

The crowned race of reed cormorant *Phalacrocorax africanus coronatus* breeding underneath Walvis Bay guano platform, South West Africa

by

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ABSTRACT

P. a. coronatus nests commonly underneath the Walvis Bay guano platform on Bird Rock, preferring the sheltered landward side. Breeding has been confirmed from December to April and probably takes place throughout the year. A total of 104 nests, of which 37 were occupied, existed in January 1973. Seventy-one chicks and 25 eggs were present (average clutch size 2,5). Seventeen half-grown chicks were ringed. Comparison is made between the nests and nesting sites of *P. a. coronatus* and *P. a. africanus*.

I INTRODUCTION

Phalacrocorax africanus coronatus (Wahlberg) is classified by McLachlan and Liversidge (1970) as a local race of the Reed Cormorant *P. a. africanus* (Gmelin) although they mention that it forms a separate species in Roberts' original work. Rand (1960) considers the race's range to be limited to the coastline from Benguella on the West Coast to East London on the Cape Coast. Winterbottom (1971) considers *P. a. coronatus* to occur commonly along the South West African coast between the Orange River Mouth and Swakopmund.

The literature refers only briefly to breeding on the S.W.A. coastal islands of Ichaboe and Sinclair (Anon 1959, Moreau 1950, Rand 1949, 1963) although this race is known to have bred at the Walvis Bay guano platform since 1944 (Groenewald pers. comm). Rand (1952) observed adults in breeding plumage at Walvis Bay during July and I have seen courtship displays at the nests in September. There is also a note by Hewitt (1934) concerning specimens of the Reed Cormorant *P. a. africanus* taken at Swakopmund and Walvis Bay but the date is prior to the recognition of *coronatus* as a distinct race. During January 1973 I was able to ring chicks and gather information about the race's breeding underneath the guano platform.

II NESTING SITE, NESTS AND ACCESS

The situation and construction of Walvis Bay guano platform has been described by Rand (1952). All nests of *P. a. coronatus* are built underneath the platform, amongst the secondary struts and beams of the main supports (Plates 1 and 2). A nesting site of *P. a. africanus* comparable to this is mentioned by Benson (1946) quoting B. L. Mitchell who found that race's nests on girders under a railway bridge which crossed a dam. At the Walvis Bay platform a total of 47 supports held nests. The nests are arranged singly and in clusters of two to six amongst the supports at a height of 2,0-2,5 m above the natural rock base of the plat-

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form. At high water ordinary spring tide the nest cups would be about 1 m above the level of the sea. The nests are built mainly with sticks and dried seaweed whilst scraps of rope, wire and plastic sheeting are interwoven into the structure. The lining consists of feathers and bits of fishing line. They have obviously been added to and re-used for many seasons because some nest structures attain a height of 50 cm and addled eggs are lodged in the lower parts. The inside diameter of the nest-cup is about 12 cm and it is shallow (depth 2-3 cm). Records of *P. a. coronatus* and *P. a. africanus* nests at the Percy FitzPatrick Institute of African Ornithology, Cape Town, are brief. MacLeod *et al.* (1951) say that *P. a. coronatus* nests were "built entirely of dry sticks". *P. a. africanus* nests are described by Gray (1945) as "platforms of thin sticks, reed and water weed", while Patten (1952) says they are "made of twigs cemented together with the excreta of several broods of young". He adds: "These were the dirtiest nests in the heronry, and looked as if they were about to disintegrate, but were, in reality, very firm and strong".

At Walvis Bay the entire colony of *P. a. coronatus* shows a definite preference for the eastern (landward) side of the platform. All nests occupy the first four rows of struts on this side (mostly the second row) and not further towards the centre where it becomes quite dark underneath the platform. The reason for the nests being located to one side is probably to avoid exposure to the prevailing south-westerly winds. The windward side may also present difficulties in landing and taking off. The preferred landward side is in an area of calmer water because the platform's western side stands on the edge of the rock formation and in a heavy swell its underneath receives spray from the waves.

The best time to visit the colony is during the annual guano harvest in January/February when two cables are rigged between the mainland and the platform for transport purposes. Access to the nests is limited to low water, preferably during a spring tide, as the entire rock base of the platform is flooded by the incoming tide. I found it necessary to carry a light-weight, 2-m ladder to reach the nest cup.

III NEST CONTENTS

During my visit in January a total of 104 nests existed with 37 occupied. Twenty-five eggs were present in nine nests (clutch size 2-4, average 2.5). Three eggs from different nests had the following measurements (mm): 44,0 × 31,0; 45,7 × 31,4; 46,0 × 31,2. MacLeod *et al.* (1951) give a clutch size of 2-3 eggs in a *P. a. coronatus* breeding colony in the Cape Province. Two eggs measured by them were 46,8 × 30,4 and 47,0 × 30,1 mm. At Walvis Bay there were 71 chicks in 28 nests (2-4 per nest, average 2), ranging from newly hatched to fledging. No published description of the chicks of either *P. a. coronatus* or *P. a. africanus* could be traced at the Percy FitzPatrick Institute (Rowan, *in litt.*) although Bow-

maker (1963) describes the immatures of the latter species.

P. a. coronatus chicks are naked, dark pink to red when newly hatched, the skin soon turning to dull black. Older chicks are covered with black down (Plate 5) except for the crown of the head which is light yellow. The bare skin of the throat next to the mandible is reddish on either side and speckled with yellow and black underneath. The legs are shiny black and the feet have sharp, hooked claws. Younger chicks remain within the nest cup, but once the wing feathers have broken through their shafts the chicks become very agile and claw their way along the beams, making it difficult to reach them. Chicks approaching the flying stage dive off the supports into the water when pursued and can swim strongly. Their head-colouring makes them easy to distinguish from the chicks of the Cape Cormorant *P. capensis* which are uniformly greyish-black around the head.

IV RINGING

To catch chicks of *P. a. coronatus* a circular loop (diameter 1 m) was attached to a metre-long pole. The loop was loosely covered with 75 mm nylon mesh taken from a bird net. It formed a holding cup so that chicks could be caught if they fell from the nests. During the first visit 10 half-grown chicks were banded with 12,5 mm monel rings which were slightly overlapped. Subsequently 8,0 and 11,5 mm rings were tried but the former size is too small. A further seven half-grown chicks were banded with 11,5 mm rings, flattened to the shape of the tarsus. It seems inadvisable to band the older, more mobile chicks as they invariably fall from the nest and cannot regain the supports under the platform.

V CONCLUSIONS

P. a. coronatus is small in number compared to the main inhabitant of the guano platform, *P. capensis*, but has established a viable breeding colony. The total number of adults present appears to be between 100-150. No Crowned Cormorant nests were found on the exposed, upper surface of the platform and the race apparently also roosts only among the sheltering supports. For these reasons *P. a. coronatus* probably has no role as a guano-producing species on the Walvis Bay platform.

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VII REFERENCES

- ANON
1959 Captioned photograph in *Bokmakierie* 11 (1): 17.
- BENSON, C. W.
1946 Aquatic birds at Blantyre, Nyasaland. *Ostrich* XVII (4): 273 - 279.
- BOWMAKER, A. P.
1963 Cormorant predation on two Central African lakes. *Ostrich* XXXIV (1): 2 - 26.
- GRAY, W. J.
1945 Some notes on the nesting of certain birds in northern Nyasaland. *Ostrich* XVI (1): 49 - 54.
- HEWITT, J.
1934 Notes on some birds in the Albany Museum. *Ostrich* V (1): 1 - 16.
- MACLEOD, J. G. R. and E. M. and MURRAY, C.d'C.
1951 Birds of the Hottentot Holland (Part I). *Ostrich* XXII (3): 179 - 189.
- MCLACHLAN, G. R. and LIVERSIDGE, R.
1970 *Roberts Birds of South Africa*. Trustees of the John Voelcker Bird Book Fund, Cape Town.
- MOREAU, R. E.
1950 The breeding seasons of African birds: Seabirds. *Ibis* 92: 419 - 435.
- PATTEN, G.
1952 Inside a heronry. *Bokmakierie* 4, No. 1: 8-9.
- RAND, R. W.
1949 Birds observed on Sinclair Island *Ostrich* XX (3): 150 - 157.
1952 Guano enterprise in South West Africa *Ostrich* XXIII (5): 169 - 185.
1960 The Biology of Guano-producing Sea-birds. 3. The Distribution, Abundance and Feeding Habits of the Cormorants *Phalacrocoracidae* off the South West Coast of the Cape Province. *Division of Fisheries Investigational Report* No. 42. Government Printer, Pretoria.
1963 The Biology of Guano-producing Sea-birds. 5. Composition of Colonies on the South West African Islands. *Division of Sea Fisheries Investigational Report* No. 46. Government Printer, Pretoria.
- WINTERBOTTOM, J. M.
1971 A Preliminary Check List of the Birds of South West Africa. *S.W.A. Scientific Society*, Windhoek.

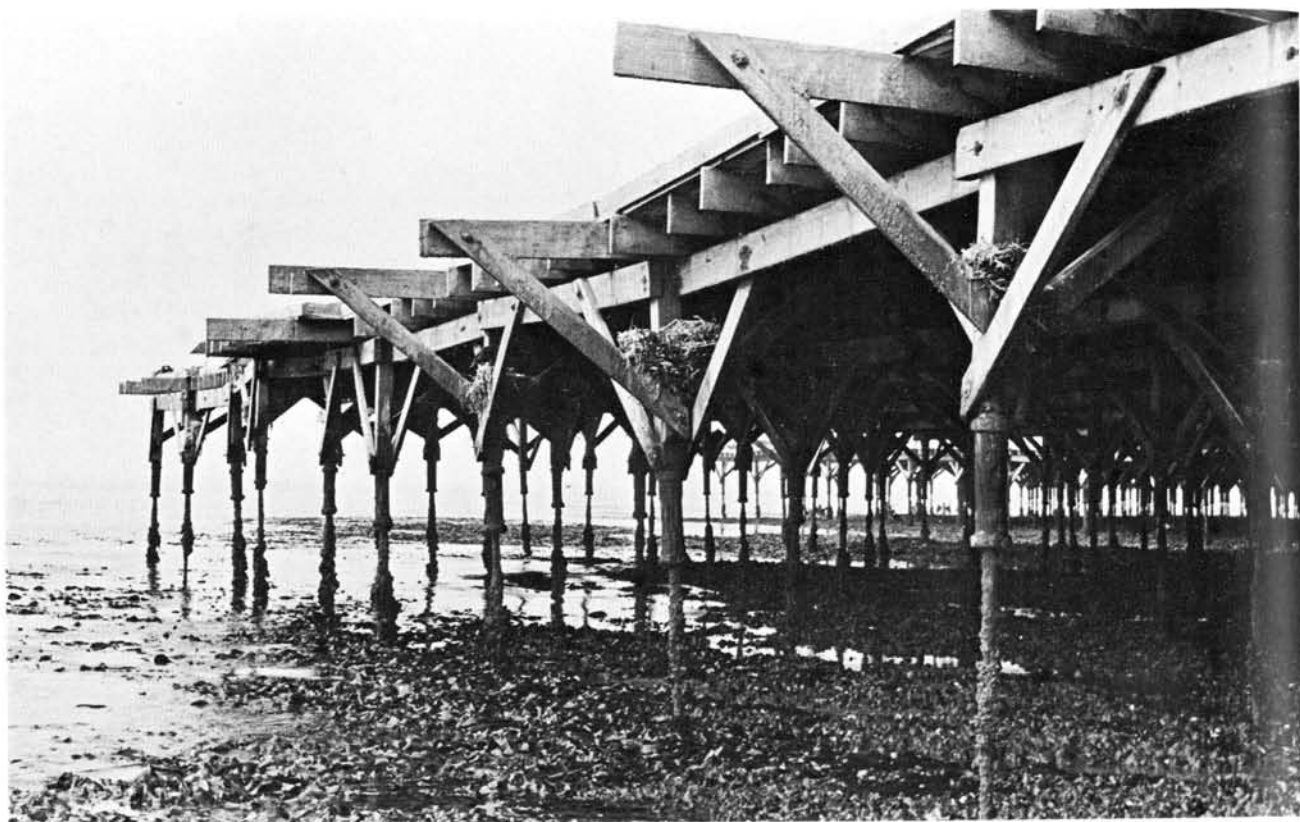


Plate 1. View of the eastern edge of the Walvis Bay guano platform at low spring tide. Nests of the Crowned Cormorant are clustered among the struts.



Plate 2. A Crowned Cormorant at the nest with its chick.



Plate 3. At this stage of growth the Crowned Cormorant chick is not quite mobile, which makes it suitable for ringing.