

WINTER NESTING AND WINTER FOOD OF THE BARN OWL
IN SOUTH CAROLINA

BY CLARENCE COTTAM AND A. L. NELSON

The Barn Owl (*Tyto a. pratincola*) is a widely distributed species occurring at least casually in all sections of the United States. It is usually a permanent resident wherever it becomes established, although records indicate that it is partially migratory. The Biological Survey's banding and migration files contain a number of records of individual birds banded in New Jersey and Pennsylvania that were subsequently collected in South Carolina and Georgia. While it is known to be an erratic nester, most nidification records are for the spring months. Several records of fall and winter nests, however, have been published and a number of these are for South Carolina. Audubon in his "Ornithological Biography" (Vol. 2, pp. 404-405) discusses the finding of a nest of three young in October near Charleston, and estimated that the eggs from which the young had been hatched must have been laid by September 15. The young in this instance had been fed throughout their nest life exclusively upon small mammals, principally cotton rats. Arthur T. Wayne, in the *Auk* (Vol. 25, 1908, p. 21) reported finding a pair of these owls nesting in early winter, November 18, 1906, in an old mill on the banks of the Cooper River. The following year on the same site a nesting pair had a clutch of six eggs by September 19. Wayne advanced the theory that the birds may breed in South Carolina in the fall because at this season their natural food supplies are at a maximum. Rhett Chamberlain, (*Auk*, Vol. 28, 1911, p. 112) gives a record of another set of four eggs near Charleston in September. Other State records cover occurrences of nesting in the spring, which is considered the normal breeding season.

As further evidence of the winter nesting habit of Barn Owls an interesting recent record of off-season breeding may be cited from one of the Federal Migratory Bird Refuges. Reference is made to the Cape Romain Refuge located not far from McClellanville, South Carolina. In October, 1936, under the supervision of Refuge Superintendent Andrew H. DuPre, construction work on a 45-foot steel observation tower for this area was begun. The tower site was located in a salt marsh some four miles east of McClellanville and was situated on a mud flat in an almost pure stand of salt-marsh cordgrass (*Spartina alterniflora*) that is usually twice daily covered by high tide. The nearest tree, and in fact the nearest dry land, is approximately two and one-half miles distant. The habitat is one best suited to such birds as

the Clapper Rail, various ducks, and perhaps Seaside Sparrows. Certainly one would not look for a Barn Owl in such a situation.

Late in October when the framework of the tower was erected and the floor about half completed, emergency work on the refuge caused interruption of building operations and prevented completion of the project. When the Superintendent returned with his men to complete the tower a few days later, he discovered that a Barn Owl had taken possession and had begun nesting. To prevent disturbing the bird completion of the tower was delayed. A few subsequent trips by the Superintendent were made and at each visit the owl would leave and alight on the nearby mud flat in the midst of the plant growth—a habit characteristic of Short-eared Owls but so far as the writers are aware, an uncommon trait for Barn Owls. A nearby temporary wharf, not more than sixty yards away, which afforded landing from a channel or “natural”, contained several upright poles that might have been used for roosting, yet the bird preferred to alight in the marsh within a hundred yards of the tower.

The nest was placed in the northeast corner of the tower and was a very crude affair consisting of a few feathers from the birds' bodies and by the time incubation was completed, it was well lined and surrounded with broken down pellet debris and bone fragments of its larger prey. Nine eggs completed the clutch. At a visit to the nest on November 17, when Mr. DuPre knew that incubation must be nearing completion, it was found that calamity had befallen the set. Seven of the eggs had hatched and the two remaining were well pipped, yet evidence indicated that the parent bird had not been in attendance for perhaps twenty-four hours. As a consequence, the larger and more vigorous young had crawled out of the nest and had fallen to the stairway or ground and all had starved or frozen to death. The two preceding nights had been unusually cold.

But one adult bird was seen near the nest at a time and it is doubtful that the male assisted in the duties of incubation. Whether the female met death while searching for food or whether the urge of migration became stronger than the parental instinct is not known. At any rate, she failed to return to her brood and was not seen afterwards. It should be pointed out that this is the only owl reported for the refuge during the past three years.

To obtain data on the food secured by the bird in this unusual locality, twenty-one whole pellets were collected and examined in the Food Habits Laboratory of the Biological Survey in Washington, D. C. The results indicate that marsh-frequenting birds were taken in greater

numbers than is usually the case. Normally this species subsists almost entirely upon small rodents.

The following table gives the results of the laboratory pellet analyses:

TABLE 1. Food Remains Found in Twenty-one Nest Pellets of the Barn Owl Collected on Cape Romain Migratory Bird Refuge near McClellanville, South Carolina, November 30, 1936.

Pellet No.	Food Items	Pellet No.	Food Items
1	1 rice rat 1 seaside sparrow	10	1 undetermined bird about the size of a clapper rail
2	1 rice rat	11	3 rice rats
3	1 rice rat 1 seaside sparrow	12	1 meadow mouse
4	1 virginia rail 1 rice rat	13	3 rice rats
5	1 meadow mouse 1 seaside sparrow	14	1 meadow mouse 1 rice rat
6	1 seaside sparrow 1 undetermined bird— size of clapper rail	15	1 seaside sparrow
7	1 undetermined bird, probably a rail	16	1 meadow mouse
8	1 rice rat	17	1 meadow mouse
9	2 rice rats	18	2 rice rats
		19	1 meadow mouse
		20	1 rice rat 1 undetermined rodent
		21	1 meadow mouse

If each pellet represents the indigestible residue of a single meal, it will be noted that for the 21 meals, 17 rice rats, 7 meadow mice, 1 undetermined rodent, 3 birds presumably Clapper Rails, 1 Virginia Rail, and 5 Seaside Sparrows were consumed. Special reference should be made to the occurrence of meadow mice (*Microtus pennsylvanicus*) as standard manuals on mammalogy do not record this species along the coast south of northern North Carolina.

BIOLOGICAL SURVEY,
WASHINGTON, D. C.