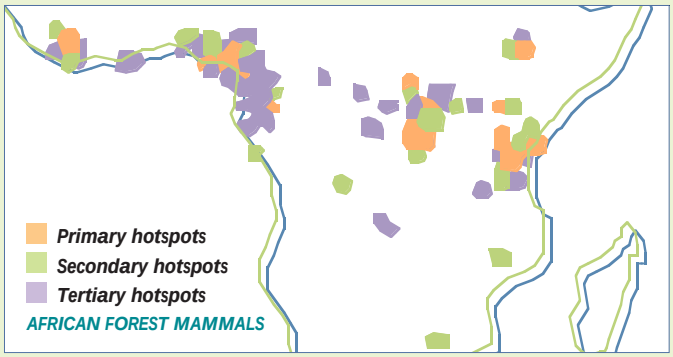
Biodiversity conservation in Africa



The needs of very range-restricted species, such as the Sokoke Scops Owl Otus ireneae (left), *may be overlooked in analyses of conservation hotspots such as those shown above.*

Birds and the bigger picture

Sub-Saharan Africa faces burgeoning human populations, growing poverty, decreased agricultural productivity and desertification. These all result in increased pressures on available land for various uses, with which conservation must compete. Given these multiple demands on land, it is essential that land use is planned carefully so that future generations may benefit. Some areas, endowed with rich, unique and threatened diversity should be afforded conservation status. Hopefully they can be developed to generate money from Afro-tourism, whilst other areas can be set aside for agriculture and urban development to meet the region's growing nutritional and housing needs.

Identifying biodiversity 'hotspots' on a continental level is no trivial task, but neither is it one that can be shied away from. In 1994, the Percy FitzPatrick Institute initiated a programme to study patterns of distribution, species richness and endemism of African birds in order to help guide conservation decisions. To date, a computerized database containing the distributions of the 1 911 bird species which occur in Africa south of the Sahara (termed the Afrotropical region) has been amassed by Helen de Klerk, a doctoral student at the Institute. This database includes digital range maps for 1 617 species which breed exclusively or largely in the Afrotropical region, a further 91 species which breed in the region but also occur widely elsewhere, as well as more than 200 non-breeding migrants.

Continental-level conservation decisions cannot be driven by the needs of birds alone, and in 1996 we were joined by scientists from the Danish Centre for Tropical Biodiversity (CTB) who are mapping the distributions of mammals, snakes, amphibians, butterflies and some plant groups in sub-Saharan Africa. This is a task which would have been impossible without the generous support of many scientists in various institutions throughout Africa. These vast databases will allow us to test whether one group of organisms, such as birds, can be used as an indicator, or surrogate, for the conservation needs of others.

A preliminary comparison of the distributions of the birds and mammals of Africa's forests was undertaken by the Percy FitzPatrick Institute and the CTB, and was presented last year at the Ninth Pan-African Ornithological Congress held in Accra, Ghana. This study showed that while there were many similarities in distribution patterns, species richness, endemism and conservation needs of forest birds and mammals, some species with restricted ranges fell through the net. For instance, although the Angolan highlands and the south-eastern coast of Tanzania are important for forest bird conservation, these were not identified as priority areas for forest mammals. By contrast, the forests between the Cross and Niger rivers in southern Nigeria were identified as a conservation priority for forest mammals, but not for birds. Thus, a conservation strategy based on either birds or mammals alone would not be adequate to preserve Africa's forest biodiversity.

Because there are differences in the conservation requirements of different groups of organisms in Africa, it will be impossible to reach informed consensus about the region's conservation needs without close international and interdisciplinary cooperation. Helen has already spent several months working with researchers at the CTB in Copenhagen, and Danish scientists have visited the Institute. These exchanges allow us to identify common problems and seek optimum solutions.

In addition to these research programmes, studies of African biodiversity are also being undertaken by BirdLife International's 'Biome Specific Assemblage' project, and by WWF-USA's 'African Terrestrial Biomes' programme. Scientists at the Percy FitzPatrick Institute and the CTB maintain contact with both organizations to ensure that collaborative efforts will lead to the development of a sound and defensible scientific basis for conservation decisions in Africa. □

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