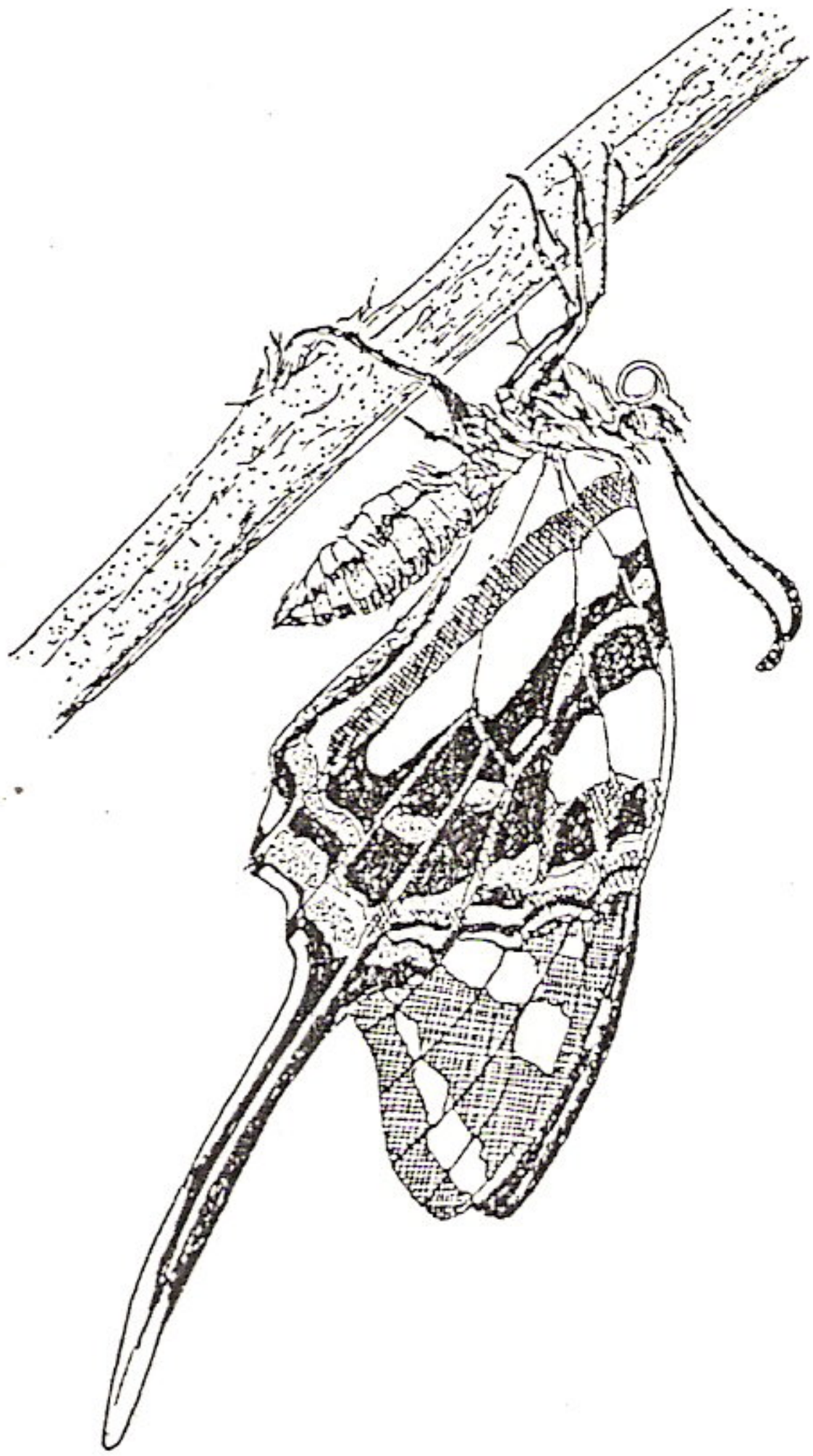

Newsletter of the Lepidopterists' Society of Southern Africa
Editors: M.C. & J. Williams, P O Box 12580, Onderstepoort, 0110, RSA

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

Taxonomic status of *Acraea anacreon bomba* Grose-Smith

J.C.O. Chitty, P.O. Box BW 452, Borrowdale, Harare, Zimbabwe

In *Metamorphosis* **1** (12) (April 1985) there is an article by D.A. Swanepoel on the taxonomic status of *Acraea anacreon bomba* Grose-Smith. The final paragraph of the article states: "Two Zimbabwean collectors whom the writer met….confirmed that they had not so far met with *A. anacreon anacreon* in that country. According to their experience *A. bomba* is the dominant form there."

While agreeing that *bomba* is the dominant form in this country, typical *anacreon* has been recorded here on a number of occasions. I quote from Pinhey's *Butterflies of Rhodesia* (Look Around You Series, no. 2, April 1949 and published by the Scientific Association) p. 57: "The typical form has only been found on the eastern border in the Colony especially at Chirinda Forest. Intermediate varieties occasionally appear in various localities."

Again, in *Occasional Papers of the National Museum of Southern Rhodesia* Vol. **2** no. 15 (1949) in his "Records of Southern Rhodesian butterflies (Rhopalocera) (collected up to March, 1949)", Pinhey states in Item 27, p. 282, under *A. anacreon* and its subspecies: "Specimens which appear to be *anacreontica* are occasionally found, particularly near Penhalonga (Pinhey) and other localities in the Eastern Border. A specimen from Mt Selinda (Carcasson, either late February or early March 1937) was closer to *anacreon* and four specimens of *anacreon* were found high up on Inyanga Downs (Pennington, February 1947).

I have myself taken *anacreon anacreon* at Inyanga in the month of December. Pinhey's remarks on "intermediate varieties" also seem relevant to Mr Swanepoel's article.

Regarding Mr Buchanan's article on migration of *Catopsilia florella* (Fabricius) (*Metamorphosis* **1** (12)) I have frequently observed return migrations of this species in this country in late December-early January.

Letter to the Editor

O.J. Shepherd

The following letter was received from the Wildlife Society of Southern Africa:

"The Editor
The Lepidopterists Society of S.A.
6 Verne Road
FLORIDA NORTH
1710

Dear Sir,

RE: "FAMILIAR SOUTH AFRICAN BUTTERFLIES"

The enclosed handbook has just been published by the Wildlife Society of S.A., Natal Branch.

It would be appreciated if mention could be made of this handbook in your magazine "Metamorphosis".

Should your readers be interested, it sells at R5.25 per copy, plus 63c GST and 60c for postage and packing and is available from the Wildlife Society of S.A., 100 Brand Road, Durban 4001.

Yours sincerely

O J SHEPHERD
Secretary
Natal Branch Publications."

Book review: *Familiar South African Butterflies* by Clive Quickelberge

Stephen Henning

This delightful little booklet has just been published by the Natal Branch of the Wildlife Society of Southern Africa.

In a well written introduction Mr Quickelberge has covered most aspects of butterfly behaviour, distribution, classification, variation and life histories. He deals briefly with 144 species, most of which are illustrated on 10 colour plates. He also provides an abbreviated list of foodplants.

This little booklet is a must at only R5.25 per copy.

Eclosion of pupae

Rudi Mijburgh, 31 Merle Street, Riviera 0845

Some collectors place incipiently emerging pupae in blown-up plastic bags (one pupa per bag) and hang them in a suitable place in order to facilitate observing the emergence of the butterfly. I also follow this procedure because of the added advantage of having very little or no damage to the wings when the insect flutters about.

As soon as the newly-emerged butterfly has ejected its meconium I take the process a step further by placing the freezer-bag containing the butterfly in a deep freeze for at least an hour. This eliminates the possibility of damage to the insect, which may arise if it is killed by other methods.

When mentioning this procedure recently to Dr Vári he expressed the view that although the method is sound he nevertheless, and for obvious reasons, does not favour enclosing the pupa in an environment rich in carbon

dioxide and moisture resulting from the exhaled breath and would prefer natural air.

Lepidochrysops ariadne (Butler)

M.C. Williams

The following article, quoted verbatim, concerning *L. ariadne*, appeared in the *Tribune* [newspaper] on the 24th October, 1984. It was written by Terry Shapiro and, in my view, is a classic example of the kind of misinformation the lay public is receiving from the pens of mischief-making and sensation-seeking journalists. Uninformed persons such as Mr Manning and Mr Swart are quoted as if they are authorities on Lepidoptera, while Clive Quickelberge, who is informed, was misquoted or at least misconstrued. The title of the article is: "COLLECTORS THREATEN NATAL'S RARE BUTTERFLY" and reads as follows:

"Legal steps may be taken to protect a rare butterfly from its most deadly enemy – the butterfly collector.

There is only one known colony of the gossamer-like *Lepidochrysops ariadne* – on a timber company-owned hillside in the Natal Midlands – and scientists are at loggerheads over how the butterfly can be saved from extinction.

Initially, the timber company, Clan Syndicate, declared the colony site a butterfly sanctuary.

Dr Clive Quickelberge, an entomologist with Durban's Natural History Museum, was asked to introduce a system that requires lepidopterists to get permits.

Only two permits were issued – both of them to amateur butterfly collectors – before the system fizzled out.

The only legal recourse Clan Syndicate has is to lay charges of trespassing against collectors who do not have permits.

Apparently, only four of the butterflies have been seen this season – and all were taken by the collector who saw them.

This sparked anger in scientific circles this week.

A University of Natal, Pietermaritzburg, masters student, John Manning, who has studied the butterfly's life cycle, would like *Lepidochrysops ariadne* to be listed as a protected species.

"Its high time legislation was introduced to protect these butterflies", he said.

"They're not the sort of creatures to become tourist attractions like lion or elephant, but their loss would have a huge impact on the environment."

Mr Manning has proposed that a list of endangered insect species be introduced in South Africa.

This has the support of the Natal Parks Board's principal scientific officer, Dr Ortwin Bourquin.

"In terms of life value, *Lepidochrysops ariadne* as a species are as valuable as lion and elephant", he said. "However, its listing would depend on the evidence and competent analysis of its situation."

Dr Quickelberge, whose attempt to limit the number of butterflies collected failed, is against the proposal.

"How can you put someone in jail for collecting a butterfly?" he said.

"I would prefer the whole thing to be free and easy. People have collected to their hearts' content for decades and the butterfly has survived. Because only four were seen this season it does not mean they are on the brink of extinction.

What I am concerned about, though, is the possibility that the ecology of the area is changing. It appears that the food plant which supports the colony may die if something is not done about it soon."

Clan Syndicate estates manager Jack Swart is as concerned about the butterfly's fate as Mr Manning and Dr Borquin.

"Conservation is one of our prime concerns. We've kept the area clear of exotic plant species, but it would seem that the food plant is becoming overgrown as it is no longer a grazing area."

Although the colony site had been fenced and declared a sanctuary, people were still "pinching" butterflies.

"The biggest threat to their survival is collectors," Mr Swart said.

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Butterfly swarms

J. Riley, P.O. Box 1063, Krugersdorp 1740

It was during October 1960, while I was walking about in the grass near Theron Station in the Orange Free State, that I noticed everywhere I walked swarms of *Cynthia cardui* (L.) rose up in front of me. There must have been thousands of them. Eventually they all collected together and flew away in a northerly direction.

On the first of September 1965 I was hunting in the Amatongas in Mozambique when I was amazed to see swarms of *Amauris dominicanus* Trimen flying about. On some trees they were hanging like bunches of grapes – I could have hand-picked dozens of them. The main road to Beira, from Umtali, passes through the forest and there were many cars on the road that day, which resulted in hundreds of casualties of the *dominicanus* strewn all about the road.

Butterfly foodplants

M.C. Williams, P.O. Box 12538, Onderstepoort 0110

I am currently working on a foodplant list for the butterfly fauna of southern Africa, which I hope to publish as an occasional paper of the Society. I am using the excellent list provided in 'Pennington's Butterflies' by Douglads Kroon as a basis for this. I would very much appreciate any help that members can provide in regard to foodplants not recorded in this

work and, of course, will acknowledge all contributions in the final list, which will be made available to members.

Breeding butterflies in captivity. Part II – breeding Danaidae

M.C. Williams, P.O. Box 12538, Onderstepoort 0110

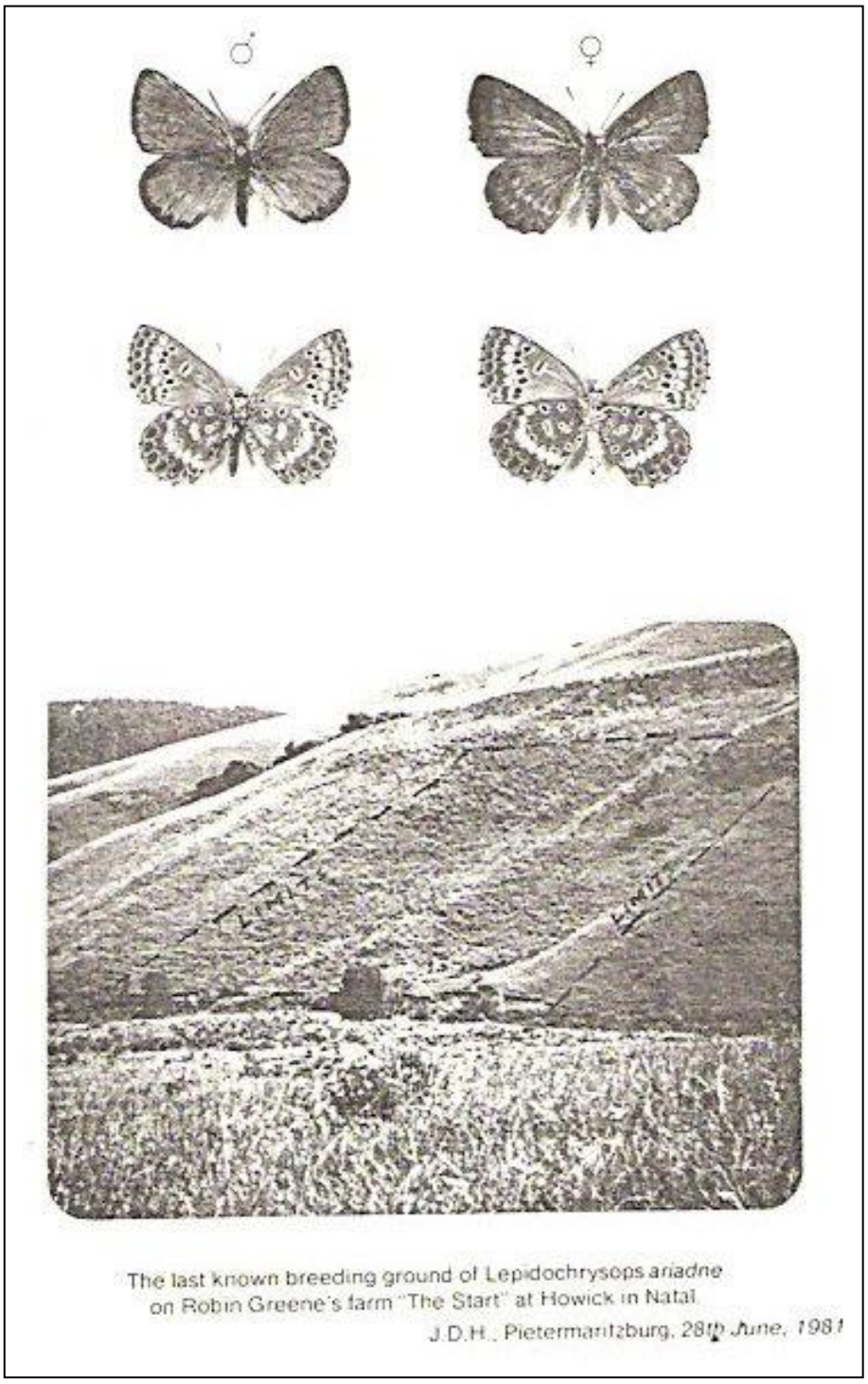
In part I of this series of articles I introduced the subject of butterfly breeding in general terms (*Metamorphosis* **1** (13)). In this article, and the next, I would like to relate my experiences regarding the breeding of South African danaids.

By far the easiest species to breed is *Danaus chrysippus* (L.). Females are easily acquired, lay readily in captivity, and are very tough and long-lived. The most suitable foodplants are species of *Asclepias* e.g. *A. fruticosa* and *A. physocarpa*, which grow almost everywhere, especially along road verges. Cut plants, in bottles of water, or potted plants, can easily be sleeved with dacron mesh. Never breed *chrysippus* in closed boxes! In the days when I was still very inexperienced my wife had the good fortune to catch a female *D. chrysippus* f. *dorippus* at Waterpoort in the northern Transvaal, which duly laid some 70 eggs. The larvae did very well until late final instar, when the excessively moist conditions in the boxes caused a disease to arise, which wiped out all except two larvae, which duly pupated. These two pupae produced a perfect pair of *dorippus* – how many more would have been *dorippus*?

Some years later I caught a *D. chrysippus* f. *alcippus* female with the hindwings completely white. By now I knew I could achieve virtually 100% success with *chrysippus* and envisioned breeding out dozens of perfect *alcippus*. The *alcippus* female proved to be a champion layer and produced over 200 fertile eggs. After much hard work all were nutured into full-size pupae. My anticipation was boundless and I could't wait for them to start hatching. Well, suffice to say, not one true *alcippus* was obtained. Most turned out to be the ordinary form but, in many, the veins of the hindwings were traced in white and in others white scales covered from 1 to 15% of the hindwing surface. Although further (and better controlled) experiments are needed before any definite conclusions can be drawn, it would appear that the '*dorippus* gene' is a single dominant gene i.e. all the offspring of a *dorippus* female would be of the form *dorippus*. On the other hand, the '*alcippus* gene' is almost certainly a multiple allele i.e. a number of genes are responsible for the white scaling – the more genes, the whiter the hindwing. My female *alcippus* probably mated with a male that had virtually no genes for white scales.

Endangered species of lycaenid butterfly in Natal. *Lepidochrysops ariadne* Butler 1898

J.D. Handman



The last known breeding ground of Lepidochrysops ariadne on Robin Greene's farm "The Start" at Howick in Natal.
J.D.H., Pietermaritzburg, 28th June, 1981

Butterfly reserve in Roodepoort

Cedric Edwards

(From *Chat*, Vol. **17** (1), 1986; News Bulletin of the Transvaal Branch of the Wildlife Society of S.A.)

Roodepoort has become the first city in South Africa to set aside a nature reserve for the protection of a butterfly. The City Council has far-sightedly made provision for a 12 hectare reserve in its new prestige township of Ruimsig to save the extremely rare *Aloeides dentatis* from possible extinction. The Roodepoort Centre of the Wildlife Society played an important role in this.

The Roodepoort Copper, as we like to call it, is a small brown lycaenid butterfly with a most interesting and complicated life-cycle. It is totally reliant on its foodplant *Hermannia depressa* (Sterculiaceae) and its ant host *Acantholepis capensis*. *Hermannia depressa* is a low-growing plant with yellow bell-shaped flowers. The female butterfly is decidedly fussy about where she lays her eggs. The plant she chooses must be close to one of the trails marked out by the host ant species. While they are small, the caterpillars feed on the leaves during the day. Later they actually enter the ant-nest and rest there. They produce the same pheromones as the ants' brood, and are consequently treated by the ants as their own young. At night the caterpillars leave the nest to feed and follow the ant-trails back to the foodplant. As they go, they produce another pheromone, the ant danger signal. The ants therefore follow them out and stay with them while they are feeding, thus protecting them from predators and parasites. The caterpillars pupate in the entrance to the ant-nest. On emerging, the imagos fly to a small rise where the nuptials take place and the process can start again.

Because of its unique requirements, the Roodepoort Copper is remarkably limited in its distribution. It has been found in only a few isolated colonies in the Transvaal and Orange Free State. Most of these no longer exist. It cannot co-exist with man in any of his developments, as any threat to the ant or foodplant is a correspondingly greater threat to the butterfly. Whilst the main reason for the reserve is to protect the Roodepoort Copper, it is not the only one. The rolling grasslands in which it is situated are rich in plant, insect and bird life. Steven Henning and his brother Graham have identified close to 60 species of butterfly in the area. In summer you can still regularly hear the call of black korhaans from the top of termite mounds.

We believe that this exceptional little reserve offers us a unique opportunity of studying the use of chemicals in communication between insects. We would not like to see it become a "dead" reserve, fenced off and insulated. To ensure its continued existence, it must be used. We would like to see a continuous record kept of all forms of life there, we would like to see it used for further research by universities, and we would like to see it used by the public with an interpretive centre to ensure that people know why it is there.

Lepidopterists' Society at Johannesburg Zoo extravaganza

Graham Henning

On Sunday the 4th May 1986 the Lepidopterists' Society gave an outdoor display at the Johannesburg Zoo Extravaganza. The exhibits comprised 10 cases of mounted specimens illustrating Lepidoptera and other insects. The exhibition concentrated on survival methods and conservation. A large

portable cage had been constructed and many live specimens were on display.

Great interest was shown by the general public and this was a good introduction to a possible 'Butterfly House' for the zoo.

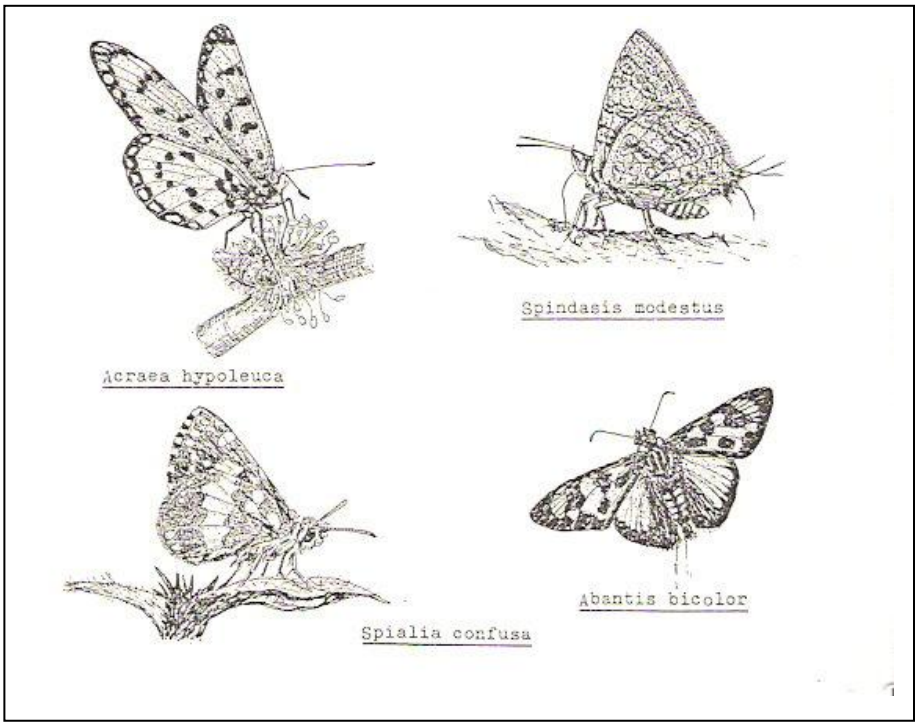
Rare and endangered southern African butterflies (Lepidoptera: Papilionoidea & Hesperioidea)

Stephen Henning and Graham Henning
6 Verne Road, Florida North 1710

Good progress is being made on *Rare and endangered southern African butterflies*, to be published by the Society next year (1987). About 150 species will be dealt with. Each species will include a section on Identification, Distribution, Habitat and Ecology, Status and Threats (see example of *Erikssonia acraeina* on next page).

We have included all the species known from one locality and other well known rarities. If there are any species with which you are acquainted, which you feel are threatened and that we may have missed, we would like to hear from you. Also, butterfly populations in your area which may have shown a marked decline in numbers in recent years. If you know or can suggest reasons for the decline, such as encroachment of exotic vegetation or habitat destruction, we would also be most interested.

The booklet will be illustrated with pen and ink drawings by Stephen Henning, a few examples of which are published below, for your interest.



ERIKSSONIA ACRAEINA Trimen **RARE**

Erikssonia acraeina Trimen, 1891. *Proc. zool. Soc. Lond.*, 1891: 91

IDENTIFICATION. Pennington (1978), p. 139 and plate 128 – adult; Henning (1984) – life history and habits.

DISTRIBUTION. Ovamboland, South West Africa (Namibia); Waterberg mountains west of Nylstroom, Transvaal and Mongu, Barotse Province, Zambia.

HABITAT AND ECOLOGY. Flies in open grassy areas of grass and scattered shrubs and trees with a sandy soil, wherever its foodplant and host ant occur together. Its foodplant is *Gnidia kraussiana* Meisner (Thymelaeaceae). The larvae shelter in the nest of an ant belonging to the genus *Acantholepis* during the day. At night the larvae emerge from the nest to feed on the foodplant. The larvae pupate within the ants' nest. Adults are on the wing from November to February. The adults do not range far from the host plants and ants. The males stake out small territories amongst the foodplants in which thay can be found throughout most of the day. The females fly at random in the area and are as common as the males (see Henning, 1984).

STATUS. First taken in Ovamboland, by the explorer and hunter, Mr A.W. Eriksson, in 1889. After that it remained unrecorded until December 1955 when Dr C.B. Cottrell discovered a small colony at Mongu, Barotse Province, Zambia. In December 1980 it was discovered by Mr D. Edge at a third locality in the Waterberg mountains west of Nylstroom, Transvaal. The Waterberg colony is very strong, while there are no recent reports from the colony in Zambia. It has not been recorded from Ovamboland since the capture of the type series.

THREATS. The Waterberg colony is on a private farm and may face the threat of agricultural development in the future.