BIRD RINGING IN EAST AFRICAN FORESTS

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Detailed work on the ecology of tropical forest birds is still very much in its infancy. Much can only be learnt by the systematic trapping and marking of the birds. Some pioneer work in this field has been done in Kakamega Forest, Kenya (Zimmerman 1972) and Semengo Forest Reserve, Sarawak (Fogden 1972). The purpose of this note is to outline some of the work in which I am engaged in Kakamega Forest (c. 1800m a.s.l.), and some other forests of East Africa.

Whereas Palaearctic-orientated ringers in Africa are contributing to our knowledge of migration, times of moult and changes of weight of Palaearctic birds, ringers concentrating on Ethiopian forest species gather rather different information.

My netting is confined to the area from forest floor to about 2.5m, and thus only the denizens of the undergrowth and smaller saplings are normally captured. Netting much above this height would involve costly apparatus continually at the risk, even on private land, of being damaged or stolen.

I work one particular area of Kakamega Forest once a month, using the same number of nets, from mid-day on the one day, to mid-day on the next, closing the nets at night. During 1973 I used two contiguous sites, alternating each month. During 1974 I occasionally use two other sites in the study area. The study area is

very close to the edge of the forest, but I have found that the composition of the avifauna differs remarkably little from that of the deeper parts of the forest. At times I have worked other parts of the forest, and in other, adjacent, forests e.g. South Nandi Forest (c. 2000m a.s.l.). I have attempted to do some comparative work at Amani, Tanzania (c. 1000m a.s.l.) and had planned to do extensive work in the forests of west Uganda, but the political climate has put paid to the latter.

Information is gathered about (i) the individual, (ii) the species and (iii) the avifauna as a whole.

(i) a.Longevity - obviously only an extensive period (say 10 years) will yield useful information.

b.Moult - length, pattern and timing. Time compels me to limit this to primaries and secondaries only.

c.Weight - changes associated with times of year and day, life-cycle etc.

d.Movement - presence or absence at a particular time; fidelity to a particular spot in the study area; territory.

(ii) a.Measurements - statistical data on weight and wing length (and bill measurements in a few species); statistical comparisons with other species.

b.Population structure.

c.Diurnal cycles.

d.Breeding - seasons, frequency, number of young, length of dependence of young.

e.Altitudinal distribution.

(iii) a.Numbers of birds, and how this varies.

b.Niches and possible competition; interspecific relationships; species diversity.

Attempts will be made to correlate some of these data with climate, particularly rainfall.

To date (September 1974) in my study area I have captured 770 birds of 61 species since the beginning of this study in January 1973. All were ringed apart from 3 that were found dead in the nets. The birds ringed can be broken down, somewhat arbitrarily into the following:

(a) 6 individuals of 2 Palaearctic species.

(b) 8 individuals of 3 species not normally associated with forest.

(c) 65 individuals of 12 species found in forests or in lush vegetation away from forest.

(d) 691 individuals of 44 species of forest or forest edge, not normally found away from that habitat.

In addition, a few hundred birds have been captured in other areas of the forest, or in neighbouring forests.

The recapture rate for a number of species is high, but I am not in a position to give any actual figures at present.

This particular study will finish when I leave Kenya in March

1975, but I hope to be able to return to the area sometime in the future. I shall not begin to write up this study until after my return to U.K.

References:

Fogden,M.P.L. (1972) The seasonality and population dynamics of equatorial forest birds in Sarawak. Ibis 114(3):307-343.

Zimmerman,Dale A. (1972) The avifauna of the Kakamega Forest, Western Kenya, including a bird population study. Bull.Amer.Mus. Nat.Hist. 149:255-340