

**Earthwatch Institute Field Report**

**EUROPE-AFRICA SONGBIRD MIGRATION  
MIGRATORY BIRD RESEARCH PROGRAMME  
HUNGARY - ITALY- KENYA  
2004**



Report compiled by

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## **SECTION I**

**Project Title:** Europe/Africa Songbird Migration

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**Research Site(s) (geographic location, include coordinates if known, e.g. Lat/Long):** Ocsa Landscape Reserve, Central Hungary; Roccolo Anesa, Ganda, Province of Bergamo, Northern Italy; Mwea National Reserve, Kenya.

**Local Management Status of the Research Site(s) (e.g. National Park, RAMSAR Site, World Heritage Site, IBA etc.):**

**Hungary:** Ocsa Landscape Reserve is part of the Duna-Ipoly National Park.

**Italy:** The research site is privately owned. The area is not under protection.

**Kenya:** Mwea National Reserve is an Important Bird Area (IBA) by virtue of the breeding of Hinde's Babbler (*Turdoides hindei*) and the huge roost of Barn Swallows (*Hirundo rustica*, estimated number >1 million birds)

**Scientific names of primary species being studied:** Songbirds, Order Passeriformes

**Key Research Objectives:**

- Create a long-term phenology database on the migratory bird populations at three locations along the Palearctic-African flyway;
- Conduct research on morphology, moult strategies, fat reserves and other physiological parameters of the common species;
- Continue to collect data on individual songbirds trapped, and compare population trends to previous years;
- Assess the relative abundance of migrants in different micro-habitats in Mwea National Reserve, and relate this to habitat structure and the abundance and composition of the resident avifauna.

## Data Collection and Results

### Hungary

During the month of August, a total of 5504 birds, belonging to 57 species, were captured and newly ringed (Appendix 1). The most common species were Sedge Warbler, Blackcap and Reed Warbler, all species associated with the reserve, especially reedbeds. Only 8 species were captured in >100 individuals. These, apart from the most common species, included: Barn Swallow, Marsh Warbler, Garden Warbler, Great Reed Warbler and Wood Warbler. The decline in numbers continued. The Great Reed Warbler captures are probably related to the nightly broadcasting of reed warbler song.

### Italy

During the 10 days, we captured and ringed 867 birds of 32 species (Appendix 2). Most common was the Pied Flycatcher, *Ficedula hypoleuca*, a small songbird. Birds originate mainly from Finland, and migrate to sub-Saharan Africa. High number captured in the province of Bergamo indicates that this area is an important migratory stopover point of this long-distance migrant. Other sub-Saharan migrants captured included Tree Pipit, *Anthus trivialis*, Garden Warbler, *Sylvia borin*, Redstart, *Phoenicurus phoenicurus* and Willow Warbler, *Phylloscopus trochilus*. Other interesting records include the declining species, Red-backed Shrike, *Lanius collurio* and Ortolan, *Emberiza hortulana*.

### Kenya

During the expedition, the Earthwatch team mist-netted and ringed 253 birds, including African birds as well as Palearctic migrants. The total number of birds ringed at Hippo Point was 43 species, 122 new individuals + 24 recaptures. At the 'roving sites', we captured and ringed 36 species, 131 new individuals + 7 recaptures. A full list of captures is in Appendices 3 & 4. We continued the census of bird occurrences in the reserve. Over the duration of the expedition, we confirmed the occurrence of 170 species that were on the list and expected to be present. We added 1 species (Levant Sparrowhawk) whose occurrence was not known in the area. A full list of birds observed during the expedition is in Appendix 5.

### Health state assessment of migrant birds

Blood samples were collected from 64 individuals of 12 passerine species and blood components were measured. These will be inserted into the bird health database. This now contains >350 samples from Africa.

### Significance/Benefits of Research

**Locally**, our research in *Hungary* contributes to and supports the long-term work of the station. We provide volunteers and funds for the running of the station, purchase of scientific equipment, without which the work could not continue. In *Italy*, our presence was vital to continue bird research activity after the recent death of the owner of the roccolo, Mr. Daniele Anesa. In *Kenya*, there is still no other research work in the Mwea National Reserve (although an IBA), so our involvement is vital to accumulate information that can be used for managing this reserve. An additional benefit of our

involvement is the support provided to the Department of Ornithology through purchase of equipment, support and training.

**Nationally**, the research location is a training site for ringing trainees and provides research site for students at several universities in Hungary and the neighbouring countries. School classes visit the station from all over Hungary. In Kenya, this reserve is being promoted as a bird-watching location, and our data are important to inform authorities and visitors about the biodiversity of the reserve. We are compiling a list of common birds in the reserve, which is under production and will be offered for sale (proceeds will go to Kenya Wildlife Service) for visitors of the Mwea National Reserve.

**Internationally**, the significance of our project was acknowledged through the 2004 AVIVA Climate change Award. Our research in Hungary has special significance, because it is among the longest migratory bird monitoring sites in the world, having completed its 22nd year in 2004.

a) How do your findings contribute to issues of sustainability?

Our project is concerned with long-term monitoring of environmental quality. Monitoring, especially long-term monitoring, is vitally important for sustainability. Our findings about long-term population fluctuation of intercontinental migratory birds contribute to this.

Research on migratory birds, especially intercontinental migratory birds is also conceptually important because it makes people understand the inter-linked nature of geographically very distant ecosystems. Understanding this link is very important to design our activities and guide our future actions as humankind's influence became overwhelming over all parts of the globe. Our research provides this as a direct, easily perceived message relevant for sustainability.

Our research on birds is of special importance for Kenya as it draws the attention of the major manager of the country's natural heritage, the Kenya Wildlife Service, that they husband more than tourist-drawing big game. Sustainable management of these resources cannot be successful without a wider ecosystem perspective - one that is not only theoretical, but rests on empirical information, namely knowing "what is part of an ecosystem"?

### **Dissemination of Results**

- Scientific papers
  - Muchane Muchai, Gabor L. Lövei, and Kariuki Ndang'ang'a. 2004. Europe-Africa songbird migration: Relative abundance of migrants in relation to habitat structure and composition of resident avifauna in Mwea National Reserve, Kenya. To be submitted to J Tropical Ecology.
  - Gabor L. Lövei, Muchane Muchai, and Kariuki Ndang'ang'a. Diversity of small birds in Mwea National Reserve, Kenya, using the scalabe diversity index. To be submitted to J. Ornithology.

- Management plans and reports
  - The birds of Mwea National Reserve. Research Report to Kenya Wildlife Service. Under preparation, to be published as Supplement to EANHS Bulletins.
  
- Presentations
  - Muchane Muchai, Gabor L. Lövei, and Kariuki Ndang'ang'a. 2004. Europe-Africa songbird migration: Relative abundance of migrants in relation to habitat structure and composition of resident avifauna in Mwea National Reserve, Kenya. Poster, Pan-African Ornithological conference, Tunisia, November 2004 (poster prize)
  
  - Several presentations were made to visitors at the Ocsa Bird Migration Station, Hungary. These are typically school classes of 30-40 students from all over the country. During 2004, there were 30 such visitor groups.
  
- Popular articles or films
  - Muchane Muchai, G. Lövei, K. Ndang'ang'a. Common birds of the Mwea National Reserve. Checklist, for visitors of the reserve. Occasional publication, in preparation.
  
- Books, chapters, illustrations
  - None