ed some 50 birds but no specimen has been obtained from Indian limits. Some of the terns including *S. hirundo,* are very confusing and it would be well to obtain specimens in support of the first few records.]

Common Tern **Sterna hirundo.** Over 400 birds in October with a few present in November. Dark wing tips, grey rump and longer tarsus separates this from the very similar Arctic Tern *S. paradisaea* in winter plumage, the latter not being present.

Short-toed Larks **Calandrella cinerea.** Flocks of 100 and over were seen feeding near the golf on most days.

[Flocks often seen on dry open land adjoining salt pans, mangrove, etc. October to February.]

Many more Palaearctic migrants were seen in the area in fluctuating numbers. The species involved were mostly wheatears, warblers, redstarts, bluethroats, bee-eaters and a continual stream of swallows.

This area would be excellent for migrational studies by local ornithologists and is only a few minutes by bus from the Society's rooms.

J. C. SINCLAIR

120, Madeline Road,
Morningside,
Durban 4001,
South Africa,
March 25, 1976.

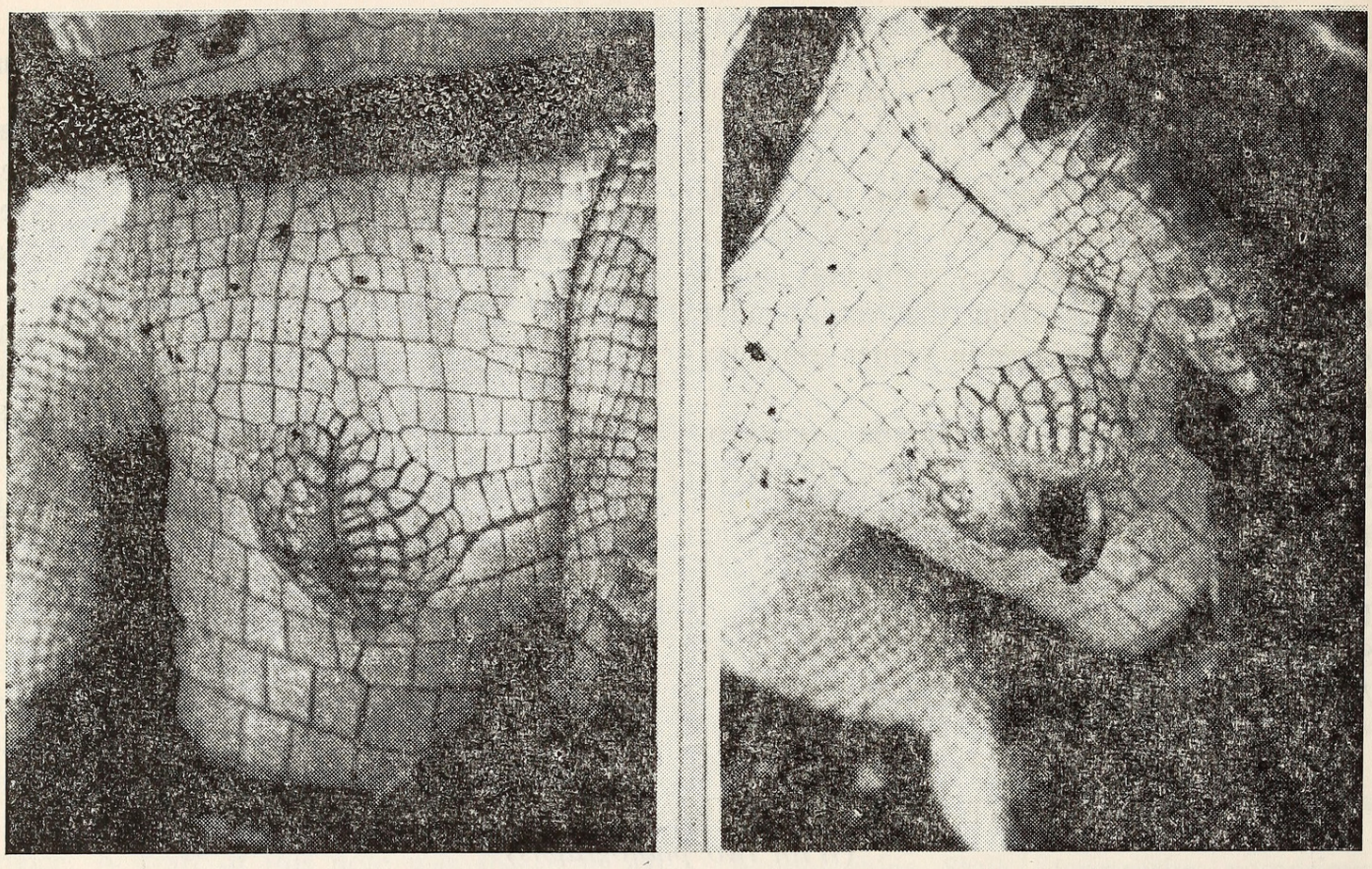
10. A NOTE ON CROCODILIAN SEX DETERMINATION

(*With two photographs*)

Rene Honegger has written in IUCN Bulletin 32 (1971) that the sex of living crocodiles of certain species can be determined by manual probing of the cloaca of specimens over 75 cm in length. Other methods include body size comparisons in large adults (the male grows larger) and scalation (the scales surrounding the cloaca are larger in the males of some species) but these are limited in scope and accuracy.

We have one *Alligator mississipiensis* 129 cm long and one 15 year old *Crocodylus palustris* 195 cm long. On transferring them recently we were able to check and determine their sex by the manual probing method. The Alligator proved to be a female with an unobstructed cloacal passage. The Marsh Crocodile is a male, the penis being a soft obstruction about 7 cm inside the cloaca. An unexpected bonus was that the crocodile extruded its penis about 12 cm while it was being checked resulting in the accompanying photograph.

Sex determination by external features is extremely difficult in many reptiles but very important when planning breeding and rearing programmes such as a crocodile farm. The success of the Samut Prakan Crocodile Farm in Thailand with its population of 11,000 crocodiles (*C. siamensis* and *C. porosus*) points to very good chances of successful crocodile farming in India. This will be a necessity to save India's three crocodilians and can be an economically profitable project as well.



1 2

Photo. 1. Slightly elevated area of a crocodile with penis withdrawn. Photo. 2. Tip of the penis of an adult male Marsh Crocodile.

MADRAS SNAKE PARK TRUST,
GUINDY DEER PARK,
MADRAS 600 022,
March 21, 1973.

R. WHITAKER

11. GROWTH STUDIES ON TWO SPECIES OF CROCODILES IN CAPTIVITY

Information on the economics of rearing crocodiles in captivity in India is almost lacking and the available literature (Daniel 1970, Misra 1970) points to the danger of Indian species facing the threat of extinction due to illegal hunting for skins. The preliminary survey of Bustard (1974) lays stress on the importance of crocodile farming in our country from the view point of both conservation and economic return.

The present study deals with the growth rates of two species of crocodiles namely *Crocodylus palustris* and *C. porosus* in captivity. These studies tend to show that they