

viewing a draft of this manuscript. This project was endorsed and funded in part by the U.S. Man and the Biosphere Program (MAB-3) contributing to grazing land management objectives. We thank the John Cason family and the Southern Timberlands Division of St. Regis Paper Co. for use of their lands during the study.—JAMES G. DICKSON, RICHARD N. CONNER, AND J. HOWARD WILLIAMSON, *USDA Forest Service, Southern Forest Experiment Station, Wildlife Habitat and Silviculture Laboratory, Nacogdoches, Texas 75962 (in cooperation with the School of Forestry, Stephen F. Austin State Univ.)*. Received 12 Jan. 1982; accepted 29 July 1982.

**Unusual Nest Attentiveness of An Eastern Phoebe.**—On 15 April 1981 we noted an Eastern Phoebe (*Sayornis phoebe*) building a nest atop a shelf on the Muellers' patio about 8 km west of Chapel Hill, North Carolina. Nest building had probably begun a few days earlier because the rate of construction was slow when first observed and increased in the few days before completion on 23 April. The nest was 3 m from the front door and .5 m from a porch light, ideally situated for observation at all hours. The nest was checked a minimum of 4 times daily, from early morning until several hours after dark. The phoebe began spending the night on the nest on 23 April, the day the nest was completed, and was on the nest every night through 26 May. The phoebe tolerated the switching on-and-off of the porch light and the passage of people within 2 m of the nest.

The first egg was noted at 07:20 on 26 April. The phoebe was on the nest again at 18:20 and remained there for the night. At 08:20 on 27 April the bird left the nest as one of us left the front door. Two eggs were present and we marked them. The third egg was laid before 07:10 on 28 April, the fourth between 06:25 and 08:45 on 29 April, and the fifth after 08:00 on 30 April. Although the bird spent every night on the nest, our fragmentary observations suggest that regular diurnal incubation did not begin until 3 May. On 29 April the nest was checked at least every half hour between 08:45 and 12:00 and the bird was not on the nest. Observations resumed at 15:00 and no bird was seen through 18:00. The bird was back at 20:00. In five spot checks between 07:30 and 18:15 on 30 April, no bird was observed. On 1 May, the first day with a complete clutch, the bird was incubating from 06:50–08:40 and then was absent until at least 10:15. Observation resumed at 16:30 and the bird returned at 17:05. On 2 May, the nest was unattended from 07:00 through 10:10. Observation was not resumed until 15:30, and the bird returned at 15:45. After 2 May, no absences of more than ca. 30 min were noted until well after the eggs hatched.

One of the first two eggs laid had hatched by 08:00 on 15 May. The other "first" egg plus the third had hatched by 19:45. The fourth egg laid hatched before 11:30 on 16 May, and the fifth before 14:00. Two young were found on the patio floor below the nest at 11:30 on 16 May, one of them dead. The other, which appeared weak, was returned to the nest. We suspect it did not survive because only 3 young were found in the nest the next morning. The phoebe spent every night on the nest through 26 May, at which time the young were sufficiently large so that the adult scarcely touched the rim of the nest. The young disappeared during the night or early morning of 26–27 May. The nest was undisturbed, showing no signs of predation, but no young could be found in the vicinity. The young were only 11 to 12 days old at this time, and their physical development appeared insufficient for flight. We doubt that they fledged successfully. Adult phoebes, but no young, were seen and heard in the immediate vicinity through 29 May. Stoner (N.Y. State Mus. Circ. 22, 1939) found that Eastern Phoebes fledge at an age of 16 or 17 days.

Roosting in the nest has been noted in passerines that breed in holes or in covered nests. Some colonial non-passerines spend considerable time on the nest before egg-laying. However, we have been unable to find any account of a passerine spending the night on an open, cup-shaped nest before incubation begins. It is likely that few observers have looked for the possibility, but Nolan (Ornithol. Monogr. 26:203, 1978) found that Prairie Warblers (*Dendroica discolor*) did not begin sleeping on the nest until the night before

laying the final egg, at which point regular diurnal incubation also began. Nolan found Prairie Warblers on the nest 7–25% of the time during the days of the egg-laying period. Although our observations were limited, we never saw the phoebe on the nest during the egg-laying period except in the early morning, when egg-laying occurred, and at night.

The timing of hatching of the eggs suggests that the phoebe was incubating at night during the egg-laying period. The length of night during late April, and the behavior of the phoebe, suggests that effective nocturnal incubation time was about 10 h. A very liberal interpretation of the data from our relatively infrequent inspections of the nest suggests that the young could have hatched about 10 h apart.

Stoner (1939) states that the incubation period of the Eastern Phoebe is 16 days, measured from the laying of the last egg to the first to hatch. Bent (U.S. Natl. Mus. Bull. 179, 1942) also gives the incubation period as 16 days, but does not specify how it was determined. For our nest, the incubation period was 15 days between the laying of the last egg and the hatching of the first and 16 days for the last, if determined as between laying and hatching, and 17 days or longer for the other eggs. The nocturnal incubation may have accelerated development, but this may have been offset by the low diurnal nest attentiveness during the first 2 days after the clutch was completed.

One might attribute the sleeping on the nest before egg-laying to the energy savings gained by the insulation of the nest and the reduced losses due to radiation because of the patio roof ca. 30 cm above the nest site. This seems unlikely because temperatures were unseasonably warm (max. 24°C min. 15.5°) on the day the phoebe began to sleep on the nest. Temperatures continued to be unusually warm throughout the time until the clutch was completed. The low diurnal attentiveness in the first 2 days after clutch completion is also difficult to explain. Temperatures were quite warm these 2 days (maxima 23° and 18°C) and the bird should have been able to obtain sufficient food without difficulty.

Sleeping on a nest before investing in a clutch of eggs has the obvious advantage of functioning as a monitoring mechanism for potential nocturnal nest predators. Such an hypothesis, however, seems unlikely because phoebes apparently require 7 to 13 days to build a nest (Bent 1942), and monitoring could thus begin earlier than a few days before egg laying. We see no advantage in sleeping on the nest once egg laying has begun, at least not during mild weather. Further watches of phoebes during nest building and egg laying are needed before this behavior can be labeled as truly unusual.—HELMUT C. MUELLER, *Department of Biology and Curriculum in Ecology, University of North Carolina, Chapel Hill, North Carolina 27514*, NANCY S. MUELLER, *Department of Biology, North Carolina Central University, Durham, North Carolina 27707*, and KENNETH D. MEYER, *Department of Biology, University of North Carolina, Chapel Hill, North Carolina 27514*. Received 28 Jan. 1982; accepted 20 July 1982.

**A Technique for Live-Trapping Cormorants.**—In the basic Bal-chatri trap, originally developed for use with raptors (Berger and Mueller, *Bird-Banding* 30:18–26, 1959), a small cage for holding live bait such as a bird or mouse is covered with slip nooses. When the predator flies in and attempts to grab the bait, its feet catch in the nooses and pull them tightly shut. The cage usually is made of chicken wire or hardware cloth, and the slip nooses of monofilament fishing line. The size and shape of the trap vary according to the size and habits of the bird to be trapped. The design of the trap has been modified to extend its use to the capture of non-raptorial birds such as shrikes (Clark, *EBBA News* 30:147–149, 1967), grouse (Anderson and Hamerstrom, *J. Wildl. Manage.* 31:829–832, 1967), magpies, kookaburras, dotterels, and a variety of grain-eating species (Llewellyn, *Australian Bird Bander* 11:30–32, 1973). Herein, we report a modified form of the trap that we used to catch Olivaceous Cormorants (*Phalacrocorax olivaceus*) and suggest its application for the capture of other aquatic species of birds.

In August 1981, we trapped cormorants at Estancia La Golondrina, ca. 45 km N of Asuncion (24°55'S, 57°40'W), in Dpto. Presidente Hayes, Paraguay. Trapping was concen-