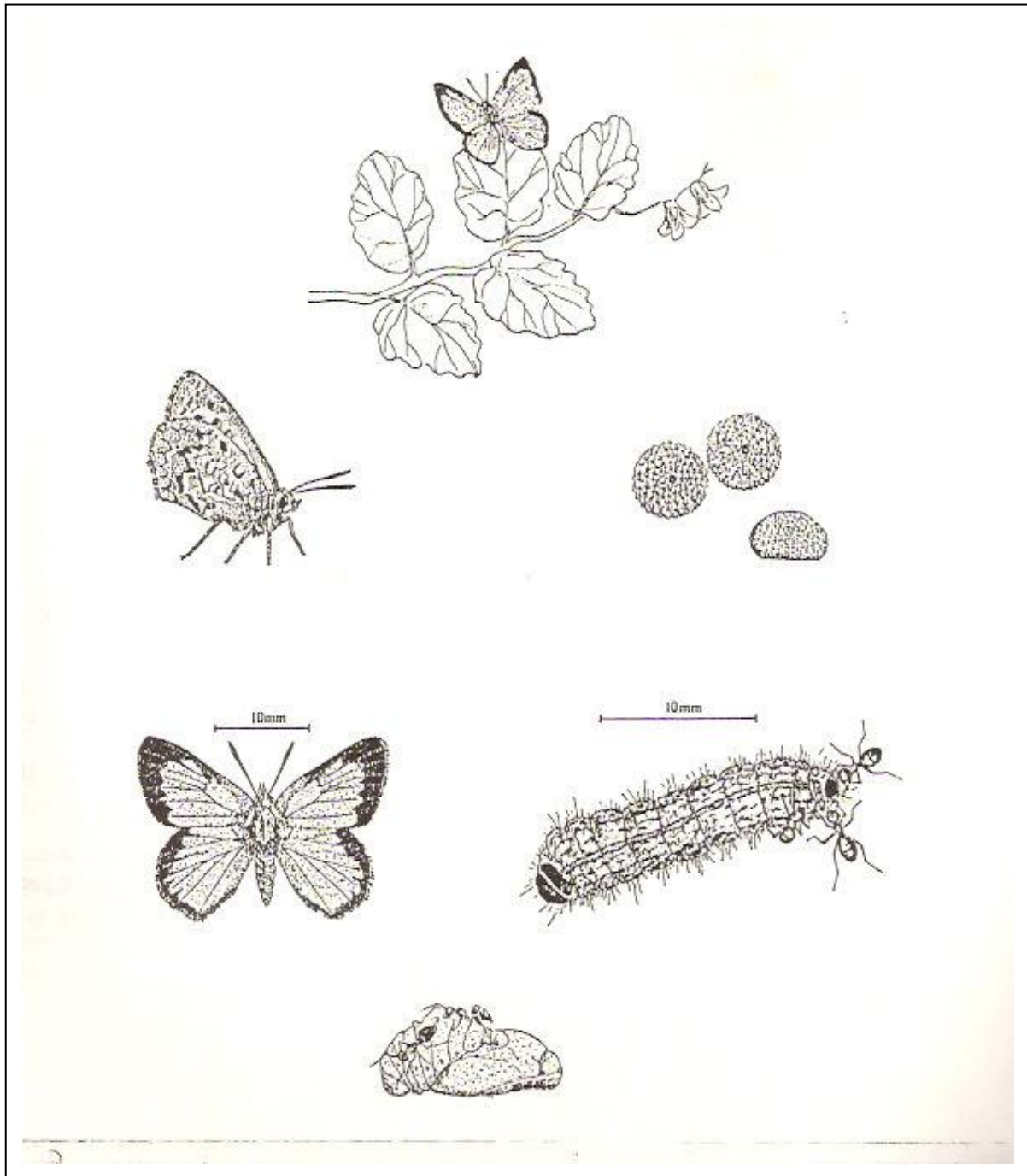


LEPIDOPTERISTS' SOCIETY
OF SOUTHERN AFRICA

METAMORPHOSIS No. 22

Editor: N.K. Owen-Johnston



Editorial

Everywhere one looks today one encounters conservation. We are entreated to, "save the whale", "save the rhino", buy a print, T-Shirt, bumper sticker or whatever because the proceeds go towards saving some endangered plant or animal. This barrage of requests reflect the underlying fear of the thinking person. The world as we know it is being destroyed.

The reason for this destruction is very simple: there are too many people in the world today. This is leading to pressure on cities and towns to expand and this in turn leads to pressure on farmers and industry to produce more food and goods to satisfy the needs of these people. As the demand grows so more and more natural bush is being chopped up and plowed up to make cropland and pastures. This destruction of our natural vegetation systems is leading to the extinction of our wildlife heritage.

Obviously some form of protection is required. The burning question is: "What protection is needed?"

We can all appreciate the dilemma of the harassed legislator who finds himself confronted by a concerned butterfly fanatic entreating him to protect some rare butterfly from extinction. Of course he shows his concern and expresses it by passing laws to protect the butterfly. This is becoming an increasingly common occurrence in South Africa today.

But are these laws devised to protect our butterflies achieving what we wish to attain?

We are all aware of the plight of the rhino in Africa today. Despite innumerable laws protecting these animals, they have been driven to extinction in virtually every country on this continent. Lets try and do something positive about our butterflies before they suffer the same fate as the rhino.

Let us pause a moment and consider the state of the study of Lepidoptera in South Africa today. The life history of many of our butterflies remains a mystery. We do not know what their larval hostplants are or what type of climatic or other factors influence their distribution and survival as a species. Many of our lycaenids are ant-dependent (myrmecophilous) and their survival is linked to the survival of their associated ant species as well as specific larval hostplants. The fact is that there is a vast amount of basic ground work that has to be done before we know what we have and how it should be managed and protected. We can count the number of professional entomologists in South Africa on the fingers of one hand with a few remaining as reserves. It is a physical impossibility for these few professionals to do all the work required. We have to rely on input from enthusiastic and dedicated amateurs to shoulder the work load.

But the laws we are introducing are aimed at stopping the amateur from collecting and studying butterflies! Surely this is a case of misdirected protection.

What is required is protection of the environment and encouragement of our young amateur lepidopterists.

A classic case of this type of misdirected protection is busy unfolding inside Zululand right now. In past years there was no objection to amateurs collecting and working in Zululand, provided they kept out of proclaimed national parks and nature reserves. However, since the discovery of *Euriphene achlys* at Manguzi Forest near Kosi Bay, the Kwazulu authorities have adopted a different approach. They now say that it is not permitted to collect a butterfly anywhere in Zululand without a permit. (We are not aware of any legislation upholding this standpoint – Editor). We can only assume that it is the presence of the colony of *E. achlys* – a supposedly rare butterfly at Manguzi that has sparked this sudden change in attitude. The tragedy is that *E. achlys* is not a scarce butterfly. Zululand happens to be the southern extremity of its range and in unsuitable climatic cycles, its distribution shrinks to areas north of our borders. Anybody wishing to study *E. achlys* has only to travel to the eastern region of Zimbabwe to find as many opportunities of observation and study as may be

required. However, this change of attitude is preventing lepidopterists from studying even the other species that occur in Zululand. It does nothing to prevent the local residents from destroying thousands of trees and clearing large tracts of natural bush to plant a few crops. Surely the thousands of butterflies destroyed in these actions are of more importance than the few specimens taken by collectors?

Zululand as an area of study by lepidopterists is almost unworked. It is one of the few areas still in a fairly original condition. Who knows what undiscovered treasures await the enthusiastic amateur. Dare we hope for a viable colony of *Charaxes violetta*, (the type locality in Mocambique is inaccessible and more material is required to ascertain its status in relation to the material available from Zimbabwe and further north), or perhaps a colony of *Euphaedra orientalis* or even further specimens of the undescribed *Euphaedra* species depicted as No. 177 in the current edition of Pennington's Butterflies. How will we ever find out if the authorities make it impossible for amateurs to work in Kwazulu.

The amateur should be encouraged to work everywhere in South Africa. His work is a labour of love and does not burden the taxpayer financially. If protection is required let it be directed at preserving our natural bush in an undisturbed condition. The number of species destroyed by the indiscriminate spraying of poisons and the destruction of indigenous vegetation to create farms and gardens will never be known.

It is only by discovering which butterflies fly in what part of our country that we can take the steps to protect these species. The only people in a position to do this work, those who have the financial resources and can devote the necessary time to undertake the studies are the enthusiastic amateurs. They do not wish to destroy butterflies. They wish to protect, preserve and study them.

Let us try and get our legislation on the right track before our law books are filled with prohibitive rules and regulations that prevent amateurs from studying butterflies. Remember, it is far easier to introduce a law than to rescind one. Lets make sure that the laws achieve the goal of protecting our butterflies in the future by protecting their environment today.

Just think how much nicer it is to have future generations of lepidopterists praise your memory as one who made it possible for them to pursue their studies than to have them curse you as one who made it impossible for lepidopterists to work in South Africa.

The supply of articles for inclusion in *Metamorphosis* is getting smaller and smaller. Without your contribution we will not be able to keep up the present standard and content of our newsletter. Pick up your pen and write a letter telling us of your experiences. Without YOUR contribution our society will lose impact and quality ! DO IT NOW!

Regional roundup

With the winter season being a period of inactivity for most of our region, reports of butterfly trips have been few and far between. Anonymous lepidopterists from the Transvaal report that *Acraea acrita* was very plentiful in Zululand this season. Further to this there was a very good "hatch" of *Deudorix dariaves* and a very large number of *D. dariaves* were observed in the early stages feeding on the seeds of *Deinbollia oblongifolia*. The Cape lepidopterists seem to have suffered from wet weekends and we have only one report from them.

Western Cape (Andre Claassens)

Hypolimnas misippus (L.) and *Junonia hierta cebrene* (T.). Recent records from the Western Cape.

The last recorded sightings of *H. misippus* in the Western Cape was that of a male on the summit of Lion's Head (Cape Town) in mid-April, 1976, by Charles Wykeham. (See *Metamorphosis* 1 (8), 1984). I have recently seen the butterfly in the following localities:

1 male at Groot Constantia (Cape Peninsula) - 4.4.88

1 male at Ceres - 13.4.88

1 male and 1 female at Swellendam - 15.4.88

I saw 1 male and 1 female of *J. h. cebrene* at Ceres - 13.4.88, in the company of the male *misippus* mentioned above and a male at Oudtshoorn - 18.4.88. From these observations it would appear that a migration of these two species (even if only on a small scale) took place during this season. Did they join the annual trek of the Transvaal holiday makers to the Western Cape for their Easter Holidays?

Zimbabwe

Rob Paré reports that the rains last season were very good. This resulted in a large "hatch" of butterflies during April and May this year. A trip to Inyanga was washed out but a trip to the Vumba produced many *Charaxes*.

Larvae of particular note were *C. alpinus* and large numbers of *C. ethalion*. *Antanartia schaeneia dubia* was recorded in the early stages on this trip. A visit to the Burma Valley during May resulted in the following species being recorded: *Charaxes protoctea azota*, *C. tavetensis*, *C. castor flavifasciatus*, *E. achlys*, and numerous *C. ethalion ethalion* larvae and eggs. Several females of *E. achlys* were taken in an attempt to study the early stages, but they were unco-operative and refused to lay any eggs.

Rob reports that a good series of *Coeliades libeon* was reared from material collected at Meikel's Jungle at Mutare. The foodplant used was *Craibia brevicaudata*. *Cyrestis camillus sublineatus* was observed on this collecting trip and fantastic numbers of *Papilio* were observed. *P. dardanus cenea* and *P. constantinus* were reared from material collected.

Ian Mullin has reared several *C. druceanus stevensoni* from material collected at Christon Bank. The winter was very mild and the local lepidopterists anticipate a good season this year.

From further north Ivan Bampton reports that he had a very successful trip to Malawi and managed to breed a number of *Charaxes acuminatus* from the Nyika Plateau. The exact status of these specimens is as yet undetermined and it is hoped that this material will be able to cast new light on this interesting butterfly. An as yet undescribed *Iolaus* was reared as far as the pupal state and we are awaiting its emergence with much interest. We hope to determine the exact status of this species in the future. A fair number of larvae of *C. penricei penricei* were collected at Lusaka and this material is being reared by Rob Paré and Ian Mullin in Zimbabwe. Steve Collins of Kenya paid a visit to South Africa during August this year and very interesting exchanges of views and information were made. Steve is busy with a very detailed study of the various subspecies of *Charaxes jasius*. We wish him every success with his investigations.

A "high-light" experience

C.D. Quickelberge
Durban Natural History Museum, Box 4085, Durban

With the number of sharp collectors about these days and also as one gets on like me with decades of butterfly collecting behind one's back, it's not often that I get the "adrenalin jolt" of new finds and experiences during my outings in the field.

During a recent trip to Kwazulu conservation areas I once more had the pleasure of looking over the Manguzi Forest which I always felt from its geographical situation close to the Mocambique border should produce more interesting butterflies than have shown up to date.

It was at 11h00 during perfect weather on 19th April this year that I once more started putting up my trap-nets on the forest's verges. Butterflies were unusually prolific and as I was setting up the first

net it was obvious I was in for a good time by the number of butterflies that buzzed about as if impatient for me to get finished. As I was moving away at the completion of the tasks a dark nymphalid suddenly emerged from the forest and perched on low vegetation close to the trap-net. Even before I had time to take a good look I just knew I was onto something unusual. Fortunately it lingered long enough for a close look and there it was – a freshly emerged female *Euryphura achlys* (*Euriphene*)! She, of course, had disappeared by the time I had retrieved my net but the mixture of banana and pineapple bait in my trap enticed her and three other males to have a feast. Despite perfect weather the following day not one *E. achlys* came to the nets.

Euphaedra neophron was also out in the greatest numbers I have ever seen at Manguzi. Obviously, this tropical counterpart to *achlys* is enjoying a good season and the same favourable factors could be behind the sudden appearance of *achlys* here as well. It will be interesting to see whether during normal seasons *achlys* maintains its foothold here or again fades into obscurity. A cyclic disappearance would account for the fact that despite much collecting in the past at both Ngoye and Manguzi it has not been found there hitherto other than in 1952.

Of course news of this nature spreads like wildfire and hardly had my specimens dried on the boards before other collectors had ridden the easy tarred road to Manguzi and taken their share of this exotic-looking butterfly. I must just say that all Kwazulu conservation officers are in radio-contact with each other and as it is illegal to collect butterflies in or around reserves of this nature one faces the unpleasant prospect of prosecution. Like the Natal Parks Board, the Kwazulu authorities are willing to consider applications for permits to collect in Kwazulu.

The discovery of *E. achlys* in Manguzi provides the first stepping stone to the gap between Ngoye Forest, where K.M. Pennington stunned the butterfly world with its discovery in 1952, and the forests of eastern Zimbabwe and Mocambique where it occurs more widely. Maybe there are other remote forests in the still large geographical gap that harbour the species as well.

The presence of *achlys* in both Ngoye and Manguzi Forests naturally leads one to wonder what other links may exist between the two forests as far as the plant and animal world is concerned.

Moths. Field collecting and processing

D.M. Kroon

In South Africa, as in most other localities, the collection of moths is most successfully accomplished utilising various attractant light traps. They respond reflexly to a light source, particularly one rich in ultraviolet spectral emissions. Ideally, much more than the mere acquisition of adult specimens is desirable, but on large scale collecting trips this is seldom feasible. However, other methods of collection and study are open to enthusiastic naturalists or conservationists and are outlined below.

Rearing larvae from eggs found on hostplants, or other nutrient source, to maturity provides valuable information about the entire life cycle of the insect, from egg through the various larval instars, pupation and on to the adult insect. Parasites emerging from any of the different stages provide valuable insights into host-parasite relationships. Immense satisfaction will be experienced when eggs are successfully raised to adulthood. Throughout, detailed notes and photographic records must be kept. More often than not fascinating insights into the natural history of these beautiful Lepidoptera continuously unfurl, providing as a bonus a perfect example at its conclusion. Where many larvae are obtained, some are sacrificed for preservation, usually in alcohol or Pempels solution, but sometimes “blown” and dried for viewing in display collections. Optimally, where facilities exist, freeze-drying is preferable for the retention of colour and other attributes. Co-operation between research laboratories with these amenities and collectors can benefit both interested parties. Because the life histories of so few southern African Lepidoptera are fully chronicled, all relevant information should be carefully noted but identifications of plants, parasites,

hyperparasites etc. should be undertaken with great circumspection, and usually confirmed by a specialist working on that particular group.

The collection of leaf-mines (those sinuous patterns sometimes noticed on the surface of leaves) and rearing the resident larva to maturity is a valuable daytime activity. The leaves are pressed properly and accurately labelled with accession numbers once the larva has pupated and hatched. These leaves are treated in a manner similar to that employed in proper herbaria, and the correspondingly numbered moth is more often than not a perfect gem for the serious lepidopterist. The type and pattern of a particular leaf-mine is usually characteristic for a particular group or family of microlepidoptera. Some spin silken cases also with clear-cut features of distinction.

The daytime use of a butterfly net is also deployed for the collection of diurnal moths, of which there is an abundance in South Africa. They may be small but are often adorned with metallic patches of scales giving them a special place amongst any collection. Sweep-netting in the long grasses, over low shrubs and along moist liverwort-covered rocky slopes is productive and many little moths seldom taken in any other way will be captured. These include the primitive family Micropterigidae, where the number of known species was dramatically extended on a single trip by nearly 400% a few years ago when Dr. George Gibbs from New Zealand visited South Africa specifically to research this homogeneous group.

Other conspicuous diurnal moths commonly seen are the larger false tiger moths of the family Agaristidae. The most usual colour is black with yellow or scarlet red blotches on the wings. The larvae may be found on various *Vitis* species (grape vines) in ordinary gardens. Zygaenidae, or Burnets, constitute another popular group amongst collectors and experienced field workers search ardently on the leaves of *Maytenus* spp. for the characteristic larvae or evidence of larval activity such as skeletonization. The adults are fairly sluggish during the heat of the day but become more active in late afternoons and just before dark when they are surprisingly active fliers considering their stout bodies.

Rarely, one of the Sesiidae, moths with a wasp-like appearance, may be seen whirring over shrubs or visiting flowers. Lucky is the collector who ever manages to obtain a good series, although many species fly on the African continent. Equally uncommon in collections are members of the families Immidae, Choreutidae, and Brachodidae. Very occasionally a specimen may accidentally find its way into light traps.

Another well represented assemblage of tiny moths with brownish or black ground-colour adorned with characteristic shiny silver metallic blotches are the Glyphipterigidae. The hindwings are rather longer than seems congruous, with rounded edges and a hairy fringe. Many remain undescribed although a good series are named in the extensive Transvaal Museum collections. The primitive hairy Adelidae with metallic markings, large eyes in the genus *Droseropa*, often mingle with other fast flying insects around *Buddleia* species when these come into flower in early spring. One of the most strikingly coloured gold and shimmering purple moths depicted a few years ago on Christmas Stamps were also of this group, which may be rare in South Africa but is common in Europe.

Other day flying moths include species whose larvae construct special cases from hostplant, debris or other substrate such as the primitive Psychidae. In this family females are often apterous, but not always, usually drab coloured, but quite recently I have collected a series of sexually dimorphic, coloured members of the group feeding on various grasses at Sasolburg. Tineidae, and Xylorictidae (Cryptophasidae) also construct bags or cases in which the larvae reside and pupate. Fascinating special modes of reproduction have been noted in members of this old world family of moths.

Neville Duke tumbled to the discovery recently in the northern Transvaal that one of the subfamilies of the Pyralidae, the Hyblaeidae, are also to be taken visiting flowers during the daytime. These moths are almost universally similarly patterned with sombre brown forewings but strikingly yellow or blotched underwings. Previously considered to comprise but a single species in our zone, it is now quite clear that several closely allied members are involved.

Malaise traps, commonly employed for collecting wasps and flies, have been used to collect Sesiidae and where erected overnight have successfully been used to obtain both sexes of the elusive *Micropterix* spp. With the so-called WET method, alcohol is used in the trapping receptacle, while another technique makes use of "vaponas" strips to stun or kill material entering the collecting drum. The latter is more acceptable to lepidopterists generally as the material can be relaxed and set normally without loss of scale patterns.

Less well known locally is the technique of "sugaring" tree trunks with molasses or other sweet aromatic concoction. The principle is probably akin to that in attracting Charaxinae. It is employed with great success in Europe to attract some Geometridae and a range of Noctuidae. Pheromone attractants are also employed commercially in agriculture and for luring certain other moths. But locally these are difficult to obtain and only special research or circumstances will warrant the effort to obtain the material. Collectors have often lured members of the opposite sex to females caged for the purpose e.g. saturniid moths or psychids have been very successfully enticed by enthusiasts using live, virgin material.

The mainstay of the average heterocerist, however, still remains collecting by means of a variety of light sources, some of which are outlined below.

Traditionally, Museum staff have selectively collected at night on a taut white sheet suspended between two poles held erect by guide ropes tied to stakes hammered into the soil. A strong UV light source suspended from a tripod in front of the sheet attracts a great variety of insects, and selectively specimens are taken in jars. This method presupposes a fair degree of expertise and knowledge of what is needed. Furthermore, it is merely a method for the acquisition of adult imago material and provides no inkling about the natural evolution or life history of the specimen concerned. The auxiliary apparatus needed is heavy and cumbersome including a generator, liquid fuel etc. To man such a collecting trap is also very strenuous for a single collector, often necessitating being awake throughout the entire night because different species have different flight times, some only coming in to the light just before dawn. Collecting in windy surroundings is inconvenient using this method as the sheet continuously flaps, dislodging specimens at critical moments. The hot bulbs are easily shattered if rain is experienced while on an outing. Furthermore, the intense UV emissions are injurious to vision and some protective shielding of the eyes is desirable. A team working in relays at a sheet is more likely to produce the optimum result. Another disadvantage arises when collecting spots are not located adjacent to access roads because of the weight of the generators and apparatus.

The advent of 6 or 15 watt actinic black or visible spectrum UV tubes has revolutionised collecting. These are erected vertically over tin traps (Heath traps) which can be bought or made, over a small plastic funnel with a tiny orifice at the lower end. Clear plastic vanes suitably positioned further serve to obstruct moths flying around the light and on striking a vane, usually fall downwards and into the tin trap. The trap is of course rainproof and not affected by wind either. Inside, a range of volatile anaesthetic agents such as chloroform or others are used to dull or kill the insects. The disadvantage usually cited is that these traps collect all and sundry without being selective, and this is a valid argument against their use. However, where all material can be usefully incorporated into various collections other insects are not wasted, and museums usually do require more than single specimens for research and study. Surveys where a particular region is doomed anyway e.g. building of large dams, benefit enormously from this method. Lastly, these traps can be placed in multiple sites and left unattended overnight and merely emptied in the early morning. Umbrellas suspended over the trap keep it dry and the numbers of moths now gathered on collecting expeditions previously "washed out" has to be seen to be appreciated.

Even larger numbers will be collected when an ordinary street light 80 watt globe is suspended over similar containers. I have simply and effectively modified empty apple-boxes by cutting a suitable hole in the lid portion and bedding the funnel therein. My experience is that at least 10 x as many specimens arrive at these traps. With the greater numbers statistically a greater number of species are taken, often in larger numbers, and strays of material not usually attracted to lights, such as some of

the families whose members are dayfliers. Little bottles of an anaesthetic agent with wicks allowing for slower continuous evaporation throughout the night are used. It is helpful to empty such traps periodically to reduce attendant risks of damage due to large beetles or other insects. In the lowveld this method is totally impractical unless several packets or sorters are available the following day to handle the material, but in the western Cape or in off seasons they are very rewarding indeed. Another useful anaesthetic agent frequently used is ethyl acetate but its vapours discolour green geometrids and noctuids to an unacceptable degree.

On such expanded field trips the moths are stunned in the traps and transferred to large cyanide bottles for actual killing. Failure to kill properly before pinning and packing results in some resistant specimens, or specimens freshly entering the trap reviving somewhat, with disconcerting results. The tiniest micros have unfortunately to be pinned with minutens the following morning, with larger specimens merely pinned or packed properly between layered cotton wool. Many species, which we only learn with experience, need to be properly mounted the following day as these don't relax later very well, and others discolour badly too. Temporary refrigeration will delay the process a few days enabling the field worker to deal with special groups. The great majority can be dealt with months or years later when needed. Ideally, however, pinning should be completed as soon as possible. Where pinning is delayed or packing into boxes is routinely undertaken, accurate labelling is imperative. Precautions to prevent the ingress of mould, ingress of beetles or other pests must also be stringently observed. The minimum data needed would be name of collector, date of collecting, locality as precisely as possible, and to amplify somewhat it seems desirable that latitude and longitude to at least $\frac{1}{4}$ degree is desirable. Where possible altitude should be included, as well as other features e.g... dense forest, open grassland, swamp, mountain peak, to mention a few. The more pertinent data available, the more useful the material is likely to be in later studies.

The accurate identification of material is difficult because so much new and unnamed material exists in South Africa. This makes the challenge and excitement of discovering new species much more likely than amongst the butterflies. Why not take up the challenge of something stimulating in addition to your usual interests. Trends overseas confirm that a far greater thrust into the heterocera (moths) exists today, and the rewards are commensurately higher. The scope locally is virtually unlimited.

Ruimsig Entomological Reserve. Report on the season from September 1987 to March 1988

G.A. Henning

Lepidopterists' Society visits

Members of the Lepidopterists' Society have visited the reserve at least monthly throughout the season. The records of the visits are collected by the writer and are incorporated in this report.

Taxonomic status

The taxonomic status of the Ruimsig colony is still under investigation, further to my report of 1986 (1c). It must be recorded that the type locality of *Aloeides dentatis* at Waterval Onder has still not been rediscovered, specimens recorded at high altitude (above 2000 m) are not of this species.

The foodplant of *A. dentatis maseruna*, 1986 (1a) has now been identified as *Hermannia jacobifilia* and not *H. cristata*.

The foodplant of the population at high altitude on the Suikersbosrand (1986 report 1b) has been identified as *Lotononis erianthe* (Fabaceae).

Management

Before the commencement of the season, on the 28th July 1987, in consultations between the Lepidopterists' Society, advisors from the Potchefstroom University and the Roodepoort conservation

officer it was decided to experiment on the various ways in which the habitat in the reserve was to be managed.

Under normal conditions this area would be grazed, keeping the grass relatively short and sparse, any excess dry grass would probably be burnt during winter. In order to try and emulate these natural conditions it was decided to burn some strips, to scrape some lightly and to scrape others more heavily. The progress during the season was monitored in all these areas.

Observations

Aloedes dentatis was observed on every visit during the season when the sun was shining, being on the wing from about 09:00 to 15:00. The burnt areas were the first to show results and during November *A. dentatis* were seen in some numbers with an estimated total in excess of twenty specimens being seen on one day, most of these being observed being in the burnt areas. At this stage the lightly scraped areas were beginning to be used and *Hermannia depressa*, the foodplant of *A. dentatis*, was growing well and spreading rapidly over these strips. During December and January the burnt areas were starting to become overgrown with long grass and the *A. dentatis* were seen predominantly on the lightly scraped strips. The heavily scraped areas did not grass up at all during the season and by mid-February there were massive patches of *H. depressa* and numerous other small plants growing on these strips. The largest daily record was made by one of the members of the Lepidopterists' Society in mid-February when more than 35 specimens were seen. This is also the largest number recorded in one day for several years.

We are quite happy to state that all the management procedures undertaken early in the season were successful and that before the coming season perhaps larger areas should be treated.

Public interest

Several parties of visitors were conducted around the reserve during the year. The largest party was that of the Centenary Walks Association when 20 members were shown the reserve during November.

Interest was shown in the photography of the insects in the reserve, members of the Germiston Camera Club visited the reserve early in the season. A film maker also visited the reserve and may, in time to come, produce a film on the reserve.

Conservation in Roodepoort

Due to the interest surrounding the reserve it was decided by the Lepidopterists' Society to hold the first Lepidoptera Conservation Symposium in Roodepoort. This took place in the Roodepoort City Theatre on the 8th August 1987.

A thousand brochures were distributed through various conservation bodies and about 70 people attended on the day. These included representatives of the Transvaal Nature Conservation Department, the Department of Environment (Forestry), the Blyderivierspoort Nature Reserve, the Transvaal Museum and the Wildlife Society.

The Ruimsig Entomological Reserve was mentioned many times during the day and was discussed in detail by G.A. Henning. The proceedings of the Symposium have been printed and has been distributed to all major conservation bodies.

Exhibition

An exhibition of Lepidoptera was held in the foyer of the Roodepoort City Theatre during the week prior to the symposium. It was reported from the Roodepoort Museum, who participated in the exhibition, that it attracted a great deal of interest from the general public.

An exhibition is also planned for the Johannesburg Zoo's open day in May, and the Ruimsig Reserve is always prominently featured.

Red Data Book

The Red Data Book is the official publication which is used in all conservation departments with regard to rare and endangered species. The Red Data Book on the butterflies of South Africa has been written by S.F. Henning and G.A. Henning and is due for publication by the C.S.I.R. in June 1988. The Ruimsig Entomological Reserve features prominently in this publication.

Notice boards

The notice boards for the reserve are nearing completion and we hope they will be erected within the next couple of months. The notice board will be in colour and have paintings of *A. dentatis* and its life history.

Species recorded during the season

HESPERIOIDEA

HESPERIIDAE

Gegenes niso niso
Kedestes barberae barberae
Platylesches ayresii ayresii
Tsitana tsita tsita

PYRGINAE

Eretis umbra umbra
Spialia asterodia
Spialia diomus ferax
Spialia mafa mafa
Spialia spio

COELIADINAE

Coeliades pisistratus

PAPILIONOIDEA

NYMPHALIDAE

NYMPHALINAE

Byblia ilithyia ilithyia
Catacroptera cloanthe colanthe
Hamanumida daedalus
Hypolimnas misippus
Junonia (Junonia) hierta cebrene
Junonia (Junonia) orithya madagascariensis
Phalanta phalantha aethiopica
Vanessa (Cynthia) cardui

ACRAEIDAE

Acraea horta
Acraea natalica natalica
Acraea neobule neobule

SATYRIDAE

Pseudonympha narycia narycia
Stygionympha wichgrafi wichgrafi

DANAIDAE

Danaus (Anosia) chrysippus aegyptius

LYCAENIDAE

POLYOMMATINAE

Anthene amarah amarah
Azanus jesous jesous
Azanus ubaldus
Cacyreus virilis
Cupidopsis cissus
Cylyrius (Syntarucus) pirithous
Eicochrysops messapus mahallakoena
Euchrysops dolorosa

Feyeria trochylus
Lampides boeticus
Lepidochrysops patricia
Lepidochrysops plebeia plebeia
Tarucus sybaris sybaris
Zizeeria knysna
Zizula hylax hylax

THECLINAE

Aloeides aranda
Aloeides dentatis dentatis
Aloeides taikosama
Aloeides trimeni trimeni
Axiocerces tjoane
Gonatomyrina henningi
Iolaus (Iolaphilus) trimeni
Myrina silenus ficedula
Spindasis natalensis

PIERIDAE

PIERINAE

Belenois (Anaphaeis) aurota aurota
Belenois (Anaphaeis) creona severina
Colotis evenina evenina
Mylothris agathina
Pinacopteryx eriphia eriphia
Pontia (Pontia) helice helice

COLIADINAE

Catopsilia florella
Colias electo electo
Eurema (Maiva) brigitta brigitta

PAPILIONIDAE

Papilio (Princeps) demodocus demodocus

The total of the above is 59 species. This probably represents almost all the resident species. One species has not been recorded for some time and is probably a migrant; this is *Acraea natalica natalica*.

The Lepidopterists' Society will continue to monitor the reserve during the coming season.

Notes on the early stages of *Durbania saga* Trimen, 1883

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

In the early years of the century G.C. Clark found the larvae of *Durbania saga* Trimen, 1883, on rocks at Ceres. Since that time nobody has recorded seeing the larvae of this butterfly. I have searched for the early stages of the Boland rocksitter on many occasions in various places where the butterfly occurs, and over a number of years, but I was always unsuccessful. During my stay at Citrusdal from 2nd until 8th of September, 1987, I spent many hours searching for the early stages in most likely places and at last I found them. I actually found eight larvae in three areas near Citrusdal. Six larvae were in the final instar and two were earlier instar larvae. One imago was caught on 8th September, an early record for the species.

The larvae were invariably found on the shaded side of rocks, not covered with lichen, and thus not in contact with their foodplant. When dislodged from the rocks to which they clung rather tightly, the larvae sometimes dropped to the ground where they were hard to find among the sand, stones and vegetation. This habit of dropping from the rocks may well be an adaptation of the larvae to escape predators.

The larvae are rather flat, bear many setae both dorsally and laterally and have a notably protective, camouflaged colouration. No ants were found in association with the larvae.

In captivity the larvae move away from the light and tended to hide in the darker corners of the rock, which was kept in a large container. During the night the larvae fed on the lichen growing on the rock taken from the original environment. The larvae showed a distinct preference for the young, greener tender growth. It would seem that the larvae of *D. saga* feed on the green, chlorophyll containing algal component of the lichen, rather than eating the non-photosynthesising fungal part of this dual organism.

The larvae started pupating from the 13th September and imagines of *D. saga* emerged three weeks later. The larvae and pupae of *D. saga* resemble those of *D. amakosa amakosa* Trimen, as depicted in Clark and Dickson, 1971. Mr C.G.C. Dickson has described the two instars and noted that they, on close examination, differ in various aspects from similar instars of *D. a. amakosa*.

REFERENCE

CLARK, G.C., & DICKSON, C.G.C. 1971. *Life histories of the South African lycaenid butterflies*. Purnell, Cape Town.

Letter to the Editor

Steve Woodhall

Dear Sir,

As a relative newcomer to South African lepidoptera circles, I would like to say how much I deplore a tendency among certain collectors. Without naming names, I am referring to the practice of holding onto locality information as precious secrets, to be passed on only as a favour with the proviso "but don't tell anyone!"

We are all adults, so why do we indulge in such childish practices? Such behaviours can only diminish our status in the eyes of the authorities, at a time when we are trying to show that we are serious amateur scientists and not mere "stamp collectors". I am a trained scientist myself albeit in a different discipline, and try to set an example by disseminating new locality information as freely as I can. So come on you secretive people, read anew the first paragraph of the Preamble to our Constitution and remember one of the reasons our Society was formed:

"..... in the hope that the free exchange of ideas, opinions, KNOWLEDGE and materials will be promoted."

Steve Woodhall
55 Elm Road, Primrose East, Germiston 1401.

Letter to the Editor

Anonymous

Dear Ed,

Having listened to many a lepidopterist offer as excuse, the law propounded by a certain gentleman of Gaelic origin, I got to thinking that perhaps some light-hearted verse might be in order. So in response to your request for "non scientific" material (*Metamorphosis* 1 (20)) I offer:

"The Patron Saint of Butterflies", or "The Lepidopterists' Lament".

Murphy's not an Irishman
He doesn't have a home
He roves from place to place each day
And sleeps under a stone

Some say there's really no such thing
A figment - nothing more
But co-incidence can only stretch so far
There's a man, of that I'm sure

Who strolls about and follows us
Invisible to all
Who watches, waiting till we move
Then trips us as we fall

Who puts our nets in thorny trees
That tangle, rip and tear
And all the while the bugs sits still
And laughs at our despair

Then when at last the net is free
And in the air is spread
He walks right up and claps his hands
Behold! The bug has fled

And when we walk without a net
In the forests, then we find
That on every leaf of every tree
Sits a butterfly of some kind

But try and walk this forest path
With ready net in hand
Then all is gone, no bug in sight
A barren flightless land

Or when the sun shines bright and hot
Our nets and bottles pack
We get to where we're going to,
To find the weather black

He teases us and leads us on
He frustrates to the core
And when we think we've seen it all
He frustrates us some more

But when at last his time will come
To cease, as all things must
We'll catch and catch, to heart's content
And quench the catching lust

And very soon the drawers are full
We'll sit and reminisce
Of when and where, or who and how
And soon begin to miss

The pleasure of the stealthy chase
 The heartbeat pounding stronger
 Gone will be the things that count
 Oh! Murphy tarry longer

ANON

Presidential address 1988

D.M. Kroon

Ladies and Gentlemen, to one and all, a warm welcome. Thank you Mark for the encouragement you have given me as I take over this new office. To you fellow lepidopterists, my appreciation for your confidence in electing me as your next President.

Ek let op dat daar vandag een van ons veterane versamelaars, ja, in der ware Swannie, die moeite gedoen het om by ons aan te sluit alhoewel hy ongelukkig nie die kongres kon bywoon nie. Ons sou waarskynlik sy uitgebreide veldkennis en ondervindingryke agtergrond tot ons voordeel gevind het. Die teenwoordigheid van Koos de Wet van die Department Natuurbewaring word hoog op prys gestel.

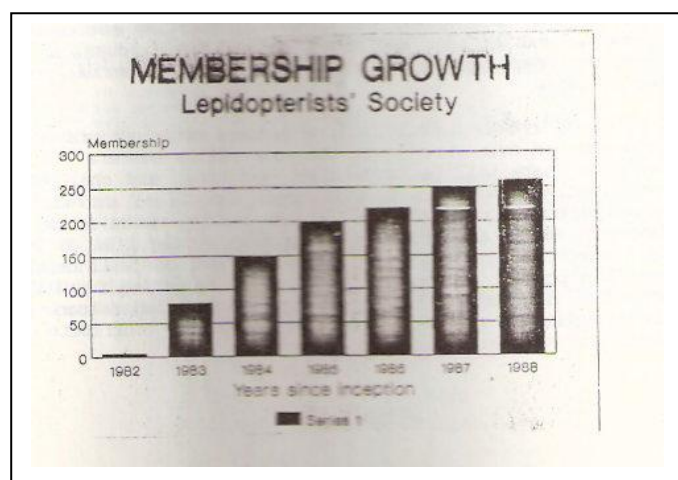
Rob Paré and Ivan Bampton from Zimbabwe are maintaining their proud record of attendance and boosting the *esprit de corps* of the Society. Everyone really appreciates the effort you make to attend from such a distant locality.

A sincere word of thanks to the Council Members, both outgoing and incoming for their willingness to participate and contribute to the effective administration of the Society.

Now that the initial excitement of establishing our Society has somewhat abated we must take stock. I believe, however, that your enthusiasm for joining our dynamic association has continued to spiral. It is also obvious to me that our Society will benefit from an objective appraisal of our current situation: I will address several important aspects apropos the functioning of our Society today which may be obvious but are generally not highlighted effectively. For example: What have we achieved, where have we been less successful? How can our Society continue to grow and improve and how will we consolidate our Society in the years ahead?

As your new duly elected President, it gives me particular pleasure at this juncture to thank our outgoing President, Dr. Mark Williams, who presided over this office since the inception of our Society. To him must go the credit of first initiating a small group some six years ago forming the nucleus of the current society - now with a membership of 270 and still growing, albeit at a lesser tempo. We are optimistically heading for the 300 mark next year!

The Society has flourished with many objectives met and major milestones achieved - not the least of which has finally made its appearance today - OUR LONG AWAITED AND MUCH DEBATED CONSITITUTION. Let's pay tribute with a hearty clap! English copies will be circulated to members in the near future. This important document will also become available in Afrikaans for those who wish to obtain a copy, thanks to a superb translation by Rudi Mijburgh with



assistance from Isak Coetzer .. Baie dankie Rudi, die Raad stel jou belangstelling hoog op prys en ek hoop ons Afrikaans sprekende lede sal hierdie puik vertaling nuttig vind. ('n Gelukkie het weereens die Vereniging getref and 'n borg is onlangs bekom wat ons in staat stel om beide die Engelse en Afrikaanse uitgawes gelyktydig in een omslag vry te stel).

Please bear in mind that you, the members of this Society, duly elect other members to your Society's Council where they serve as instruments implementing your wishes. Without input, productive output is not feasible. This is why it is imperative to respond to circulars, questionnaires and ballots sent out from time to time, and become more actively involved. For example, we now have a constitution achieved by the consultative interaction and participation of members at earlier AGMs. The Council must know what its members really want.

Perhaps not all members are aware of or appreciate the hard behind-the-scenes work so essential and necessary for securing suitable venues for our conferences and meetings. If you carefully consider the logistics involved in creating the necessary infrastructure and contacts which ensure and contribute to the smooth running of the Society you will appreciate that substantial effort and time is involved. To provide interesting meetings a diverse forum of speakers, exhibitions and shows as well as discussions are essential. Be generous, share your experiences with us at the annual conference or in our publications.

I am going to rely heavily both on members contributions during my term of office and even more so on the office bearers. We sincerely hope the next few years will be productive, exciting, and challenging. By becoming more involved, people in distant areas won't feel excluded. We are trying to avoid polarization within the Society and by communicating regularly with the Council members or through *Metamorphosis* the ties of our common interest will strengthen substantially. What you get out will depend on what you put in. This popular internal publication is appearing regularly and should hold something of interest for everybody. If you find nothing of interest, seize the opportunity, respond to this challenge and contribute something different which you consider topical and important.

I appeal to everyone to attend our main get-together once a year - our annual Conference and AGM:

AGM can also be viewed to mean something different Just think **All Gain More** - every one of us, including you, all gain more just by getting there.

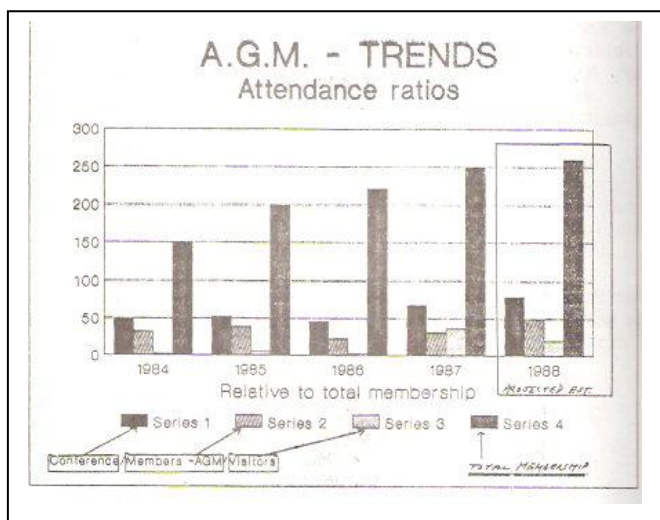
The easiest contribution and input any member can make, is merely to ensure his or her attendance at an AGM, every AGM.

The trends

Despite consistent growth in the Society the attendance has remained virtually static. This means that a smaller and smaller percentage of our members are making the effort to attend and contribute.

The total attendance has marginally grown, but mainly due to visitors.

The AGM itself reflects a declining member attendance in actual numbers and even more so in real percentage terms.



The solution - (but how to activate?)

Instill more enthusiasm, participation, persuasion, by setting an example amongst your close friends, and influencing others positively on the value of joint effort and the worth of your Society. Take a real pride in it.

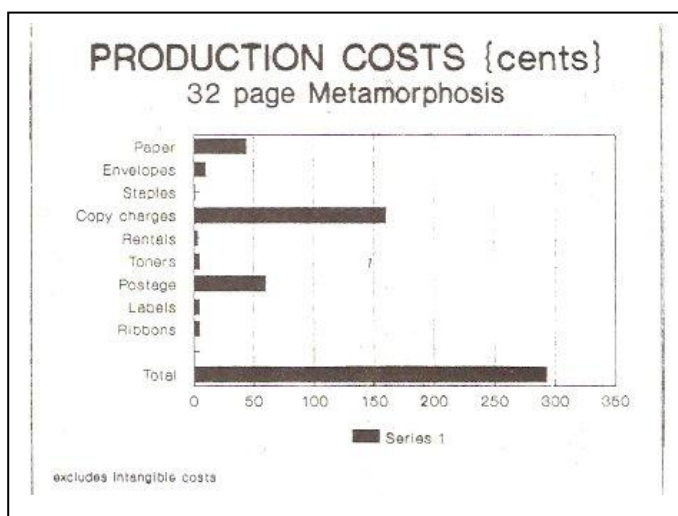
For our next AGM we want to suggest a venue with a difference. The suggestion will be discussed later at an appropriate time this morning in the AGM itself. The plan put forward, if accepted by members, will enable lepidopterists, both amateurs and professionals to make contact with other entomologists, experience other disciplines, and reap a wealth of new ideas which we could profitably utilize ourselves sometime at future meetings.

If you experience problems of whatever nature, feel dissatisfied, or critical, consider this an open invitation and please write to the secretary or me personally. Your problem or suggestion will receive consideration, and we will attempt to resolve such issues. If you don't tell us, we simply can't guess why certain persons become dissatisfied.

The quality of future publications or circulars is also a vitally important matter, which has to be addressed, but which must be realistically weighed against the steadily deteriorating economic background. Remember high quality costs. At the same time the projected public image of low quality is detrimental to the Society as a whole. There is a time and place for special higher quality publications, of which the constitution is a prime example; however, others may have to be produced, within existing parameters ... albeit imperfect ... merely to keep members involved and updated and enlighten them of developments, decisions, interesting anecdotes etc.

Inexorably, the cost of everything continues to escalate and although the committee intends to hold your membership fees as low as possible, you will realize that as with most other societies, especially those producing high quality publications, expenses gradually force everyone to raise their membership fees A vexed, unpopular and controversial subject.

As an illustrative exercise I have prepared a rough table of what it does cost to produce even the first copy of our last AGM which evoked such, probably deserved, criticism.



Your membership dues - R20 annually compared with the cost to produce a thick edition of *Metamorphosis* (e.g. 32 pages)

(Actual physical costs which include a few variables)

Paper @ R13.72/500 sheets = 88 cents/copy = on 2 sides	= R0.44
Envelopes - brown medium	= R0.10
Staples @ R2.66/500	= R0.01
Copy charges @ 5 cents/page counter: 32 pages	= R1.60
Rental machine for xeroxing say 1/30 of monthly rent	= R0.03
Toner powder and fixer (additional to charges)	= R0.05
Postage - small items about 16 cents, larger & heavier	=R0.60
Computerized address labels gummed	=R0.05
Ribbons etc. @ R80.00	=R0.05

Minimum cost for ONE COPY therefore = R2.93

Plus a proportion of the intangibles listed below

(Hidden costs not usually taken into consideration)

Less tangible yet not insignificant costs overall which certainly comes out of someone's pocket:

Telephone calls - costs high soliciting articles and the spectrum of gathering, collating, printing, distributing the materials to members, and amongst editorial comm. R????

Time and labour involved in production R????

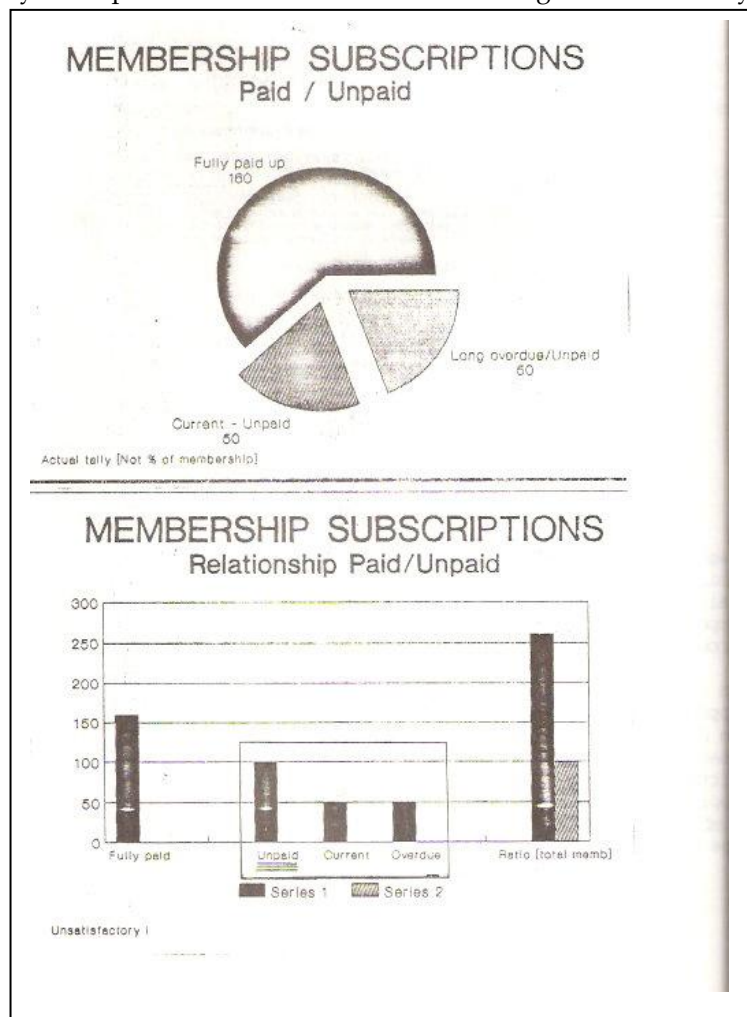
Motor expenses including petrol, wear and tear etc. R????

High quality special issues or publications cost a good deal more and although our reserves are steadily improving we have had to rely on sponsors until the present, and probably will in the future still have to rely on these.

Despite these adverse trends and because of the important involvement which this Society has nurtured with conservation bodies, the Council acted on certain well-meant criticisms and the result is a replacement publication of the important Conservation Symposium - a document of which our Society can now be proud.

An important point concerning our fees, but not in some instances so obviously appreciated by local members, is that overseas members pay the equivalent sum in dollars ... meaning that in actuality about R45.00 comes in per overseas member. The high costs of overseas mail is disheartening, but the Committee has always felt that international contact must be strenuously pursued, applying this extra income to offset postal charges. There are, of course, a number of honorary associations and institutions which benefit directly from the Society free of charge.

Concerning the payment of annual subscriptions, a problem has of late become apparent. Alarming,ly, our Society has now reached a point where, despite looking for increased membership, the Council feels that it cannot continue to support indefinitely those members whose financial obligations remain overdue despite several requests and reminders. The reminders themselves further deplete valuable financial funds which could be channeled more beneficially e.g. to prepare cost-effective and attractive publications. We are currently doing some soul searching about this problem, and possible solutions. What strikes one is that overseas



members are virtually all fully paid-up, and they make up 20% of the Society's membership. Why, we wonder, if you do not want to belong and benefit from the Society by contributing a small but realistic fee, did you apply to become a member at all? In the near future I plan to circulate a questionnaire to probe your feelings on various topics. Let me emphasize, circulated ballots and questionnaires are important documents and I must appeal to everyone to make the effort to respond to these in the future.

The question is frequently put: Where is our Society going? What are we achieving? Are we producing articles and research of sufficiently high standards? Are our non professional members happy with what we are doing? What do the professionally qualified members think? Their thoughts and advice could assist the proper channeling of many an amateurs drive to productive research, articles, scientific observations, and a host of other facets where the amateur would feel that his hobby is making some useful contribution somehow.

I must say that I feel proud of what members have achieved so far, and we should try even harder to promote and enjoy the fellowship and camaraderie this Society offers.

We have achieved a measure of success tackling co-operative joint ventures with nature conservation authorities and controlling bodies by way of initiating checklists, giving advice and happily supplying information in respect of rare and endangered species. The question of permits, always vexed and full of burning controversies has been alleviated to some extent through the efforts of the Council and other members, and you can rest assured that well motivated applications directed on behalf of and with the blessing of the Society have been singularly successful and opened previously locked doors. We are continuing to expand these co-operative endeavours.

Two of our members have single-handedly been involved in the compilation of a red data book, currently being finalized before going to print. This portends to set out an incisive appraisal of the status of our insects, and although the Society itself was not involved directly, as President I would like to take the opportunity of congratulating Stephen and Graham for a successful conclusion for their sustained enthusiasm and joint venture.

The status of subspecies has been covered exceptionally fully by Rolf in the latest *Metamorphosis*. Members are urged to read this article very carefully and take cognizance of modern trends.

Anyone who avers that this Society is not making real headway, many positive contributions over a wide spectrum, is not strong and financially viable, is not actively involved with some research, is unenthusiastic about its future: To them I say ... a far more likely appraisal is that your very non-involvement has caused you to miss the opportunity of a lifetime. Remember, there's plenty of time to rethink, but start NOW.

You are denying yourself the right of having a better Society by withholding your views and experiences. An opinion expressed gives others the opportunity to accept, reject or pursue the information and thus a chain reaction is set in motion - and this, after all, is what we want - INTEGRATION OF THOUGHT.

Thank you

D.M. Kroon
(President - Lepidopterists' Society of Southern Africa)

Postscript

Many publications of a popular nature, as well as interesting yearly get-togethers and one definitive publication have been the order of the day. These all require hard work, enthusiasm, dedication to cause and in this respect the various committee members have shown their grit. No society is free of or will function without occasional difficulties and disagreements, and these are tackled by your committee and resolved to the best of our ability. Members of our Society have always been free to

write in, airing suggestions or grievances. It should be remembered that any committee is rendered ineffective unless presented with challenges or other innovations to stimulate our common interest, and promote our declared aims. One of our professional members has submitted a very pertinent article on the desirability of describing subspecies in *Metamorphosis*. It is highly desirable that all members read this excellent appraisal carefully, because it is likely that the scientific editors of the future are likely to follow closely with this train of thought for scientific publications.

Handbook on collecting, breeding and preserving techniques

Steve Woodhall, 12 Coniston Ave, P.O. Modderfontein 1645

At a recent Council meeting it was mentioned that many new, inexperienced members would like a source of basic information on how to collect and breed specimens, and how to preserve them. We discussed the problem and decided that a simple illustrated handbook for beginners would be a good idea. I have been given the job of collating information from members, which we will then edit and combine into a booklet.

All you experienced collectors out there have, over the years, developed your own techniques and special "dodges". For our booklet to be of the maximum benefit to beginners, we need to include as much concentrated experience as possible. Some ideas are:

- Easy economical ways of making equipment such as nets, traps, cages, setting boards, storage boxes and cabinets.
- Hints and tips on breeding, for example ways to induce females to lay eggs.
- Special collecting techniques.
- Photographic hints and tips.
- Your recipes for baits and lures. We would like to include a good selection of these.
- Information on preservatives and ways of preventing specimens from "greasing up" or fading; also relaxing fluids, and pest repellants.

I'm sure you can think of many methods you have developed over the years that will help a beginner to get more out of his hobby and preserve his specimens in good condition.

Please jot your ideas down on paper and send them to me.