connecting with intra-African migrants

Dayo examines a male Diederik Cuckoo for wing moult.

Migrant birds cover vast distances, moving in response to changing resources and often under perilous conditions. Working with BirdLife International, the UN's Convention on Migratory Species has highlighted the need for action to address the decline in migratory land birds in the African–Eurasian flyways region. One of the key actions identified is to gather information about the movement patterns of birds within Africa and improve our understanding of the conditions in which they migrate.

At the Fitztitute a new research project is investigating migratory connectivity among intra-African migrant kingfishers, cuckoos and bee-eaters. Initially we are focusing our attention on species whose ranges extend across the western, eastern and southern subregions of Africa. There are very few ringing data for these birds, so we will use other techniques to deduce their movement patterns. Trapping to collect blood and feather samples will be carried out during the breeding season in each of the three subregions and third-generation genetic sequencing will indicate whether individuals from different subregions inter-breed. Analyses of the stable isotopes of oxygen and hydrogen in primary feathers will hopefully reveal wintering areas, as the ratios of these isotopes vary regionally and reflect the areas where feathers are grown. We will also measure size and vocal differences among birds from the three subregions.

Led by post-doctoral fellow Dayo Osinubi, the first field work was conducted at three sites in Limpopo Province, South Africa, between November 2015 and January 2016. Further sampling is planned in West Africa (Nigeria and Ghana) and East Africa (Kenya and Uganda). The Woodland Kingfisher *Halcyon senegalensis* is a promising model species to assess the range of movement patterns. Recent geolocator tracking data (see *African Birdlife*, May/June 2014, pp. 54–62) indicate that the southern subspecies *H. s. cyanoleuca* migrates across the equator to overwinter in the breeding areas of *H. s. senegalensis*. The extent of the non-breeding range of the northern race is unknown.

The Diederik Cuckoo *Chrysococcyx caprius* is another species of interest. As it parasitises mainly weavers, the population that breeds in southern Africa times its arrival to coincide with the weavers' nesting seasons. This raises interesting questions within the southern African subregion, where weavers breeding in the south-western, winter-rainfall region breed several months earlier than those to the north and east. It will be intriguing to see whether Diederik Cuckoos visiting these regions come from the same population and winter in the same regions of Africa.

Dayo hails from Nigeria and has a PhD from Canterbury University in New Zealand. He is ideally suited to tackle this challenging project as, after his PhD, he worked on the African–Eurasian flyways at the Ghana office of BirdLife International. The research project at the Fitztitute is being run in collaboration with the National Zoological Gardens of South Africa, the South African National Biodiversity Institute and BirdLife International, with support from the Swedish International Foundation for Science. Additional backing will be required if the project is to include direct tracking of the larger cuckoos.

Links are being forged with researchers on other continents, in particular South America and Asia, who are also working on intra-continental avian migration. But, more importantly, Dayo needs to connect with networks of birders across Africa. If you find a dead migrant cuckoo, bee-eater or kingfisher, or you are a licensed ringer trained to collect blood samples from birds and would like to support our sample collection effort or if you would like to help by providing accurate information about breeding areas and dates of selected intra-African migrants, please contact Dayo at *temidayo.osinubi@uct.ac.za*. With more information about migratory routes and the cues that time movement, conservation efforts can be better directed to sites where action will be most effective.

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