Capture and Transport of Oxpeckers *Buphagus erythrorhynchus* & *B. africanus* from the Eastern Caprivi Strip, SWA/Namibia

by

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ABSTRACT

Mist nets in kraals were used to capture redbilled and yellowbilled oxpeckers. Methods of keeping, feeding and transporting oxpeckers in temporary cages are discussed.

CONTENTS

1 INTRODUCTION

The aim of this project was to develop suitable methods for the capture and translocation of oxpeckers over large distances. Oxpeckers have been caught using nylon nooses on tethered animals (Davison 1963; Grobler 1979) and by using mist nets at watering points (Bezuidenhout & Stutterheim 1979). Van Someren (1951) proposed the collection at nests and the construction of a 6-inch diameter stove pipe 15 ft tall in a cattle boma. It was suggested that an oxpecker perched on the pipe would dive down it and be unable to fly out at the approach of a second bird. Using tethered animals, however, proved unsuitable for the present application as the animal used to capture the birds had to be pre-baited for a period of up to one month (Grobler 1977). This was impractical due to the distances involved.

A suitable capture site was selected by surveying oxpecker distributions in the Eastern Caprivi Strip (Stutterheim & Panagis 1985a). Yellowbilled oxpeckers *Buphagus africanus* were found to predominate over redbilled oxpeckers *B. erythrorhynchus* along the larger rivers and on the floodplains. The most important host for both species of oxpeckers in the Caprivi is cattle (Stutterheim & Panagis 1985a). Shangwali Village in the southwestern corner of Eastern Caprivi was selected as a suitable area as it is easily accessible and dominated by yellowbilled oxpeckers. A total of 22 oxpeckers were caught. Of those captured five redbilled oxpeckers and five yellowbilled oxpeckers were transported by road and air to the Veterinary Research Institute at Onderstepoort. After the successful transportation a further 43 yellowbilled oxpeckers were caught and transported to a release site in the Hluhluwe Game Reserve, Natal, as part of a reintorduction project in June 1986. In the same period a total of 16 redbilled oxpeckers were caught. The longest period in transit was 14h.

2 METHODS OF CAPTURE

Both species of oxpeckers have an early morning feeding peak (Stutterheim *et al.* 1987) and therefore oxpeckers were caught while the cattle were still in the kraals in the early morning from 05h30 to 11h00. Two sets of double nylon mist nets 12 m x 4,8 m (mesh size 36 mm) were erected at right angles to each other inside the cattle kraals with the bottom strands 1,5 m above ground. After a minimum of three oxpeckers had settled on the cattle inside the kraal the cattle were carefully herded towards the nets and then the birds were chased into the nets. Trapping was made difficult due to the steep ascent and descent flying pattern of oxpeckers (Stutterheim 1976).

A total of 16 redbilled and six yellowbilled oxpeckers were caught in a 10-day trapping period in October 1984. Although yellowbilled oxpeckers were more numerous in the area (Stutterheim & Panagis, 1980a), they were more difficult to capture as a result of a closer oxpecker/host relationship (Stutterheim & Panagis 1985b) these birds being reluctant to fly around. During the second capture operation 16 redbilled oxpeckers and 43 yellowbilled oxpeckers were captured during an eight day trapping period by two trapping teams. Birds were weighed and ringed immediately after capture.

3 TRANSPORT

Birds were transported to temporary holding cages in standard bird transport boxes (100 x 50 x 30 cm) built to IATA specifications (Specific container no 43; IATA 1985). The inside of the box and the perches were covered with 1 cm layer of foam and a single layer of hessian cloth. This was done to enable the oxpeckers to cling to the sides of the boxes in a manner similar to oxpeckers clinging to their host animals (Attwell 1966). These boxes were also used to transport oxpeckers by air from Caprivi to Onderstepoort and to Umfolozi Game Reserve. The birds were held captive for a minimum period of 18 h after transportation to monitor condition and mortalities. No birds were released until they were observed feeding. The longest continuous period spent in these boxes was 14 h. No mortalities occurred during or after transport. Oxpeckers were provided with food and water during transportation which they used extensively. In one instance, during the flight to Umfolozi, the birds were transported in an unheated plane. This placed considerable stress on the birds and is not recommended for future transportation. No mortalities occurred, in this instance, possibly due to the fact that the cage could be placed in such a way that the birds had access to limited amounts of sunlight and the fact that the period in transit was relatively short. Birds were returned to host animals as soon as possible after transportation.

4. MOBILE TEMPORARY HOLDING CAGES

Both species were kept together in temporary holding cages (2,5 x 1,5 x 1,5 m) for a period of 3 - 13 days depending on the date of capture. Two goats were provided as host animals. The cage was built on a trailer 2,5 m x 1,5 m to enable the birds to be moved for short distances without handling the birds or removing the host animals. The bottom and sides (up to a height of 40 cm) of the cage was covered with steel plating to contain the goats and facilitate cleaning. However, the use of a steel frame for the cage proved unsuitable during the winter as the oxpeckers were sensitive to cold during roosting. Protected areas had to be provided for roosting. The rest of the cage was covered with plastic netting giving 50% shade to avoid injury to the birds and provide a soft medium to which they could cling. Shallow trays (3 - 5 cm deep) of water and sand were provided to facilitate sandbathing and drinking. Oxpeckers were caught in the cage with hand nets when required.

5 FEEDING IN CAPTIVITY

Oxpeckers were fed a mixture of egg, "Pro-nutro" and mincemeat in the ratio of 1 egg to 30 g "Pro-nutro" to 130 g finely ground minemeat. This food was supplemented with frozen *Boophilus decoloratus* engorged female ticks provided by Onderstepoort. Artificial food was introduced by placing it inside an existing wound on the goats and by tying small plastic petri dishes for food to the goats. These dishes were gradually moved away from the goats until a feeding site on a platform had become established. Newly introduced birds learned from the other birds to use the feeding sites. Using this procedure ensured that all birds fed within 24 h after capture. A total of four feeding sites were provided as yellowbilled oxpeckers dominated and excluded redbilled oxpeckers during feeding. During the capture operation in June 1986 the large numbers of yellowbilled oxpeckers caught required the species to be separated. This did not resolve the problem of aggression at the feeding bowls. Interspecific aggression was prominent at feeding sites, particularly for yellowbilled oxpeckers. This made the use of multiple feeding sites necessary.

6 MORTALITIES AND INJURIES

Two birds showed symptoms of shock or injury when released into the temporary holding cages. Symptoms were consistent with leg paralysis associated with capture-myopathy in birds resulting in the oxpeckers not being able to cling onto the goats successfully (Young 1967). One bird recovered 24 h later, the other died after 48 h having been trampled by the goats at night. Similar symptoms were seen in three birds after transportation in an unheated plane. All these birds

recovered within 3 h after being returned to host animals. No further mortalities or injuries occurred during holding or transport. Birds were reweighed five days after arrival at Onderstepoort (i.e. 8 - 18 days after capture). Redbilled oxpeckers showed an average decrease in body mass of 4,7%, while yellowbilled oxpeckers showed an average increase in body mass of 2,1%.

7 DISCUSSION

The use of mist-nets in cattle kraals, proved to be successful in the capture of both species of oxpeckers. An alternative method of capture for yellowbilled oxpeckers, which sleep on cattle (Stutterheim & Panagis, 1985b), would be the use of spotlights and hand nets at night. This method is not considered suitable for use in areas where oxpeckers are persecuted, since the method may be learnt by the local inhabitants.

The use of foam and hessian inside the IATA transport boxes, seem to be essential to prevent injury and stress to the birds during transport. Goats proved to be inadequate as hosts as they displayed intolerance behaviour (Stutterheim 1976) towards the yellowbilled oxpeckers to the extent that the yellowbilled oxpeckers could not sleep on the hosts as they do elsewhere (Stutterheim & Panagis 1985b). For longer periods in captivity, a more suitable host, such as donkey or cattle, should be provided for yellowbilled oxpeckers. The decrease in weight of the redbilled oxpecker could possibly be a result of the initial aggression and exclusion by the yellowbilled oxpeckers of the smaller redbilled oxpeckers at the feeding sites; the two species should be kept separated to avoid any direct competition and aggressive interactions.

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