

# RGS-IBG Field Research Programmes

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Geographical  
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## ● Mkomazi Ecological Research Programme, Tanzania 1992-98

**An ecological survey of the Mkomazi Game Reserve in northern Tanzania, providing baseline data to underpin long term conservation and management plans for the reserve.**

Organised by the Royal Geographical Society (with the Institute of British Geographers) in collaboration with Department of Wildlife, Tanzania.  
*Patron* HRH Duke of Kent

*Joint Leaders:* Dr Malcolm Coe, University of Oxford  
Mr Bakari Mbano, Director of Wildlife, Department of Wildlife, Tanzania

The Mkomazi Game Reserve in northern Tanzania is of great biological significance, representing species and ecosystems not commonly found elsewhere in East Africa. However the reserve brings few local and national economic benefits, while internationally it has become a cause célèbre for both those championing the rights of people to resources and those seeking to preserve and restore ecosystems.

The process of addressing these controversial issues needs to be well informed and in this context the Tanzanian Department of Wildlife and the Royal Geographical Society undertook the five-year Mkomazi Ecological Research Programme.

The programme was established as a collaborative venture, between the Tanzanian Department of Wildlife and the Royal Geographical Society (with IBG), collaborating with Tanzanian, UK and other institutes for research and education. The main requirement of the Department of Wildlife was to describe the fauna, flora, physical geography and ecology of the area, as a report to viable and long term management plan for the reserve, balancing

species and habitat diversity with growing human populations and associated pressures along the periphery of the reserve.

The Reserve covers an area of 3,250 km<sup>2</sup>. along the Kenya-Tanzanian border, between Kilimanjoro and the coast, (adjacent to the Tsavo National Park 21,000 km<sup>2</sup>.) This area of semi-arid savanna comprises a single ecological unit, individual parts of which provide seasonal refuges for many species of large mammals and migrant birds. The flanking ranges of the North and South Pare and Usambara mountains provide climatic and topographical diversity, which in turn produces great habitat and species diversity, especially in the western and central areas. In addition the Reserve lies at the southern extremity of the great arc of semi-arid savanna, the Sahel, into which many Somali species of plants and animals are funnelled, but beyond which they are unable to extend their range, concentrating species diversity, and making this one of the richest savannas in Africa. To date almost 450 species of birds have been recorded and over 100 species of plants. Entomologists studying the arthropod fauna of the commoner savanna trees suggest that the

total number of insects could approach 90,000 species.

To integrate the individual components of the ecological inventory studies for analysis and presentation, a Geographical Information System has been developed.

Two artists were commissioned to record their interpretations of Mkomazi and the Programme's work. Sponsored by The British Council, Jonathan Kingdon, and his Tanzanian colleague Professor Elias Jengo, have worked together to produce a joint exhibition of their work called *Mkomazi Mind and Memory Maps* which has been exhibited in Dar es Salaam and also at the Royal Geographical Society in October 1998.

Important conservation areas such as Mkomazi are coming under increasing pressure from neighbouring populations, which in some regions have doubled in the last ten years. If the Mkomazi and similar areas are to survive ways of generating a substantial income, which can be shared with local communities, need to be found. The anthropological team under Professor Katherine Homewood examined the livelihoods of local communities and the potential for conflicts between conservation and development interests.

Research in the Mkomazi Game Reserve has produced enough data to confirm the existence of an astonishingly diverse and rich flora and fauna. The Friends of Conservation Ibaya Research Centre, equipped with a Land Rover vehicle, laboratory, running water and electricity provides an excellent location and base from which research can be carried out. Research institutions in Northern Tanzania have already benefited by using it as a training facility for their staff and students. Following seminars in Dar es Salaam in July 1992 and London in May 1998, to present the Programme results, a final Scientific Report was published in 1999

*Mkomazi: the ecology, biodiversity and conservation of a Tanzanian savanna* edited by Malcolm Coe, Nicholas McWilliam, Graham Stone and Michael Packer. A management plan will be prepared by the Department of Wildlife to ensure the sustainable future preservation and utilisation of this unique Reserve.

#### **Major supporters include:**

Abercrombie & Kent, Baring Foundation, British Airways, British Council, BP (Tanzania), CMC Land Rover, Darwin Initiative, Friends of Conservation, George Adamson Wildlife Trust, GreenCard Trust, Land Rover, Royal Society, Sheraton Hotel (Dar es Salaam)

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