

# Important Bird Areas capture much other biodiversity

*The Important Bird Area network effectively captures a high proportion of threatened, endemic and representative wildlife species other than birds. We can therefore use birds as indicators for key biodiversity areas, especially when data on other groups are poor or patchy.*

p. 28: Golden-rumped sengi © GALEN RATHBUN  
Ruwenzori Forest IBA, Uganda © IAN FRANCIS  
Werner's three-horned chameleon © LOUIS A. HANSEN  
p. 29: Butterfly *Euxanthe wakefieldi* © IAN GORDON  
Sultansazlığı IBA, Turkey © CUNEYT OGUZTUZÜN  
Orchid *Ophrys lycla* © GUVEN EKEN/BIRDLIFE



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## Important Bird Areas are key biodiversity areas

Important Bird Areas (IBAs) are part of a larger network of key biodiversity areas—the most important sites for terrestrial biodiversity conservation world-wide. Key biodiversity areas form the anchors of a systematic ecological network (see pp. 60–61). Like IBAs, they are identified based on the species they hold. We generally have good data on the status and distribution of bird species. However, the information for many other species is poor or patchy, often making it hard to identify the critical sites for these species.



## 1 Important Bird Areas effectively capture terrestrial vertebrates across East Africa, and globally threatened wildlife species in an East African 'hotspot'

All Important Bird Areas (IBAs) are themselves key biodiversity areas, because they are internationally important for birds. Individual IBAs are often important for many other taxonomic groups as well (box 4). For example, the network of 228 IBAs in Ethiopia, Kenya, Tanzania and Uganda do an effective job of capturing threatened and endemic terrestrial vertebrates. Collectively, these sites include 97% of the region's 97 endemic mammals, 90% of 80 globally threatened mammals, and 92% of 131 endemic snakes and amphibians<sup>1</sup>. To include the 'missing' species would require only 11 more sites, and this may be an overestimate: several of these species are poorly known and may well be found to occur in the existing IBAs.

Similarly, a study in the Eastern Arc mountains and coastal forests of Kenya and Tanzania, a biodiversity 'hotspot'<sup>2</sup> (see pp. 54–55), identified 160 sites, some of them very small, that shelter one or more globally threatened species of mammal, bird, amphibian, gastropod or plant<sup>3</sup>. Forty three of these sites (c.25%) had already been identified independently as IBAs. However, the IBA network includes 92% of the 26 most significant sites, those for which ten or more globally threatened species are recorded. All 24 Critically Endangered species (only three of which are birds) occur in at least one IBA.

**SOURCES** 1. Brooks *et al.* (2001) *Ostrich suppl.* 15: 3–12. 2. Mittermeier *et al.* (1998) *Conserv. Biol.* 12: 516–520. 3. NatureKenya & Wildlife Conservation Society of Tanzania (2003) Eastern Arc mountains and coastal forests of Kenya and Tanzania biodiversity hotspot: species and sites conservation targets. Unpublished report.



## 2 Uganda's 13 'forest' Important Bird Areas capture 89% of the butterfly, large moth, small mammal and woody plant species recorded in an inventory of 50 Forest Reserves

In Uganda, the national Forest Department has conducted a remarkably thorough inventory programme of five wildlife groups in 50 Forest Reserves, with the aim of identifying priority areas for conservation<sup>1,2</sup>. The study took 100 person-years, cost US\$1 million, and surveyed woody plants, birds, small mammals (rodents and insectivores), butterflies and large moths (saturnids and sphingids). A total of 2,452 species was identified.



Independently, NatureUganda (BirdLife in Uganda) has identified and documented a network of 30 Important Bird Areas (IBAs)<sup>3</sup>, 13 of which are also Forest Reserves. This provides an opportunity to evaluate how effectively these 13 IBAs, selected on bird data alone, represent total species richness across five taxon groups.

Analysis shows that the 13 'forest' IBAs, with an area of 5,445 km<sup>2</sup>, capture 2,181 (89%) of all the species identified in the 50 forest reserves, covering a total of 10,000 km<sup>2</sup>. This suggests that these 13 IBAs are an effective suite of sites for conserving a large and representative proportion of Uganda's forest biodiversity<sup>4</sup>. The low cost of gathering IBA data, compared with conducting site inventories for multiple taxa, reinforces the practicality of using birds as beacons for key biodiversity areas.

**SOURCES** 1. Howard *et al.* (1997) *Oryx* 31: 253–264. 2. Howard *et al.* (1998) *Nature* 394: 472–475. 3. Byaruhanga *et al.* (2001) Pp. 975–1003 in Fishpool & Evans, eds (2001) *Important Bird Areas in Africa and associated islands: priority sites for conservation*. Newbury and Cambridge, UK: Pisces Publications and BirdLife International. 4. Pain *et al.* (in prep.).

**Important Bird Area networks conserve much biodiversity in addition to birds**

There is growing evidence that networks of IBAs, though identified using information on birds, are disproportionately important for other animals and plants. That is to say, IBA networks are good at capturing threatened,

endemic and representative species for other terrestrial groups. The effectiveness of the IBA network has already been shown for terrestrial vertebrates in East Africa; globally threatened wildlife species in the mountains and coastal forests of Kenya and Tanzania (see **box 1**); butterflies, large moths, small mammals and woody plants in Ugandan forests (**box 2**);

butterflies and dragonflies in all Ugandan habitats (**box 3**); and plants, mammals, reptiles, amphibians and freshwater fish in Turkey (**box 4**). It appears that IBAs can be used with confidence as a 'first cut' for the overall network of key biodiversity areas, with extra sites for other taxa being added when data become available.

**3 Uganda's 30 Important Bird Areas capture 74% of butterfly species and 84% of dragonfly species recorded from the country, and higher proportions of those species of greatest conservation concern**

The 30 Important Bird Areas (IBAs) in Uganda occupy some 8% of the land surface of the country and include a wide variety of forest, savanna and wetland habitats<sup>1</sup>. Comparative studies of the country's 13 'forest' IBAs have shown they are effective at capturing much forest-dwelling biodiversity in other taxon groups (see box 2). More recently, butterflies, dragonflies, birds and vascular plants have been surveyed in the remaining 17, mainly savanna and wetland, IBAs in Uganda. The aim was to assess how well the country's IBA network as a whole captures species diversity in other taxa, across the full range of habitats.

Data from these surveys are currently being collated with earlier records from the Uganda Forest Department<sup>2</sup> and other sources. Preliminary results available for the two insect taxa show that the national IBA network includes most of Uganda's butterfly and dragonfly biodiversity. Of the 1,247 butterfly species recorded from the country<sup>3</sup>, the IBA network captures at least 74% of the total and 82% of those of highest conservation priority (species endemic to the Albertine Rift or to Uganda) (see figure).

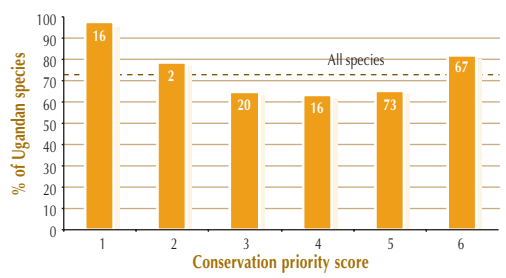
Six Ugandan IBAs have not yet been surveyed for dragonflies. Even so, 84% of the country's 241 species have already been recorded from the 24 IBAs for which data are available, including 11 of the 12 Ugandan dragonfly species recently assessed as globally threatened or Near Threatened<sup>4</sup>.

The results of studies for woody plants are still awaited. However, the insect data suggest that the IBA network effectively captures a large proportion of Uganda's species-level biodiversity across all main habitats, in only a small proportion of the country's land area.

**SOURCES** 1. Byaruhanga *et al.* (2001) Pp. 975-1003 in Fishpool & Evans, eds (2001) *Important Bird Areas in Africa and associated islands: priority sites for conservation*. Newbury and Cambridge, UK: Pisces Publications and BirdLife International. 2. Howard & Davenport (1996) *Forest biodiversity reports*. Kampala: Uganda Forest Department. 3. Davenport (1996) *The butterflies of Uganda: an annotated checklist*. Kampala: Uganda Forest Department. 4. Assessment by V. Clausnitzer & K.-D.B. Dijkstra, who are also revising East African national lists. **ACKNOWLEDGEMENTS** Data and graphic kindly provided by Charlie Williams, Herbert Tushabe and Josephine Asasira of the Ugandan IBAs Project, a collaboration between Makerere University Institute of Environment and Natural Resources (MUIENR), Kampala, Uganda; University of Copenhagen, Denmark, Royal Society for the Protection of Birds, UK, and University of Cambridge, UK. Additional records and other help were contributed by T. Davenport, S. Collins, W. Kinuthia, D. Kalibakate, F. Molleman, F. Jiggins, V. Clausnitzer, K.-D.B. Dijkstra, J.J. Kisakyi, K. Miller and P. Etyang.



The percentage of Ugandan butterfly species represented in Ugandan IBAs in each of six conservation priority categories

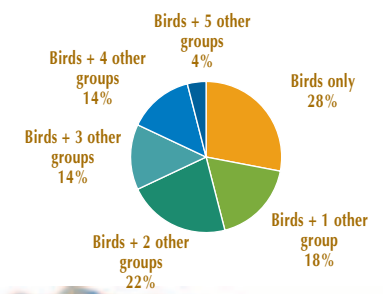


Conservation priority score is based upon approximate range size, and varies from 1 (widespread across W, C, E and S Africa) to 6 (endemic to the Albertine Rift Valley region or to Uganda). Numbers in columns show the number of butterfly species in each category recorded from IBAs.

**4 Over 70% of Turkey's Important Bird Areas also hold internationally important numbers of other animals or plants**

The 156 Important Bird Areas (IBAs) in Turkey cover a total land area of 91,684 km<sup>2</sup>, c.12% of the country<sup>1</sup>. Studies in progress have shown that at least 112 (72% of the total, 93% by area) of these sites also hold internationally significant populations of one or more of five other wildlife groups (plants, mammals, reptiles, amphibians and freshwater fish)<sup>2</sup>. Nearly one third, 48 IBAs, are of global or regional importance for three or more different groups, in addition to birds. As more surveys are carried out, the number of IBAs known to be important for other groups is likely to rise. These findings highlight the importance of conserving IBAs in Turkey for a diverse range of other fauna and flora.

Number of taxon groups in addition to birds for which Turkey's 156 IBAs hold internationally significant populations<sup>2</sup>



**SOURCES** 1. Analysis of data held in BirdLife's World Bird Database. 2. G. Eken *in litt.* (2003). **ACKNOWLEDGEMENTS** Additional data kindly provided by Doğa Derneği and WWF-Turkey.

