

ear a pair of Bluebirds whose young were ready to leave. On four occasions the Bluebirds re-nested in the new house. On two occasions they used the original house. This is all we tried.

By keeping notes on each Bluebird house and by banding adult nesting birds, an interesting piece of information was collected on Tree Swallows. On three occasions we found more than one female Tree Swallow incubating a clutch of eggs or feeding young. At any one time there was only one female in the house but we caught other males either sitting on the eggs or feeding the young.

Hatched Egg-Shells Covering COMMON TERN EGGS

by DAVID R. M. HATCH*

While conducting a study on Little George Island (52°51' — 97°47'), Lake Winnipeg, between July 1 and July 10, 1971, I made an unusual observation in Common Terns regarding hatched egg-shells.

In each of seven nests, one egg in the clutch of two or three was covered by the large end of an egg-shell from a hatched egg. In each case, the additional shell was firmly stuck over the large end of the unhatched egg. I removed the extra egg-shell from six eggs. In two of these six cases, the big end of the unhatched egg was already pipped. Chicks hatched within 24 hours from four of these six eggs. The two remaining eggs each contained fully developed dead young. All four young from the eggs which hatched were accepted by their parents. In the seventh egg from which I did not remove the additional shell, the chick failed to hatch.

N. Tinbergen refers to the large end of the hatched egg as the "small 'lid' at the obtuse end which comes off during hatching."³ In dealing with the Black-headed Gull, Tinbergen suggested that one of the reasons for egg-shell removal is the possibility that this "lid" might tend to slip over an unhatched egg, thus trapping the chick in a double shell." This may have occurred in the case of the Little George observations.

Adults that I observed generally

carried the hatched portions of eggs from their territory and usually out of the colony. This behaviour differs somewhat from that described by R. S. Palmer who wrote that "adults may fly up with a shell, then drop it while they are still over their own nesting territory."² He did not mention egg-shells slipping over the ends of unhatched eggs.

There is the possibility that these "lids" were actually placed over the unhatched eggs. In the Honey Buzzard, the two halves of a hatched egg-shell are placed one inside the other before they are removed from the nest.¹ My observations may represent a similar tendency in Common Terns, or they may merely show a failure of some adults to remove egg-shells following hatching with the resultant accidental slippage of the "lids" over unhatched eggs.

I would like to thank Dr. Roger M. Evans, Dr. Kees Vermeer, and Dr. Robert W. Nero for their assistance in reviewing the manuscript. My work was undertaken while employed by the Canadian Wildlife Service.

¹ARMSTRONG, E. A. In: A. L. Thomson, ed. 1964. *A new dictionary of birds*. McGraw-Hill Book Company, New York.

²PALMER, R. S. 1941. *A behavior study of the Common Tern*. Boston Society of Natural History, 42: 1-119.

³TINBERGEN, N., G. J. BROEKHUYSEN, F. FEEKES, J. C. W. HOUGHTON, H. KRUIK, and E. SZULE. 1962. *Egg-shell removal by the Black-headed Gull (Larus ridibundus L.): a behaviour component of camouflage*. Behaviour, 19: 74-118.