

James Rennie Bequest Report

Project Title: Workshop on insect biology and identification for Kenyan research assistants, seminar on insect pollination and donation of insect specimens to Kenyan institutions.

Dates: May-June 2005

Location: Mpala Research Centre, Laikipia, Kenya & National Museums of Kenya, Nairobi, Kenya

Group Member(s): Katherine Baldock

Aim: To contribute insect reference material and knowledge of insects and insect pollinators to the scientific community in Kenya.

Background:

As part of my PhD I have been studying the interactions between insects and flowers in a Kenyan savannah ecosystem. The aim of the study is to investigate the competition for pollination between flowering plant species in an African savannah. My work has been focused on conducting detailed studies of flower visitors for *Acacia* trees, a genus of plants that dominates such ecosystems. I have also been investigating the interactions of *Acacia* flower-visiting insects with other flowering plant species in the community.

This work has involved the collection and identification of a wide range of insect species that were observed visiting flowers. Identification of these insects, from a number of different orders (see Table 1), has been a complex task and has involved developing links with a network of specialists for a large number of different taxa. In addition I have used collections in the Natural History Museum in London and museums in Scotland and Wales to identify the specimens as accurately as possible.

The collection to date represents a large resource of insect species encompassing approximately 3000 individual specimens and over 400 separate species. Table 1 shows the main orders of insects that were collected along with the number of species that have so far been identified for each order.

Table 1. Numbers of species of insects identified during pollination studies at Mpala Research Centre, Kenya, grouped by order

| Order | Common name | Number of species identified |
|-------------|---------------------|------------------------------|
| Diptera | flies | 135 |
| Hymenoptera | bees, wasps, ants | 170 |
| Coleoptera | beetles | 70 |
| Lepidoptera | butterflies & moths | 25 |
| Hemiptera | bugs | 7 |

Outcome:

The necessity of bringing my specimens back to the UK for identification highlights the paucity of identified material and specialist taxonomists available in Kenya itself. The time involved in identifying insects, and also in finding the appropriate specialists, is costly and often these contacts are not available to people within the countries themselves. One objective of my visit to Kenya was to arrange the donation of identified insect specimens to the National Museums of Kenya in Nairobi, which houses the main insect collection for East Africa. I also deposited specimens in donated insect storage boxes at Mpala Research Centre where I conduct my work. These specimens will form the beginnings of a permanent insect reference collection at the centre that can be added to over time. I hope that these contributions will enable both Kenyan and visiting scientists to benefit from my research in the future.

Another purpose for my visit to Kenya was to disseminate information about insects and the findings of my studies to the Kenyan scientific community. In conjunction with Dr Wanja Kinuthia of the Department of Invertebrate Zoology at the National Museums of Kenya, I arranged a morning seminar and discussion session about pollination in East Africa. This was extremely well attended, thanks to the efforts of Dr Kinuthia, and included presentations by both Kenyan and British scientists. This was an opportunity for me to pass on findings of my studies to the academic community in Kenya and other interested parties. The meeting also facilitated discussion about pollination research in Kenya and ways in which to progress. I hope to remain in contact with Dr Kinuthia and other Kenyan scientists and to assist in furthering pollination studies in the country.

The final part of my trip involved organising a two day insect workshop at Mpala Research Centre for their local Kenyan field assistants. Twenty field assistants participated in a programme of lectures, field practicals and laboratory work. Lectures covered subjects ranging from basic insect biology and classification through to the effects of insects and their impact on humans. Insect sampling techniques were discussed in the classroom before applying these skills in the field. The assistants then learnt pinning and labelling methods as well as how to carry out basic identifications in the lab.

I was extremely impressed by the field assistants' enthusiasm for the subject. Many of them work on birds or mammals and enjoyed the chance to learn about a new aspect of the biological environment. All participants worked hard and were extremely attentive. They seemed to especially enjoy the practical aspects of the course. This made running the workshop good fun and I am pleased to have been able to make a contribution to the people at the Mpala Research Centre that I hope will be useful for them in years to come.

In summary, I feel that I achieved the aims I set out for the trip. I was able to ensure the integration of insect specimen donations into the existing collection at the National Museums of Kenya and establish a permanent insect collection at Mpala Research Centre. The morning pollination seminar at the Museum and insect workshop at Mpala Research Centre both went well and were extremely rewarding. I wasn't able to carry as many reference documents for donation as I would have liked and plan to send further material in the future. I hope to maintain contact with both institutions and intend to send further insect specimens in the next few months.

I am extremely grateful to the James Rennie Bequest for travel funding that enabled me to make this visit.

Photos from Insect Workshop at Mpala Research Centre, June 2005



Paying attention in lectures



Catching insects with nets



Pinning insects in the lab



Looking at butterfly collections



Collecting pan traps



Insect workshop participants