

Conserving biodiversity in the Uluguru Mountains, Tanzania

BirdLife continues its project work in the Ulugurus to assist the conservation of the globally important biodiversity and with the development of the human population of the mountains.

World Birdwatch December 1998 outlined the biodiversity value of the Uluguru Mountains in eastern Tanzania (Figure 1) and the efforts of a previous BirdLife project (by RSPB, BirdLife in the UK and WCST, BirdLife in Tanzania) to understand the conservation issues in these mountains and to plan how they might be tackled.

Building on this previous work, the Danish Ornithological Society (DOF, BirdLife in Denmark) in collaboration with the Wildlife Conservation Society of Tanzania (WCST) are together implementing a project aimed improving the conservation of the Ulugurus, which includes a capacity building component for WCST. The projects' first phase started in 1999 and will run until 2002 and is funded by the Danish Government development agency (DANIDA) with a total budget of close to 1 million USD.

WCST staff form the core of the project team, with other staff coming from the government's Catchment Forestry office (responsible for the Catchment Forest Reserves on the Ulugurus), the government's Natural Resources office (responsible for conservation issues outside the Catchment Reserves), and the Uluguru Mountains Agriculture Development Project at Sokoine University (responsible for agricultural improvement activities). DOF provides a technical advisor and technical backup for the project.

One aspect of the project is working to gain a better understanding of the Uluguru's biodiversity, the extent and quality of its forest habitat, and the current forest conservation problems and sustainable forest uses. The project works with local communities in selected villages around the forests (currently seven of the 50 villages bordering the forest) to assist activities which are both supportive of the conservation of the Uluguru forests and which also contribute to improvement in the livelihoods of the local Waluguru people.

The first 18 months of operation has led to mixed findings for the long-term conservation of the area. Many of these are inter-related and all have a bearing on planning for increasing conservation efforts in the area.

On the plus side, bird, reptile, amphibian and small mammal surveys undertaken by the project have found that some of the species believed to be very rare in the Ulugurus are in fact commoner than previously believed. Examples include the endemic Uluguru Bush Shrike *Malaconotus alius* with an estimated 1170 pairs in early 2000 (increased from previous estimate of 1000 birds), the near-endemic Mrs Moreau's Warbler *Bathmocerus winifredae* estimated as 7500 pairs, and Loveridge's Sunbird *Nectarinia loveridgei* with a population of thousands of pairs. Surveys of a primate, the near-endemic Mountain Galago *Galagoides ornius*, have estimated a population of over 23,000 animals in the higher parts of the Uluguru forests, making the site the most important known for the conservation of this species. Furthermore, four of the six endemic amphibians in the Ulugurus, many of which have not been seen for more than 70 years, have already been found in good numbers. Species of amphibians and reptiles previously unknown from these forests have also been recorded, further increasing the known biodiversity value of the area. There is clearly much to save in these forests, and apparently still more to discover.

Surveys found that the Catchment Forest Reserves contain largely intact forests with encroachment for farming and other activities limited and that pitsawing for timber is rare, thanks to a 1993 ban

on this activity imposed in Tanzania. Reserve boundaries in the areas so far surveyed are often well marked (often by large *Eucalyptus* trees) and, although local people use the forest as a source of poles, firewood, medicines etc, the forests are relatively undamaged. This encouraging situation is because of the long-term existence (since about 1909) of Catchment Forest Reserves on the Uluguru Mountains, and the respect for these areas shown by all levels of the Tanzanian Government system, right down to local village governments, and also by the local people.

Surveys of people's attitudes in the target villages have discovered that villagers respect the Catchment Forest Reserves, and that they are interested in planting trees for timber production (to generate money) and for firewood production (to save walking to collect it). They are even prepared to set aside areas of farmland for tree plantations, or as school or village forest reserves. Changes in Tanzanian law have allowed local ownership to become much easier, with the role of the state diminished in the decisions made at village level. Village forest reserves offer a particularly hopeful model for the conservation of some areas of natural (high biodiversity) forest which survive outside the reserves on the slopes of the Ulugurus. There is also a strong interest from villagers in improved agricultural practices. Local people appreciate that their land is limited and that their children will need somewhere to farm. Either they can try to move into reserve forests to develop new farmland, or to intensify agricultural practices to provide more food from the currently farmed land. Advisors from the University of Sokoine in Morogoro, through the UMADEP project, have spent more than 10 years in a part of the Ulugurus, helping farmers to increase their yields and diversify their farming and income-generation opportunities. There are now plans to replicate this success in other village lands around the mountain.

The Waluguru use local medicines either as their sole medical treatment or in conjunction with modern medicines. Traditional healers are therefore understandably very interested in the conservation of the forests as they source of many of the herbs used in these medicines. Some of these traditional healers are also influential local leaders who can tell the younger generation about changes in the weather caused by deforestation over the years. They are powerful advocates for retaining forest cover within the lands of each of the villages around the Ulugurus.

The generally positive attitude of the local people to the project was somewhat unexpected. A famously disastrous project, implemented in the Ulugurus in the 1950s, tried to force the local people to change their farming methods. In response the Waluguru set fire to the mountain, an act that helped spark Tanzania's independence movement away from the British Colonial Government. However, no traces of these old antagonisms remain today; clearly things have changed a lot the past 50 years.

Although the project has been able to locate and count some of the Uluguru's endemic and near-endemic species, others have not yet been located such as two snake species, known only from the submontane forests of Uluguru North Forest Reserve. The original collection localities have since been deforested and it is feared the species may now be extinct. The loss of submontane forest over the past 50 years means that some species, like the Uluguru Bush Shrike, must have declined considerably. Moreover, neither the vulnerable Banded Sunbird *Anthreptes rubritorques* nor the endangered Usambara Weaver *Ploceus nicolli* have recorded for several decades, raising fears that they are now locally extinct on the Ulugurus.

Although forest within Catchment Forest Reserves is generally in reasonable condition, this is in complete contrast to forest outside reserves. Aerial photographs from 1955 and 1977 and ground surveys have revealed that almost all of the forest on village lands outside the reserves in 1955 has been cleared for farmland. Forest has been lost preferentially from the submontane (500–1500 m) zone. Particularly worrying is the almost total loss of the former Waluguru Chief's forest to the

north-east of the Uluguru North Forest Reserve (Figure 3). The Chief formerly maintained this forest for himself and his people but the Tanzanian Government permitted logging of the area in the 1970s. The Chief now has little influence over this land and over the past 10 years plots of the forest have been allocated to villagers for the establishment of farms. Only the forest on the steepest rocky areas remains pristine and might be allocated as Village Forest Reserves if the village government agree to this.

As with all projects attempting to assist the development of human interests while at the same time assisting the conservation of important biodiversity areas, there is often great difficulty in ensuring that the links between development and conservation are clear and self-reinforcing. Agricultural improvements can reduce the need for new land and thereby reduce pressure on forest resources, whilst at the same time increasing income levels. However, things are not always as clear-cut. For example, in the Ulugurus banana cultivation was recently introduced. It offered the possibility for growing food year-round in small plots of land where agroforestry can also be practised and increasing the income of local people. These were all seen as positive for both human development and forest conservation and hence the development of banana cultivation was encouraged.

However, demand for bananas in Dar es Salaam (the largest town in Tanzania and only 200 km distant) is high and businessmen have started to exploit the banana growing potential of the Ulugurus. Large plantations have been established outside of reserves beneath the natural forest canopy and in many places most of the canopy trees have been cut down in addition to shrub layer removal. Thinning the canopy allows more light to reach the banana trees, provides them with nutrients from the rotting trunks and maintains the cooler and damper forest conditions that bananas thrive in. Banana agriculture is now the *major* cause of deforestation in the Ulugurus and also one of the most lucrative business opportunities in the area. Within five years, it has turned from a positive boost for forest conservation to a serious problem.

The 1998 Tanzanian Forest Policy and the forthcoming Forest Act both emphasise the increased involvement of local people in the management of the nation's forest. This is imperative, especially when one considers that most local forestry staff have been made redundant in the past five years because of the requirements of the World Bank sponsored Structural Adjustment Programme. Today, Joint Forest Management (JFM), whereby an agreement is made between government authorities (in this case the Catchment Forestry) and local villages, specifying what the local villages can do inside the reserves and what in return are their management/protection responsibilities, is being strongly advocated. In the Ulugurus almost 50 villages border the forest reserves and each of these may require its own agreement for a fully functional JFM in the area. This is clearly a major task that will take time to implement and there is the issue of who would monitor the agreements to address. Given adequate resources, this is something that NGOs, such as BirdLife could carry out. The Tanzanian Government may decide that the high biodiversity and water catchment value of the Ulugurus, may mean that designation of the area as a Catchment Reserve or even as a National Park is appropriate. Clearly, there will be much debate over this issue, but in the meantime, continuing data gathering is needed to ensure that adequate village land-use plans and resource management agreements can be developed.

The conservation of the Uluguru forests is clearly a long-term goal. The area is huge and the terrain extremely rugged. BirdLife conservation efforts in the mountains, although useful, are not sufficient to ensure that the forests are not gradually lost over time. The Global Environment Facility is currently proposing longer-term support for the Ulugurus, and the details of this collaboration are being worked upon. DANIDA has also indicated that if everything goes well, they would support a second DOF/WCST project phase in the Ulugurus.

One challenge for these projects is to ensure that the relatively large amounts of money spent can be made sustainable over time. In some parts of Tanzania, and elsewhere in eastern Africa, conservation trust funds have been set up whereby interest from the trust funds can be used to manage long-term conservation activities. A system like this may allow conservation programmes in the Ulugurus to be sustainable and help in the survival of the forest, its biodiversity and its critical water catchment functions. The development of such a trust fund is one in which BirdLife could take an active and long-term role, and indeed some discussions have already taken place with representatives of the World Bank on this issue.

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The Uluguru Mountain project is carried out by BirdLife Denmark and Wildlife Conservation Society of Tanzania, in co-operation with the Tanzanian Government and DANIDA.

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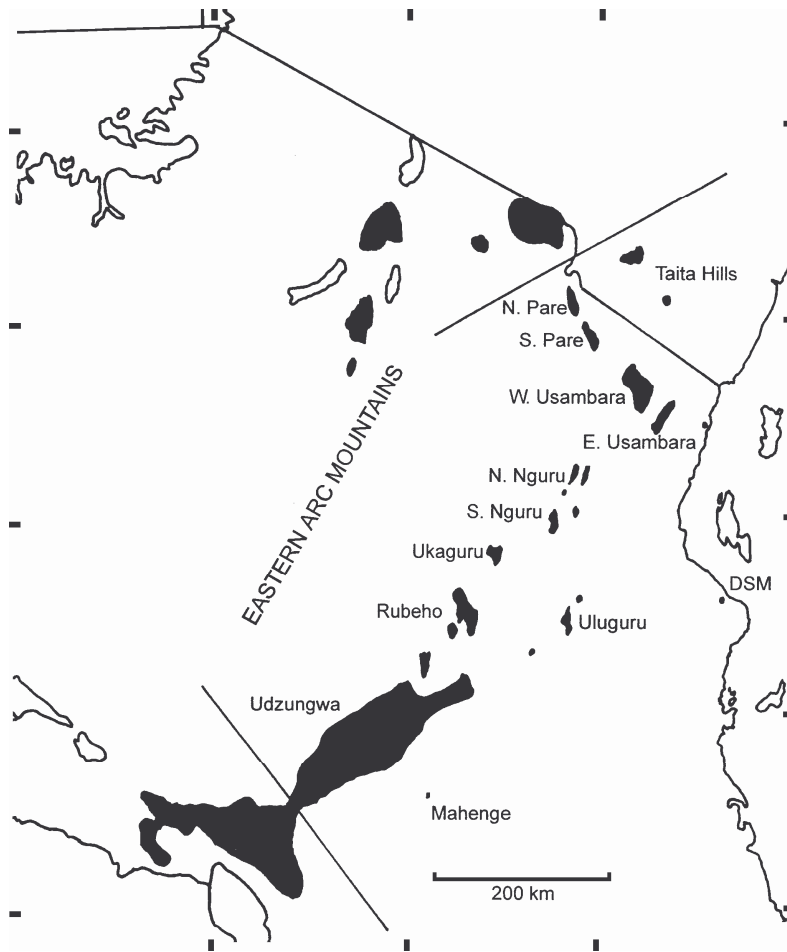


Figure 1: Location of the Uluguru Mountains in eastern Tanzania

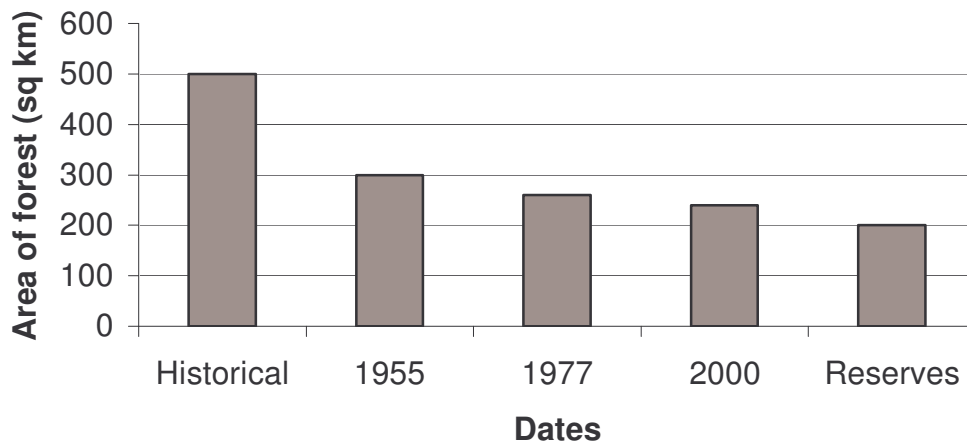


Figure 2: Forest loss in the Ulugurus. Historical is the estimated total area of forest which once occurred before forest areas started to be converted to farmland. Reserves is a minimum area of forest in Uluguru North and South Forest Reserves excluding areas which are grassland or rocks.

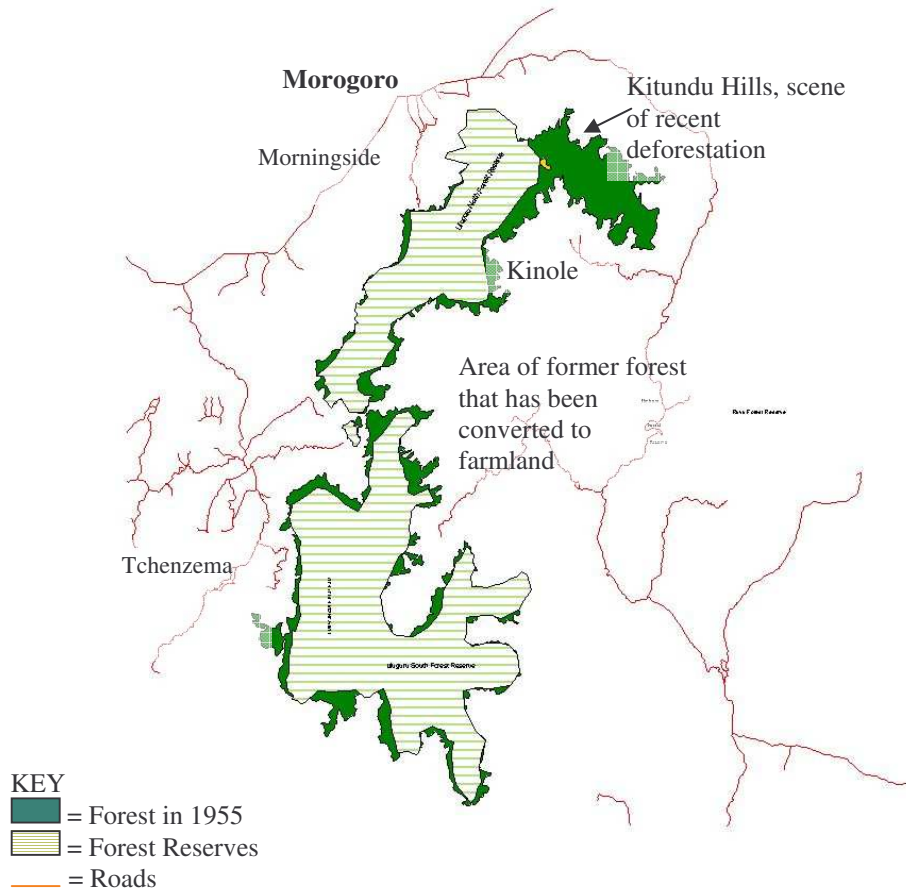


Figure 3. Forest cover (dark) in 1955 in the vicinity of Uluguru North (top), Bunduki (middle) and Uluguru South (bottom) Catchment Forest Reserves. Forest is now almost confined to the Forest Reserves (lined), except on the southern margin of Uluguru South, and some fragments.