

FEATURE ARTICLES

THE "LIGHTHOUSE EFFECT" IN AFRICA

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The Editor (Safring News 2(2):3-4) made brief mention of a "lighthouse effect" phenomenon at Ngulia (3°S, 38°13 E) in Tsavo National Park (West), Kenya.

The letter from Tony Tree (Safring News 3(1):35) reporting another case of night migrants being attracted to lights at a farm in Rhodesia prompts me to give some background information on the Ngulia phenomenon. The "lighthouse effect" was first noticed there in December 1969 by A.D.Forbes-Watson; he told me about it immediately and, from 1969 to the present, a few other ringers and I have worked the area regularly each (northern) autumn and winter. A mention of the Ngulia movement is given by Moreau 1972 (The Palaearctic-African bird migration systems. London:Academic Press, p.265). A fairly detailed paper on the Ngulia findings (with David Pearson as senior author) is in press for Ibis so the present note must be brief and serve merely to give ringers in southern Africa some ideas for future work.

Well over 5000 Palaearctic migrants have been ringed (to January 1974) at Ngulia; almost all of these were on passage, many carrying large fat reserves indicating final winter destinations far to the south. The success of the catching at Ngulia depends upon several factors: first, the lights (three 1kw) are most important; second, falls of birds are far greater on misty or rainy nights than on clear nights; third, under conditions of full or near-full moon, even with mist, falls are reduced. Falls of birds occur throughout the Tsavo area in autumn but are vastly concentrated by the Ngulia lights. It follows therefore, that if lights can be used in otherwise dark areas (e.g. isolated farms, national parks) especially where mist and/or rain are frequent, falls can be expected during the southward migration.

From the 5000+ migrants ringed at Ngulia only one, a Banded Warbler Sylvia nisoria, has been recovered and that, in the next autumn on its way south through Arabia. It is a source of great disappointment that no Ngulia-ringed birds have been controlled or recovered further south in Africa - Tree's letter gives hope that some of these birds may be caught, at least in Rhodesia. I might add that the grounded birds at Ngulia move on very rapidly indeed (retrap numbers are minute) so that controls further south made at lights might give extremely accurate information on speed of migration and weight loss. All Ngulia birds are weighed, measured, moult recorded, aged and sexed (where possible); in addition, possible fat ratings are recorded, ectoparasites collected and blood slides made from many of the birds caught.

The numbers ringed at Ngulia are low considering the potential of the site but it must be remembered that only two people regularly visit the area (both amateurs) and that the netting bushes are shared for much of the day by elephants so that netting is a severe

what hazardous business, to say the least.

I would like to ask all ringers in Rhodesia, Zambia, Malawi, Mocambique and northern South Africa to be aware of the "lighthouse effect" and to exploit any falls they find. Over 75 000 Palaearctic migrants have been ringed in East Africa as a whole yet only one (a Little Stint Calidris minuta, Kenya - Zaire) has been recovered elsewhere in Africa, and that was controlled by a Belgian ringer! Exploitation of the "lighthouse effect" in November/January in northern southern Africa should radically alter this situation.

(As may be remembered the S.A.O.S. generously contributed R200 to the cost of building an anti-elephant ditch at Ngulia. No other donations were received. This combined with the fact that the elephants were found to serve a useful function by keeping the bush down to mist-netting height, has necessitated the shelving of our plans. The money will be returned to the S.A.O.S. Nevertheless I would like to express our thanks for their support).

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