RINGED CROWNED GUINEAFOWL AND SWAINSON'S FRANCOLIN FOR POPULATION STUDIES ON SUIKERBOSRAND NATURE RESERVE

S.W. Wolff,
Suikerbosrand Nature Reserve,
P.O. Box 350,
Heidelberg,
2400.

Introduction

The Crowned Guineafowl, Numida meleagris and Swainson's Francolin Pternistis swainsoni are the two most hunted gamebird species in the Transvaal. This information is based on the meagre 1-5% hunting license returns from hunters. Even with this low return I think one can accept this assumption, because the Crowned Guineafowl and Swainson's Francolin are well distributed all over the Transvaal. Very little or no information is available on breeding season, breeding success, natural mortality and annual increment. During 1973, a project which is mainly aimed at population studies on the two above-mentioned species, was started on Suikerbosrand Nature Reserve. A great deal of this project involved trapping and ringing the birds after their breeding season in order to establish the ratio of adult to immature birds, chick survival, annual increment, the age of chicks and the number of adult retraps.

After the chicks have hatched it is just about impossible to follow them as they move in tall cover on the reserve. A period between hatching and trapping elapses, where little information can be obtained and the breeding success is mainly derived from the number of chicks hatched and the recruitment to the adult population after the breeding season.

Trapping Season

After the breeding season guineafowl flock together and on Suikerbosrand Nature Reserve it was found that the best time to trap them was from May to September. If the guineafowl are trapped earlier than May, there are usually a number of immature birds in the flock which are not ready for ringing. It was found that several flocks, which might number 50 to 60 birds each, join up at the roost and break up into flocks again during the day. After the first rains have fallen, which is usually during September to October, the family flocks break up into smaller flocks and pairs. Then trapping is less worthwhile, because only single birds and pairs are trapped.

Swainson's Francolin are also best trapped during May to September. During this period the birds are still in coveys (family groups of up to 13 birds have been seen), and a number of birds out of a covey or even the whole covey may be trapped.

Trapping Method

For this project the funnel-type walk-in trap has been used to trap Crowned Guineafowl and Swainson's Francolin. Traps of varying size have been used and it seems as if the size of the

trap does not affect the success of trapping, as long as the entrance of the funnel is high enough to allow easy access. The size of the traps mainly used was 2 2 m long by 1 2 m wide and 1 2 m high. Each trap was fitted with two funnels, one on each of the long sides, with measurements given in Fig. 1. All the sides and the top were covered with 3 8 cm diamond mesh and the funnels were covered, except for the base, with bird mesh. The sides, top and funnels are detachable for easy transport fom one trapping site to another.

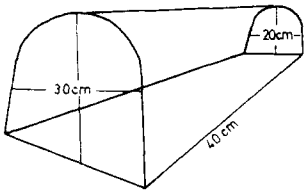

Fig. 1 Measurements of funnels used to trap Crowned Guineafowl and Swainson's Francolin.

Before the traps are put out, mixed grain is spread over areas where the guineafowl move through frequently until the birds get used to feeding there regularly. Then about 5 to 10 traps are placed over the area and baited with mixed grain, with one of the short sides, used as a gate, left open. As soon as the birds get used to feeding in the traps, the gates are closed after sunset to ensure that no more birds enter the trap. Any bird that stays in the trap overnight stands a high risk of being caught by nocturnal predators.

To trap Swainson's Francolin, grain is spread in areas where coveys are regularly seen. Then the same procedure is followed as for trapping guineafowl, and often francolin enter traps which have been set for guineafowl.

Over two trapping seasons a total of 623 Crowned Guineafowl and 84 Swainson's Francolin were ringed. All these birds were trapped with walk-in traps and the given totals do not include any retrapped birds.

Some Problems encountered while trapping

While trapping guineafowl it was noticed that each trap held a maximum of ten birds. Whether this can be overcome by using larger traps has still to be tried out, although traps of about double the size have been used and the same results obtained. Very large traps may trap more birds, but are difficult to transport and are usually permanent fixtures. It was also noticed that after a few days of trapping, the same birds entered the traps (trap-happy birds) and others, still unringed, refused to enter the trap (trap-shy birds).

On a few occassions, predators, such as the Slender Mongoose and Spotted Genet, entered the traps and killed a few birds. Of all the trapped birds, the loss due to predators was o,06% over Two trapping seasons.

A disadvantage of the walk-in trap is that birds are fed with grain during the trapping season, and this might improve the survival during the winter months."

Marking Method

All the trapped guineafowl and Swainson's Francolin were ringed with 11 mm Incoloy rings. During 1971 and 1972 a few Crowned Guineafowl were trapped on Suikerbosrand Nature Reserve, ringed with an 11,5 mm aluminium ring and marked with a P.V.C. reinforced backtag (Labisky and Mann, 1962). A guineafowl ringed on 22nd November, 1971, with an aluminium ring and marked with a white backtag was recaptured on 25th July, 1973. The ring was lost, but the backtag was still on the bird. This shows that aluminium rings may easily be lost on guineafowl and other gamebirds and that in future only Incoloy rings should be used.

References

LABISKY, R.F. and MANN, S.H. 1962. Backtag Markers for Pheasants. J. wildl. Mgmt. 26(4):293-299.

MOULT IN PALAEARCTIC WADERS

M. Waltner,
5 Montagu Way,
Pinelands,
7405.

In reply to the challenge in SAFRING 4(1):17 we have very little to brag about the knowledge of our visiting waders. There are only two waders, the Little Stint Calidris minuta and the Curlew Sandpiper Calidris ferruginea, where the moult cycle is reasonably well established.

Little Stint. The sterling work of Middlemiss (1961) showed that the Little Stint moult their primaries between the first week in November and the second week in April. The individual moult, however, is most likely to be of shorter duration. Little Stints leave the Cape towards the end of April for their breeding grounds.

Curlew Sandpiper. The Curlew Sandpiper is the most abundant wader in our area. First-year Curlew Sandpipers which over-winter at Langebaan, start a partial primary moult any time from February on, and most of them start between June to mid-August. This moult most commonly involved the outer three, four or five primaries. All the first-year birds undergo this moult in this manner and they differ from reports of the Kenyan birds. They also replace their innermost secondaries as well as the secondary coverts. This moulting of the secondaries starts with the innermost feather and proceeds to the sixth or seventh secondary. This is in the reverse order of that of the adults (Fig 1a).