



ROYAL GEOGRAPHICAL SOCIETY
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President The Rt. Hon. the EARL JELlicOE, KBE, DSO, MC, FRs, PC

Director and Secretary DR JOHN HEMMING, CMG

*Welcome to the Royal Geographical Society and the
launch of the Mkomazi Research Programme*

*Tuesday 28th June 1994
in the presence of His Royal Highness The Duke of Kent*

PROGRAMME

- 10.30 *Doors open, guests take their seats in the Lecture Theatre*
- 10.50 Welcome by the President, Lord Jellicoe
- 10.55 **RGS Commitment to Field Research** by Mr Nigel Winser
- 11.05 **The Nepal Hydrology & Soils Project** by Dr Rita Gardner
- 11.15 **The Jordan Badia Research & Development Programme**
by Dr Robert Allison
- 11.25 **The Mkomazi Research Programme** by Dr Malcolm Coe
- 11.40 **Land Rover's Commitment to RGS and Science**
by Mr Russell Turnham
- The winner of the Land Rover / Geographical Magazine
competition will be announced and the prize awarded.
Keys to the Land Rover donated to the Mkomazi Project will be
handed to Dr Malcolm Coe.*
- 11.50 HRH The Duke of Kent leaves
- 12.00 Reception in New Map Room and RGS Garden
Photocall in the Garden; opportunity for interviews.
- 13.00 *Close*

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*Launch of the Mkomazi Research Programme at the Royal Geographical Society
on Tuesday 28th June 1994 at 10.30am in the presence of His Royal Highness The Duke of Kent*

TANZANIA SAVANNA BIODIVERSITY STUDY
LED BY OXFORD ECOLOGIST DR MALCOLM COE

The RGS announces today its plans to begin a three year study of the biodiversity of a savanna region in Tanzania next month, funded in part by the Darwin Initiative.

At the invitation of the Tanzania Government, the Royal Geographical Society has brought together a small group of Tanzanian and European specialists to undertake a detailed ecological survey of the Mkomazi Game Reserve in north-east Tanzania.

Dr Coe, who has dedicated his life to the study of East African ecology, maintains the savanna regions deserve better attention by the international scientific community.

"Management of these complex systems require greater understanding on how they can cope with overgrazing by animals, fire, erosion and truckloads of tourists".

Coe does not believe there to be easy solutions.

"Small protected regions like the Mkomazi Game Reserve in Tanzania provide an opportunity to find the balance between the protected conservation status of national parks and the multi-use role of game reserves".

This balance will only be found by better dialogue between the conservators of nature on one hand and the needs of the guardians of the regions on the other. This project sets out to provide information on the natural resources available to both. It will be doing this in conjunction with the Department of Wildlife in Tanzania.

The Royal Geographical Society has been the focal point for geographical science and exploration for over 164 years. Today, the RGS is one of Britain's largest largest organisers of geographical field research overseas. It has sponsored ten major multidisciplinary overseas expeditions during the last two decades. All of these have contributed to conservation and development priorities at government level.

The Society has had a long association with East Africa including studies at Lake Turkana in the sixties and the Kora National Reserve in 1983, in Kenya.

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MRADI WA UTAFITI, MKOMAZI 1994 - 1996

MKOMAZI RESEARCH PROGRAMME

Programme Leaders Director of Wildlife (Dar es Salaam) & Dr M.J.Coe (Oxford University)

RESEARCH AIMS

The Mkomazi Game Reserve in north-east Tanzania is an area of particular biological interest as it contains a high local richness and diversity of habitats, flora and fauna. During the dry season it provides an important refuge for wildlife from the neighbouring Tsavo National Park region of Kenya due to its higher rainfall. It also extends the area within which game is protected. Outlying foothills of the Usambara and Pare Mountains found in southern and western parts of the reserve contain small remnants of moist forest that support high numbers of endemic species, found only in this region. These isolated hilltop environments are less disturbed by human activity, including the introduction of alien species, than those in the neighbouring Pare region.

The ecology of the Mkomazi reserve is dominated by three main factors: human activities, fire and natural seasonal change.

It is probable that until recently, the most important factor was human activities. The pastoral Maasai herded cattle and goats which may have competed with wildlife for grazing and water. They also used fire to encourage new growth of grass for their livestock. These fires threatened the remnant forests by spreading up the side of the foothills when fanned by the wind. If destroyed, the environments of such forested islands would be lost forever, since they are in part responsible for the moisture that sustains them.

Natural fires do occur and play a role in maintaining and modifying the reserve. Other fires from outside the reserve can also spread into Mkomazi, particularly from its Southern border.

Although human levels in the reserve has been reduced by resettlement of pastoral Maasai and agricultural Pare tribes outside the reserve, the long term plans for Mkomazi should address the needs of local peoples and their traditional patterns of resource use. Current views of reserve management increasingly suggest that fences cannot be used to keep out local people and their herds. Instead, an integrated plan should be proposed, in which human resource use is encouraged to remain within sustainable and non-damaging levels. This can only be achieved if the effects of grazing, fire and climate on the local flora and fauna are studied in detail.

The scientific programme for Mkomazi will involve measuring human impact in the reserve and researching the local needs for resources contained in the protected area. A main focus of the research will be surveying the plant and animal life in areas at known periods after their last burning. This will show on what time scale habitats recover from fire damage. Availability of air photographs and satellite imagery mean that these surveys can be extended back in time as early as the 1940's. Thus the longer term processes of ecological change in Mkomazi environments, both as a result of fire and of other factors such as changing patterns of rainfall, can be examined.

The intention is, that by the end of this three year project, management recommendations for sustainable, local exploitation of the reserve shall be made by the Tanzanian Department of Wildlife and the Royal Geographical Society. The work will involve social anthropological work among peoples surrounding the reserve, and zoological and botanical investigations in a range of habitats through the seasons in a rolling scientific programme.



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A Darwin Initiative
funded project

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RESEARCH PROJECTS

Darwin Initiative Terrestrial Invertebrate Biodiversity Project

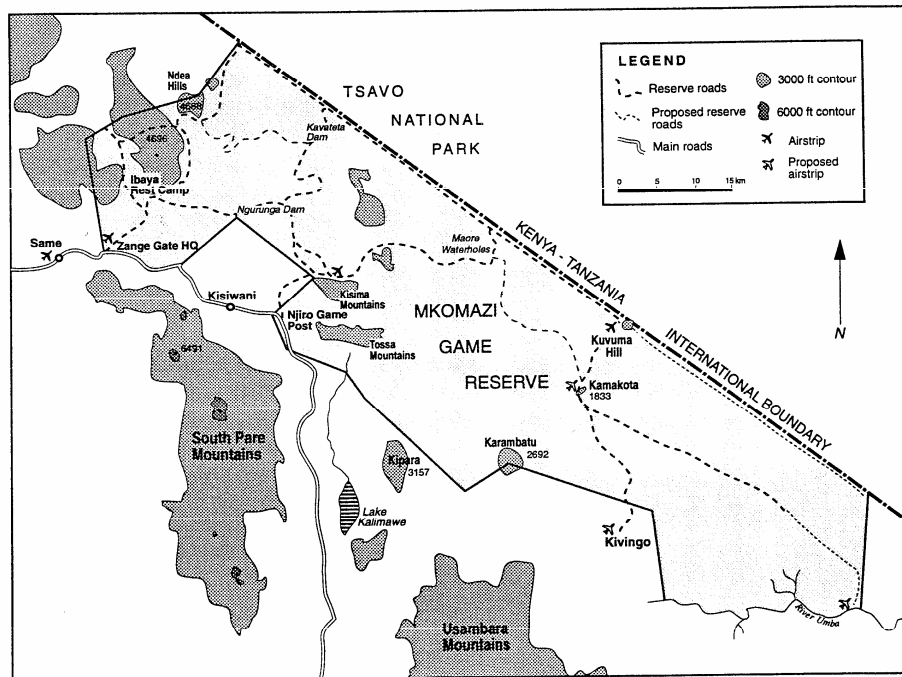


Savanna invertebrates are a neglected group of organisms in an undervalued ecosystem. With funding for three years (1994-96) from the Darwin Initiative, this project aims to provide baseline inventory data on key invertebrate groups in the ground layer, grass layer and tree canopies, using a range of sampling and trapping techniques to provide quantitative measures of species numbers and diversity. With these data it will be possible to establish the degree of similarity between different habitat types and to determine what effect burning and grazing have on species richness and diversity.


Preliminary surveys in Mkomazi have already revealed a very rich diversity of species of insects and other arthropods. By studying selected groups at different trophic levels within the food chain (herbivores, predators, decomposers) and in conjunction with parallel studies on soil nutrients and fire-induced vegetation changes, the project will provide a detailed understanding of the effects of natural processes and man-induced changes in the environment of the Reserve.

The project brings together experienced tropical biologists from the Natural Resources Institute, the Natural History Museum and Oxford University who will be involved in data collection and analysis, alongside Tanzanian counterparts. A major emphasis of the project will be the training of Tanzanian biologists in the techniques of biodiversity assessment. Provision has been made for two Darwin Scholars and a Darwin Fellow to receive training in the UK as well as in the field in Tanzania.

In addition to training Tanzanian personnel, the project will leave behind extensive invertebrate reference collections at the Tropical Pesticides Research Institute (TPRI), Arusha, which already houses the National Herbarium of Tanzania. These collections and the published results of the project will make a major contribution to the sustainable management of the Mkomazi Game Reserve.



Large mammal research

Dr Keith Eltringham 
Dept of Zoology, University of Cambridge

The large mammals of the Mkomazi Reserve are a fundamental part of the ecosystem. Herbivores make an important impact on the vegetation and many of them are responsible for the distribution of seeds. Predators play a significant role as a mortality factor and may be instrumental in shaping the population dynamics of the herbivores. The large mammals have experienced many changes over the past twenty-five years. Most species were reduced to very low levels through poaching and some disappeared from the reserve altogether.

The immediate objectives of the large mammal research programme will be to identify which species are still present, to obtain estimates of numbers, to map the distribution of each species and to record how this varies according to season, habitat type, the presence of other species and physical features such as roads, grass fires and permanent water. Possible changes in reproductive rates will be examined through studies of the population structure.

The project will be the first intensive survey of the large mammals since 1967 and will serve as the foundation of a continuous monitoring programme, which could be incorporated into a management plan.

Subject to scientific personnel being available, subsidiary research will be carried out into the social and feeding behaviour of the large mammals for comparison with information from other regions and from previous studies in Mkomazi. This will help to show whether or not conditions are returning to normal. There are plans to reintroduce some species that have gone extinct, particularly wild dog and black rhino, and if these come to pass, the fate of the animals after release will be monitored.

Techniques for studying the large mammals will include aerial survey and radio tracking.

Anthropology

Dr Katherine Homewood & Mr Daniel Brockington
Dept. of Anthropology, University College London

The context of conservation is changing throughout the developing world and community-based management, both of natural resources and particularly conservation areas, is frequently coming to be seen as the only viable long term option. The aim of this research is to investigate local resource use around Mkomazi. It will provide data that will help defuse actual and potential conflicts and foster participatory conservation in the long term in this and other savanna areas.

This study will focus on local resource use and the implications and organisation of that use, by and for Maasai, Pare and other dwellers adjacent to the reserve.

Conservation concerns have centred on the effects of overgrazing, burning and competition with wildlife. The relative importance of human impact and natural change will be tested by relating vegetation and wildlife population trends to climate trends, livestock levels and policy change (e.g. Tsavo poaching control, fire and excision for irrigation). This will determine the exact ecological implications of local resource use.

In addition, data on current livestock and land holdings, diet and nutritional status, demographic status and livestock performance among the excluded pastoralists will be gathered to assess the impact of exclusion on the pastoralist community.

Many conservation strategies come up against difficulties because they have been devised with no account of the way in which local communities operate. The traditional social structure of decision-making and conflict resolution of the Maasai and Pare will be investigated with a view to fostering a management system for the Mkomazi Game Reserve that is viable in the long term.

PRINCIPLE UK SCIENTISTS

Programme Director

Dr Malcolm Coe
Dept of Zoology, University of Oxford

Mapping / GIS / Remote Sensing

Research Coordinator: Dr Shaun Russell
Durrell Institute of Conservation Ecology (DICE),
University of Kent

Ms Julie Cox
Durrell Institute of Conservation Ecology (DICE),
University of Kent

Soils / Hydrology

Research Coordinator: Dr Rob Bowell
Dept. of Mineralogy, Natural History Museum

Dr Peter Abrahams
Inst. of Earth Sciences, University of Wales,
Aberystwyth

Plants

Dr Kai Vollesen
Herbarium, Royal Botanic Gardens, Kew

Dr Joseph Mutangah
Dept of Botany, University of Aberystwyth

Invertebrates

Research Coordinator: Dr Mark Ritchie
Natural Resources Institute

Dr Antony Russell-Smith
Natural Resources Institute, Chatham

Dr George McGavin
Hope Department of Entomology, University
Museum

Dr Nigel Stork
Dept Entomology, Natural History Museum

Dr Graham Stone
Dept of Zoology, University of Oxford

Ornithology

Research Coordinator: Dr Peter Lack
British Trust for Ornithology

Mammals

Research Coordinator: Dr Keith Eltringham
Dept of Zoology, University of Cambridge

Professor R Rudi van Aarde
Dept of Zoology, University of Pretoria

Professor J D Skinner
Dept of Zoology, University of Pretoria

Anthropology

Research Coordinator: Dr Katherine Homewood
Dept. of Anthropology, University College London

Mr Daniel Brockington (Research assistant)
Dept of Anthropology, UCL

TANZANIAN MEMBERS

Dr M.A. Ndolanga, Director of Wildlife, is collecting a Tanzanian team together from various research bodies in Tanzania, including the University and the Wildlife Training College at Mweka.

"Research Priorities in Mkomazi" is the title of a one-day workshop in Dar es Salaam on the 28th July 1994 being hosted by the British Council.

SPONSORS

The Royal Geographical Society acknowledge the following CORPORATE PATRONS and other bodies who have agreed to underwrite the major costs of the Programme;

Abercrombie and Kent
British Airways
British Council
Darwin Initiative
Friends of Conservation
Land Rover

Two further Corporate backers are required to fund the full three year commitment.

The Society also thanks the following who have helped launch the programme to date;

Baring Foundation
British Petroleum (Tanzania) Ltd
George Adamson Wildlife Preservation Trust
Long Distance Walking Association, Wessex Group.

The Society is indebted to the following individuals whose unselfish support and encouragement over the past 18 months has enabled the programme to be launched today.

Raphael Abdullah, TPRI
Neil and Liz Baker
Sandy Evans, Abercrombie & Kent
Tony Fitzjohn, Mkomazi Project, Same
Paul Goodyer from Nomad supplies
Ramadani Mkusi, TPRI
Eliazar Mgonjar, Anti-poaching Unit
Mr Mungure, Warden, Mkomazi Game Reserve
Robert Sykes, Director, British Council, Dar es Salaam
Mama Tumbo, DC Same
Hugh Watson, Field Director, Summer '93 visit
Roger Westbrook, British High Commissioner, Tanzania

last but not least

The People of Same and Mkomazi
The Staff Of the Department of Wildlife, Dar es Salaam
Members of the St Peter's College expedition to Mkomazi '93

Dr Malcolm Coe
Programme Leader & Scientific Director
Mkomazi Research Programme



THE MKOMAZI DEFENDERS

Land Rover today announced, at the launch of the Mkomazi Research and Development programme at the RGS in Kensington, their donation of two Defenders to this important initiative. The project, co-ordinated by the Department of Wildlife, Tanzania and the Royal Geographical Society, is essentially an ecological survey which will help instigate a management plan for the Mkomazi Game Reserve and, in due course, provide valuable data for reserves in other parts of the globe.

Land Rover have adopted a long term policy dedicated to environmental and conservational issues. This strategy is evident in encouraging their customers to gain the maximum performance from their vehicles at the least cost to our precious earth, (through the "Land Rover Experience" 4x4 driving courses), and also in their commitment to complex research projects for which their vehicles provide an invaluable and essential tool in enabling such work to take place.

Land Rover's contribution, however, has not stopped there. Equally aware of the importance education bears on the global future, Land Rover earlier this year ran a competition in Geographical magazine offering a first prize of a trip to Tanzania to join the working party in the field. This was won by Jeanette Kayes from Witham, Essex whose tie breaking line read; "I would like to join the expedition because ... as a geography teacher I could use the experience to inspire hundreds of young geographers".

Richard Fox, Land Rover's Sponsorship and Special Events Manager, said: "This is another extremely important programme with which Land Rover are delighted to be associated. The RGS's interests and our own are exceedingly compatible and by providing two Defenders, Land Rover are able to demonstrate their awareness of environmental concerns and an ability to contribute to them. The fact that Jeanette Kayes is also able to join the project adds a valuable dimension as Land Rover continue to stress the importance of education in all the entities we support."

- ends -

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