

400 mm. telephoto lens. We are also entirely indebted to Mr. George Wallis for the design and construction of the rafts and to the men of his Company for their enthusiastic help.

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Observations on nesting Shelduck

THE Shelduck *Tadorna tadorna* remains a considerable enigma. Only during the last twenty years has the fascinating pattern of its moult migration been discovered, and many aspects of its breeding biology remain shrouded in uncertainty. The main reason for this lack of knowledge is that the species usually nests in holes and, whilst its choice is catholic, the difficulty of observing behaviour at such nests is considerable. Full protection and the bird's unpalatable flesh have also helped to limit knowledge insofar as the species is of little interest to wildfowlers and in consequence research prompted by economic and harvesting considerations such as has taken place on other species of waterfowl has been lacking. My own studies on Shelduck have been made in the Thames estuary in Kent, where the species is an abundant winter visitor and also breeds commonly. In this short paper some features of the habits at the nest are described. It is hoped to publish a more complete account of the breeding biology later.

The two most common nesting situations in my study area are in stacked hay and in trees; all the observations described here were made at such sites. Tree sites are especially fascinating and one of the most strangely beautiful experiences for anyone interested in ducks is the sight of a pair of Shelduck circling and flighting through the fresh green foliage of upland tree screens in May and early June, particularly when the presence of a nest is known with certainty. I have described elsewhere the hiding reaction of a female and brood when surprised at the nest (Hori, in press). Since that observation I have recorded a number of identical reactions from incubating birds. Typical was that of a female on 3rd June, 1962. This bird was nesting in a hollow bough of a pollarded elm about fifteen feet from the ground and had been under observation since late May. As is often the case with such trees, not only was the trunk hollow but so were the stumps of old boughs which ringed the top of the trunk forming a series of holes or antechambers off the trunk, with access from inside only. By 3rd June the ten eggs were in an advanced state of incubation. On climbing the tree that morning I detected movement inside and was just in time to see the female finish covering the eggs with down, slip quietly out of the nesting hole and steal into an adjacent hole. She went to the far end of the latter, some two feet long, and flattened herself against the end. This clutch was subsequently hatched on 10th June. Another example of the same behaviour was recorded from a bird nesting in a haystack. This nest was approximately twenty feet above the ground in a "blind" hole some twenty feet long. Here the bird had obtained its hiding place by building the nest fifteen feet from the entrance, thus giving itself another five feet behind. When disturbed the bird would leave the nest and hide in either the approach or the rear tunnels, usually the latter. Only in the event of severe disturbance would it leave the site altogether. When the entrance hole was blocked it would merely slip quietly into the rear hole.