

Newsletter of the Lepidoptera Study Group of Southern Africa

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Editorial

M.C. Williams

It is my fondest hope that this first issue of *Metamorphosis* will live up to its name and progress in subsequent editions from an inconspicuous 'ovum' to a beautiful 'imago' that we can all enjoy. Its success or otherwise will of course depend on how involved each of us becomes – without an active exchange of knowledge and views within its pages atrophy and eventual demise is inevitable. Let me hasten to add that judging from the tremendous enthusiasm shown by most of you I consider this an unlikely eventuality. It has indeed been an honour for me to be able to act as a 'catalyst' and I hope that the formalised communication now set up will generate an *esprit de corps* among all lepidopterists in the subcontinent.

So far I have received the names of over 200 lepidopterists from southern Africa (a number of whom I must still contact) and membership at the beginning of August stands at 80. My sincere thanks to Rudi Mijburgh and Bill Henning for the effort they have gone to in supplying me with large numbers of names and addresses – also to all those others who have contributed.

With the unprecedented response and growing membership numbers it has become abundantly clear to me that I cannot cope adequately for very long on my own. A number of people suggested that provision for the election of a standing committee be made in the proposed constitution (something I did not think would be needed in the near future) and I wholeheartedly agree. The following is a compilation of my own and other members' thoughts.

Proposed additions to the REGULATIONS

2.1 Committee

- 2.1.1 A committee consisting of six members (chairman, secretary, treasurer and three additional members) will be elected by the ordinary members and serve a two year period in office. The chairman will act as editor of the newsletter.
- 2.1.2 Nominations will be made by ordinary members and must be accompanied by the written consent of the nominee. Nominations must reach the secretary before or on the 20th February every second year. The retiring chairman, secretary and treasurer will automatically serve as additional committee members for the next two year period should they not be re-elected to office.
- 2.1.3 Elections will be conducted by postal vote in March of every second year.
- 2.1.4 The committee will be the highest authority of the group and its functions will include the protection of the group's interests, liaison with governmental and conservation bodies, penalization of members found guilty of contraventions of the constitution and conduct of the business matters of the group.
- 2.1.5 Three committee members (including the chairman or his nominated deputy) will form a quorum at committee meetings.

- 2.1.6 Travel and board/lodging expenses incurred by committee members in pursuance of their duties will not be recoverable from the group's funds.
- 2.1.7 The secretary will keep minutes of the proceedings at committee or other business meetings of the group.
- 2.1.8 Special sub-committees may be appointed by the committee should this be deemed necessary.
- 2.1.9 The chairman has a casting vote in the event of voting being equal.
- 2.1.10 The committee may co-opt not more than two members per year.

Other proposed changes:

1.2.3 to read: "to act as the co-ordinating mouthpiece for the viewpoints of the group."

2.2.3 to read: "a financial report will be presented to members in the first issue of the newsletter after April 1 of each year."

2.2.4 to read: "all funds will be deposited in a savings account in the name of the group."

Note: "editor of the newsletter" will be replaced by the appropriate committee member e.g. in 2.1.1 "the secretary".

Further comment is welcome!

Butterfly Conservation

S.F. Henning

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Habitat destruction is the major cause of the decline of butterfly populations. The butterflies most at risk are the myrmecophilous (ant-associated) Lycaenidae. These species are often quite local and rare as they require the presence of both host ant and host plant, as well as optimal climatic conditions. Being thus confined to a limited area, often no larger than a tennis court, these species are particularly vulnerable to any disturbance of their preferred habitat. Building of a house, ploughing a field, constructing a road could lead to the extinction of a rare species confined to a single locality. We must act to conserve endangered areas before the situation goes too far to be corrected.

We do not want a situation to arise similar to that of the British population of the large blue, *Maculinea arion* (Linnaeus), which has been extirpated in spite of intensive research and management efforts. This species has a similar life history to our *Lepidochrysops*. In this case the insect's high degree of specialization, coupled with changing patterns of land use, frustrated those involved in its conservation, as the active colonies continued to diminish. Their association with the host ant, along with the relative abundance of thyme, the host plant, meant that the butterfly's requirements could not be fully understood without the most painstaking and difficult research. In the meantime, most of the colonies were destroyed by ploughing, overly hot brush fires, or the relaxation of grazing. It was found that grazing had to be intense to favour the correct species of ant, *Myrmica sabuleti*, which only lives in short grass. Work

began to improve habitats through controlled shrub burning, planting of additional thyme near ant's nests, and grazing. But by this time the large blue in England was confined to a single small colony. A series of adverse seasons, including two successive years of extreme drought, corresponded with poor reproduction success and extirpation followed. In the end, the process of refined autoecological research and resultant management simply came too late for the large blue. Let this not happen to our species. We must establish the requirements of our rare species before they become endangered.

Aloeides dentatis (Swierstra) is at the moment facing extinction. One by one the known localities have been destroyed by township development and agriculture. One of the last known active colonies is near Roodepoort in the Transvaal. This area is now under threat of further township development. Through the West Rand Branch of the Wildlife Society an approach has been made to the Roodepoort City Council to have the area protected. They have shown interest and are investigating the possibility of turning the area into a nature reserve.

As butterfly collectors we are the only people who know where these endangered species occur. It is up to us to approach the authorities to have these areas protected when they become threatened, otherwise these species will only be known by the pinned specimens in our collections.

Butterflies have given us endless joy over the years, let us give them something in return: their existence.

Endangered *Lepidochrysops* in Natal

John Handman of Pietermaritzburg has written to say that he is engaged in a project to conserve the endangered *Lepidochrysops ariadne* (Lycaenidae). The only known breeding ground for this rare butterfly on Mr Robin Green's farm 'The Start' near Howick in Natal has been sold and there is therefore uncertainty about the future of the insect in this locality. Natal members are urged to contact John to lend their moral and/or logistical support. His address is 19 Mills Circle, Pietermaritzburg (phone 61390).

Ope brief aan die Redakteur

Merlestraat 31, Riviera, Pretoria 0084

Die Redakteur
Lepidoptera Studiegroep van S.A.

Geagte dr Williams

Ek het met groot genoegdoening verneem van die stigting van die studiegroep en dit was vir my dan ook 'n plesier om u te kon voorsien van nagenoeg 100 name en adresse van lepidopteriste wat ek oor baie jare versamel het.

Vireers wil ek u graag geluk wens en ook hartlik bedank dat u met die idee na vore gekom het. Dit is geen geheim dat u 'n dinamiese persoon is nie en ek is daarvan oortuig dat ons groep se belange in veilige hande is. Namens myself - en mag ek my verstout om te sê namens ons almal - wil

ek/ons u bedank dat u bereid is om op onbaatsugtige wyse hierdie groot en mooi taak aan te pak. Vir baie van ons is dit die verwesentliking van 'n ideaal.

Myns insiens is die stigting van 'n studiegroep of vereniging noodsaaklik want uit die aard van die saak is die mens 'n sosiale wese en wil ons graag met mekaar kommunikeer. Ons het gemeenskaplike belange en wil dit graag bevorder en beskerm. Ons soek ordelikheid en daarom soek ons 'n spreekbuis wat die lepidopteris se saak asook die saak van ons gevleuelde vriendjies by die owerheid kan stel. Ons stel almal daarin belang om die geheime van die natuur te ontrafel en daarom wil ons mekaar se kennis deel. Ons wil graag ons stokperdjie geniet en daarom soek ons inligting wat ons in staat kan stel hoe om dit korrek en verantwoordelik te beoefen. Elkeen wil graag op sy beskeie manier iets bydra vir die nageslag en daarom wil ons nie graag dit laat verlore gaan wat ons met soveel sorg versamel het nie, hetsy kennis of materiaal.

Dis my innige wens dat 'n kollegiale gees uit die studiegroep na vore sal kom en dat mooi vriendskappe uit die groep gebore sal word.

Hoogagtend

Geteken: Rudi Myburgh

Revision of *Stugeta* (Lycaenidae) in Southern Africa

M.C. Williams

C.G.C. Dickson has recently published papers (Dickson, 1980a; 1980b) clarifying to some extent the relationships within the subgenus *Stugeta* as it occurs in southern Africa. He recognizes two species viz. *S. subinfuscata* (with two subspecies) and *S. bowkeri* (with three subspecies).

S. subinfuscata was originally described by Grünberg (1910) from Windhoek (S.W.A.) material as a valid species but was later relegated to a subspecies of *S. bowkeri* (Dickson & Kroon, 1978). Mr Dickson raises it again to specific status mainly on the basis of features of the valves of the male genitalia. A second subspecies (*S. subinfuscata reynoldsi* ssp. n.) is described from Springbok (Namaqualand). Specimens of *reynoldsi* were captured more than a century ago but were thought to represent an aberration of *S. bowkeri* (by Trimen). *S. subinfuscata reynoldsi* is separated from nominate *subinfuscata* by small differences in the wing pattern.

S. bowkeri has been tentatively assigned to three subspecies viz. *bowkeri* (Eastern Cape, e.g. Queenstown), *henningi* (S. Tvl. & O.F.S.), e.g. Potchefstroom) and *tearei* (rest of the Tvl., Zimbabwe, Mozambique, Botswana and parts of northern S.W.A.). *S. b. henningi* appears to breed only on *Viscum* sp. (Loranthaceae) and *S. b. teari* on *Ximenia caffra* (Oleaceae). According to Bill Henning these foodplants are not interchangeable.

Much more work needs to be done in comparing series of *S. bowkeri* from Natal and large areas of the rest of the Cape since there may be more good subspecies in southern Africa and some may even need to be raised to specific status. More attention should also be paid to the particular larval foodplant(s) used in all localities in which *bowkeri* occurs.

REFERENCES

- DICKSON, C.G.C. 1980a. Six further new butterflies from southern Africa. *Entomologist's Record and Journal of Variation* **92** (1): 1-6.
- DICKSON, C.G.C. 1980b. Six further new butterflies from southern Africa. *Entomologist's Record and Journal of Variation* **92** (2): 38-44.
- DICKSON, C.G.C., & KROON, D. [Eds] 1978. *Pennington's butterflies of southern Africa*. A.D. Donker, Johannesburg, 1-670.
- GRÜNBERG, 1910. Lepidoptera. *Denkschriften der Medizinisch-Naturwissenschaftlichen Gesellschaft zu Jena* **16**: 91-146.

Rediscovery of *Erikssonia acraeina* (Trimen) (Lycaenidae)

M.C. Williams

This peculiar orange and black species was discovered by Eriksson some hundred years ago in Ovamboland and more recently was taken in small numbers at Mongu, Zambia by Dr C.B. Cottrell in December 1955. Very recently the species has been located in the Transvaal by Dave Edge in the company of Miss E.D. Jeffreys on the 21st December 1980 and presently is known to fly until the 7th of January, although its flight period will probably prove to be much longer. The locality is at an altitude of about 1600 m in the Waterberg west of Nylstroom.

The butterfly is confined to a small area of grassland dotted with low trees about half a hectare in extent. It is on the wing from 10h30 or earlier to as late as 15h00 and does not appear to be very sensitive to weather conditions as it has been found flying on overcast days and even in light rain. Its flight is weak and it resembles, to some extent, that of *Acraea eponina*. When alarmed it dives to the ground and conceals itself at the base of grass tufts. Normally it alights near the top of a grass stem where it sits with closed wings. Males and females fly together and seem to have similar habits. It appears to mimic *Acraea eponina manjaca* although not closely and no species of *Acraea* were observed in the locality. (Excerpted from *Rostrum*, Newsletter of the Entomological Society of southern Africa, No. 2, August 1982).

Congratulations to Dave Edge on a fine discovery - it just goes to show what can be found if localities not yet explored are thoroughly searched.

The status of *Belenois ogygia* (Trimen) (Pieridae)

M.C. Williams

In a recent publication (Quickelberge, 1982) the *Belenois ogygia* mystery is reappraised in the light of some new evidence. It is exactly 100 years since Trimén (1883) described *B. ogygia* from two specimens caught by, respectively, M.J. McKen at Durban in 1866 and W. Morant around the same time at (?) Pinetown, Natal. Some confusion has existed about the sexes of these two specimens but Quickelberge, with good reasons, considers both to be males. The McKen specimen is housed in the British Museum but the Morant specimen appears to have been lost.

A century elapsed before a third specimen was caught by V. de Witt at Durban in 1968. It was shown to the late K.M. Pennington who identified it as *ogygia*. Since then the collector and specimen have disappeared without trace. On the 17th November 1981 Deryck Whiteley and his son Earle caught a fourth specimen in the coastal bush between Umhlanga

Rocks and Umhloti. This male has been examined by Clive Quickelberge (details in the reference below) and he concludes that it is probably a hybrid between *Belenois thysa* and *Belenois creona* since it shows an almost 50:50 mixture of characters for these two species. In support of the hybridization theory he mentions that Ivor Migdoll captured a male *thysa* in copula with a female *creona* near Umhlanga Rocks in October 1981. The possibility that the 'Whiteley hybrid' is an aberration, polymorphic phenotype or species in its own right is considered and reasons mitigating against such conclusions are given.

The McKen specimen was found to show a close resemblance to *thysa* on the upperside and a marked relationship to *B. zochalia* on the underside, indicating that it may be a hybrid between these two species (c.f. *thysa* x *creona* for the Whiteley specimen).

It is suggested that hybridization between *thysa* and *creona* may occur on the Natal coast during periods when *thysa* females are scarce and males thus copulate with one of the more abundant *creona* females. In the case of *thysa* x *zochalia* it may be the absolute scarcity of *zochalia* in the coastal forests that prompts such hybridization. It is also possible that interspecific pairings occur more commonly but that the sterility barrier between gametes only breaks down rarely. The above conclusions are tentative and further investigations such as controlled breeding and sophisticated genetic studies may help to solve the *ogygia* enigma.

Note: Clive Quickelberge has very recently (5/8/83) written to tell me that L.A. Berger (1981) in his book *Les papillons du Zaire* has figured and described an '*ogygia*' which he has given subspecific status viz. *B. ogygia bongeya*. This was brought to Clive's attention by Dave Hancock of the Bulawayo Museum.

REFERENCES

- QUICKELBERGE, C.D. 1982. Systematic notes on southern African butterflies - 6. On unusual forms of some South African butterfly species. *Durban Museum Novitates* **13** (11): 139-148.
- TRIMEN, R. 1883. Descriptions of twelve new species of South-African Lepidoptera Rhopalocera. *Transactions of the Entomological Society of London* **1883**: 347-363.

Stop Press

M.C. Williams

From the 1st of January 1984 it will be necessary to obtain a permit in order to collect butterflies and moths in the Transvaal. This provision is contained in the new provincial ordinance, which has passed its second reading in the provincial council. I have tried to ascertain the exact wording but have been told that the relevant gazette has not yet been published. In view of the grave implications of such blanket legislation for amateur collectors I have contacted the relevant authorities and they have agreed to meet and discuss the matter with an *ad hoc* committee of the study group early in September. Since there is no time to elect such a committee through normal channels I have taken upon myself the task of setting one up. Please feel free to contact me should you like to comment.