

Hatching of Wood Duck eggs after abandonment.—In the course of studies on the Wood Duck (*Aix sponsa*) at the Patuxent Research Refuge, Laurel, Maryland, I observed an instance of incubation after the eggs apparently had been abandoned by the duck. Several eggs hatched in a nest box during warm summer temperatures, without evident benefit of a setting bird.

On June 15, 1953, a female wood duck was flushed from its nest box containing 15 eggs which were warm and surrounded by a scant amount of down. On June 23 I removed the duck from the nest and fastened over the entrance a protective wooden tunnel of the type designed by the Massachusetts Division of Fisheries and Game to exclude raccoons, *Procyon lotor*, (McLaughlin and Grice, 1952. *Trans. N. Amer. Wildl. Conf.*, 17:242-259).

Five days later, on June 28, the nest box was inspected again but no duck was present. Instead, raccoon hairs were found at the entrance of the tunnel though not on the inside. There appeared to have been no change in the nest since the previous inspection. An "X" was pencilled on the upper surface of each egg so that in a later inspection it would be evident whether the eggs had been turned, as is done periodically by incubating ducks. Before leaving the box, I restored the down to its place over the eggs.

The nest box was inspected again a month later on July 29 at which time nine of the 15 eggs were found still intact and covered with down with the "X" marks still facing upward. The fact that these eggs apparently had not been turned seems to indicate that they had not been incubated by the duck since the time the "X" marks were applied. Ducklings had hatched from three other eggs but were dead in the box, and three more eggs were pipped but the ducklings were dead inside the shells.

The nest box was made of heavy pine boards and erected where it was exposed to the sun during most of the day. Although the insulation provided by the box, together with sawdust and duck down, would tend to "level off" extremes of daily temperatures, the embryos must have been exposed to considerable chilling at night and possibly excessive heating on hot, sunny days. The amount of chilling or overheating that duck embryos will tolerate at various stages of incubation appears to have received little study.

Installation of the entrance tunnel during incubation may have been the primary cause of abandonment, but boxes equipped with these tunnels are used commonly by Wood Ducks. The following year (1954) the same nest box, equipped with the same tunnel, was occupied by a Wood Duck which brought off a brood of ducklings.—CLARK G. WEBSTER, *U.S. Fish and Wildlife Service, Laurel, Maryland, May 1, 1955.*