

watchers' and ringers' paradise in Gauteng. I know that this area can either be included in the regular CWAC counts or incorporated into the Important Bird Area (IBA) Programme. With the extensive experience of the personnel at BirdLife South Africa and the great success of the Wakkerstroom project to build upon, I hope that:

- the Vlakplaats maturation ponds and the adjacent Natalspruit wetlands can again receive formal protection as a natural area,

- the whole area can be fenced off,
- the area can then be properly maintained,
- hides can then be built,
- interested people from the surrounding community can be taught to become bird guides,
- gate fees can be charged as a means of a partial income,
- intensive bird ringing can be reinstated with the resultant scientific knowledge that will flow from it.

This area must be preserved for posterity.

The excitements for a UK bird ringer of ringing in Botswana

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Since 1996 I have been enjoying the excitement of ringing birds in Botswana. By excitement I mean the pleasure of handling new species and a wider variety of species than found in the UK. I also mean the unexpected and unpredictable nature of ringing in Botswana by comparison with the UK. Birds in Botswana, as elsewhere in southern Africa, do not show neat patterns of occurrence. A few species are truly resident but most, other than the Palaearctic and intra-African migrants, are opportunistic nomadic or semi-nomadic species, which arrive at, or depart from, a site according to various factors, notably the amount and location of rainfall.

The other excitement for me is the fact that there are huge opportunities for any ringer in southern Africa to make a real contribution to our knowledge of birds in this region. For most species in Africa there is still much to be discovered – on biometrics and moult patterns, movements, breeding or some other aspects of species' biology. In Britain it is increasingly difficult for the average ringer to discover something, although he/she can still contrib-

ute through schemes organised by the British Trust for Ornithology (BTO). The Constant Effort Site (CES) scheme is one such participatory scheme. A ringer running a CES chooses a site and erects the same number of nets in the same places on each of 12 visits in specified periods during the breeding and post-breeding season in successive years. Details of all adult and young birds caught or retrapped are passed on to the BTO who can then look at such things as annual changes in breeding success.

I contrasted my ringing activities in the UK (my CES site, pulli ringing in nestboxes and catching river birds for a long-term study of Dippers *Cinclus cinclus* and Grey Wagtails *Motacilla cinerea* along rivers) with ringing at a 4 ha site in *Acacia* bush 30 km northeast of Gaborone. Between March 1996 and February 2000 some 3667 birds of 82 species were caught at this site. Only 24 species were caught in numbers of 20 or more, the most numerous being Blue Waxbill *Uraeginthus angolensis* (637 individuals), and the next most numerous being Masked Weaver *Plo-*

ceus velatus (353), Larklike Bunting *Emberiza impetuani* (313), Melba Finch or Greenwinged Pytilia *Pytilia melba* (266) and Scalyfeathered Finch *Sporopipes squamifrons* (258). Of the top 20 birds 17 were seed-eaters, one an insectivore (Rattling Cisticola *Cisticola chiniana*), one a frugivore (Pied Barbet *Tricholaema leucomelas*) and one a nectar/insect feeder (Marico Sunbird *Nectarinia mariquensis*). Larklike Buntings were only caught in the winter and early summer of 1998.

There were marked influxes at irregular periods for many other species of seed-eater, although some showed a more regular pattern in their arrival and departure times, being

generally either summer (wet season) or winter (dry season) visitors. The few resident species were characterised by a high retrap rate. No Palaearctic or intra-African migrants were caught in large numbers, although Red-backed Shrikes *Lanius collurio* were frequently caught in November and December (26 birds).

Ringling regularly at a series of sites within Botswana and in adjacent areas of South Africa would help differentiate between very local (<15–20 km) and longer-distance movements and show any widespread and consistent patterns of movements and the possible factors inducing these movements.

The Kalahari environment: its birds and mammals

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Every year brings a pestilence in these arid regions – this can be anything from caterpillars to termites or locusts. These are not predictable with our current knowledge. But it does illustrate that there is no truth in the cliché ‘balance of nature’, but rather that we have a ‘wobble of nature’. That is difficult to forecast.

Over a period of time the populations of the mammals in the Kalahari can vary quite dramatically. There can be an enormous influx of blue wildebeest when conditions to the north are dry. The availability of food such as the tsama-melon will also affect the movements of animals such as the hartebeest. The springbok with a double lambing period in one year can recover losses in a short time and so their numbers vary enormously – more so than may occur with the gemsbok, for example.

Similarly the bird populations are highly variable and one day can see the arrival or departure of hundreds of thousands of larks in any one area. Larklike Buntings can come in thousands. Raptors are dependent upon rains to the north, even when there are good termite eruptions that attract all types of birds. There are also unusual birds such as crakes, coots, jacanas and other non-desert birds that turn up in such wet seasons as we have had now. There seems to be a huge reservoir of birds that range over a vast area of the arid southern region. It is very difficult to determine the breeding success of such birds.

After such good rains as the area has had now, it is fairly safe to predict that there will be good years immediately ahead for the birds and mammals.