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# OBSERVATIONS OF CRESTED TERNS WITH AN EXPERIMENTALLY ADDED EGG IN THE NEST

The clutch size of Crested Terns *Sterna bergii* is predominantly one, although a few clutches of two occur. Langham and Hulsman (1986) recorded that one per cent of clutches at One Tree Island on the southern Great Barrier Reef contained two eggs. There has been some speculation about Crested Terns being capable of laying two eggs with the suggestion that larger clutch sizes result from eggs rolling between adjacent nests (K. Hulsman, pers. comm.).

A clutch enlargement experiment, undertaken at Eagle Island on the northern Great Barrier Reef (Smith and Buckley 1986), revealed that most Crested Terns either reacted to added eggs by destroying them or were incapable of hatching two young.

Laying began in the study colony on 3 January 1984. Ten nests were selected at random on 19 January, flagged and an egg from another nest (of the same age) added, within a day of laying, to each of the marked nests. The transplanted eggs were marked and both eggs were measured either six or seven days later, except in one nest where the eggs had disappeared. The nine clutches were subsequently monitored daily for up to six hours from a hide until hatching.

In three nests, the additional eggs were observed being destroyed by the sitting bird shortly after measuring had taken place on 25 or 26 January. In two of these nests the remaining egg disappeared after 26 January, and in the third nest a chick hatched. Both eggs disappeared without trace in another three nests. In a further two nests, one egg had disappeared and the other chick hatched; it is not known whether the original or added egg hatched. In only one nest were two chicks hatched; one of these chicks was found dead five days after hatching. In summary, five chicks hatched from 10 nests containing 20 eggs in total, giving a hatching rate of 25 per cent.

It is curious that eggs in manipulated nests were not rejected until seven days after transplanting, rather than immediately. Egg destruction may have been a direct consequence of my visit, although the motivation behind the act is unclear. It is possible that the added egg had become a source of irritation.

The observations suggest that Crested Terns are reluctant to accept an egg that may have rolled into the nest. Thus, most Crested Terns may recognize foreign eggs as such and will destroy them. Alternatively, most Crested Terns may be physiologically incapable of brooding two eggs, so that if an egg rolls from an adjacent nest then an egg will be inadvertently rejected.

It is evident that a small proportion of Crested Tern pairs (i.e. 1 in 10) will accept an added egg into the nest and successfully hatch both young; this supports the hypothesis that eggs could roll between nests. However, based on these results, one cannot rule out the possibility that two eggs in a nest may be the product of either one female or a female-female pair, where each female contributes an egg to the nest. Female-female pairs have been recorded for other Larids, such as the Red-billed Gull *Larus novaehollandiae scopulinus* of New Zealand (Mills 1989).

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