REFERENCE :

Kemp, A.C. 1977. Some marking methods used on a variety of Southern African raptors. Safring News 6 (1): 38-43.

H.C. and R. Biggs, P.O.Box 20120, WINDHOEK, South West Africa/Namibia.

- o O o -

COLOUR-MARKING SCHEMES IN ALGOA BAY

A.P. Martin

As part of a project to determine the impact of birds as predators on the Swartkops Estuary, Port Elizabeth, several colour ringing and dyeing schemes are in progress. Colour rings are used on the three most important species, namely, Kelp Gulls *Larus dominicanus*, Grey Plover *Pluvialis squatarola* and Whimbrel *Numenius phaeopus* to enable individuals to be followed during feeding observations and to get an idea of the extent to which they use the Estuary for feeding.

To find out whether birds feeding on the Estuary also feed on the adjacent saltpans and sandy beaches, and to see if there is any turnover of birds on the Estuary, every bird caught is dyed with picric acid, whether colour-ringed or not. Dye is applied to the breast, belly or tail, according to the region of the Estuary on which the bird was caught, to check for intra-estuarine movement. I prefer to dye rather than colour-ring the majority of birds that I catch because dye is more visible and prevents us from catching the 'European colour-ringing syndrome' where so many schemes are in progress that few sightings of colour-marked birds can be traced. To avoid confusion with European schemes I do not dye adult migrants after the start of their autumn pre-nuptial moult.

Picric acid is generally considered the best of the dyes currently available because the yellow/orange colour is very visible and it lasts longer than other dyes (Summers 1978). A saturated solution (with excess crystals at the bottom) is prepared in 70% ethanol which dries quickly when brushed well into the feathers. The birds are kept in a well-ventilated keeping cage for *ca.* 20 minutes before release to allow the dye time to dry. Little Stints *Calidris minuta* do not appear to be

suitable for dyeing as some dyed birds ringed on an expedition to Morocco were found sick the next day (Moser 1981).

WADERS

Waders can only be caught on their low-tide feeding areas and on the saltpans at night using mistnets (I use 42 ft, 2 shelf Bleitz nets). High-tide roost mistnetting and cannon netting proved fruitless because the birds went to one of the many alternative roost sites on the saltmarsh as soon as they suspected anything unusual. Only small numbers (a maximum of 20 per night) can be caught, but as I work alone and stomach-pump the birds as well as taking full biometrics, this is as many as I can safely handle. I find that the birds are present on the mudflats at night all through the year, regardless of the phase of the moon. However, the Swartkops is so well illuminated (which may be why they feed so much at night) that fewer birds are caught on a full moon, presumably because they see the nets.

To avoid confusion with European schemes, all palaearctic waders colour-ringed in southern Africa should carry a yellow colour ring above the tarsus on the left leg, and the Wader Study Group (which co-ordinates European wader marking schemes) would like to be informed of all proposed schemes in order to keep their records complete.

Grey Plover

Only 11 have been caught to date. I put a yellow ring above the tarsus on the left leg and a combination of two on one of the tarsii. It is assumed that most juvenile palaearctic waders remain on their non-breeding grounds during the austral winter (Pringle and Cooper 1975). However, of the five juveniles caught, only one remained on the Estuary during the winter. So far (early November) only one adult has returned. I would be very interestd to know where the juveniles went; perhaps they winter in South West Africa?

Whimbrel

Whimbrel are very difficult to catch as they are wary and tend to bounce out of mistnets. (*A bigger mesh size is obviously needed for these birds.* Ed.) Three have been caught to date and these were colour-ringed as for Grey Plover.

Other waders

I mostly catch and dye Curlew Sandpipers *Calidris ferruginea* and Turnstone *Arenaria interpres*, but also Whitefronted Plovers *Charadrius marginatus*, Greenshank *Tringa nebularia* and

Terek Sandpipers *Xenus cinereus*. I find that most birds stay for about a month and there is some interchange between the Estuary and the saltpans. However, the number of dyed birds gradually decreases, even during midsummer. I assume that they move to other estuaries along the coast but any sightings would be welcome.

KELP GULL

This is the most problematic species with regard to assessing the amount of time that they spend feeding on the Estuary, as they like sandy beaches and refuse dumps (where they are not averse to eating the odd hypodermic syringe!). 33 adults were caught in 1983 and 22 out of a target total of 39 have been caught so far this year, using walk-in traps over their nests on a saltpan adjacent to the Estuary. Two colour rings are put on one tarsus (it is important to note which one) and a metal ring on the other. They are dyed yellow (in November) and the dye is moulted out by about April. The pulli are given a site-specific colour ring. Rod Randall, on St. Croix Island, also puts a site-specific colour ring on one or other tarsus, according to whether the bird was ringed as an adult or as a pullus. Juveniles disperse from the area soon after fledging, and reports of colour-ringed gulls (ideally with an indication of the age plumage of the bird) would be most welcome to help establish their whereabouts.

This year I hope to put more effort into the wader and gull ringing and dyeing, and may also try to catch Common Terns *Sterna hirundo*. Any sightings of dyed or colour-ringed birds, especially away from the Swartkops Estuary, will be most welcome.

REFERENCES:

Moser, M.E. 1981. 'Shorebird Studies in North West Morocco'. Report of Durham University 1980 Sidi Moussa Expedition.

Pringle, J.S. & Cooper, J. 1975. The Palaearctic wader population of Langebaan Lagoon, Ostrich 46: 213-218.

Summers, R.W. 1978. Results from dye-marking waders in the southwestern Cape. Ostrich 49: 48-51.

A.P. Martin, Department of Zoology, University of Port Elizabeth, P.O. Box 1600, PORT ELIZABETH, 6000