

During the summers of 1977 and 1979 two instances of prolonged incubation by Common Loons (*Gavia immer*) for 74 and 68 days, respectively, were observed in New Hampshire. Normal incubation periods reported for the species in New Hampshire range between 25–33 days and average 28 days (Sutcliffe, Aspects of the Nesting Ecology of Common Loons in New Hampshire, M.S. thesis, Univ. New Hampshire, Durham, New Hampshire, 1980). In both cases reported herein the loons were monitored at least twice weekly and chances of egg loss followed by renesting were unlikely. Both nests were ultimately abandoned. The 74-day clutch (two eggs) was found in the nest, whereas eggs from the 68-day clutch were found floating adjacent to the nesting island. All eggs were addled and their contents were about one quarter the volume of a normal loon egg. Reasons for non-viability were undetermined.

These examples serve to verify Skutch's (1976) observations that some bird species may remain faithful to unhatched, malodorous eggs for periods up to twice the normal incubation length, thereby providing a wide margin of safety for eggs taking longer to hatch. At northern latitudes, where short ice-free seasons may reduce the possibilities for renesting and fledging of chicks before freeze-up, this behavior may be beneficial to loon populations. However, in more southern areas like New Hampshire, where ice-free seasons are longer, prolonged incubation of non-viable eggs may prevent successful renesting that might occur otherwise.

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Barn Swallow fledgling successfully elicits feeding at a non-parental nest.—In Barn Swallows (*Hirundo rustica*), as in many species, the begging behavior of fledglings is ignored by the parents just prior to independent feeding. Fledglings then beg indiscriminately from any available conspecific. They are usually disregarded and begin to feed independently. Herein, I report on an instance of a fledgling successfully obtaining food from an adult which was not its parent. On 20 July 1980, while watching a nest in a Barn Swallow colony of 80 pairs under the decks of the Rutgers Marine Field Station, I saw a fledgling from another nest land in the nest I was watching and beg with the nestlings; the nest contained four 14-day-old nestlings. The female at this nest had previously been banded and color marked on her breast. Her mate was unmarked. The young Barn Swallow, identified as a fledgling by its breast color and yellow gape, landed on the edge of the nest. Both adults were there and called vociferously at the intruding bird. The intruding young remained at the nest despite this and the adults left after 60 sec. For 10 min the intruder crouched in the nest cup behind the nestlings. It then began to present its gape (which was noticeably larger than those of the nestlings) to the feeding adults. During the next 30 min the female made seven feeding trips to the nest and the male made ten. On two trips the intruder was fed by the male.

The adults apparently recognized the fledgling as an intruder. Immediately after feeding it for the first time the male pecked at it. On three other occasions the male paused after feeding his own young and tried to evict the intruder by pecking at it. All of these attempts usually lasted less than 1 min. The second time the fledgling was fed, the male stayed fewer than 10 sec at the nest.

This observation is consistent with what is known about individual recognition in Barn

Swallows. Although Burtt (Anim. Behav. 25:231-239, 1977) has shown that Barn Swallows do not start to recognize their young until the time of fledging, Grzybowski (Condor 81:236-246, 1979) demonstrated that parents can discriminate between their own young and experimentally presented young of a different developmental stage. The intruder's success in acquiring food on two feeding visits from adults in 30 min was probably a function of the severe time constraints on parents with broods of this age and size. The parents averaged 20-30 feeding visits per hour which left little time to remove the intruder from the nest and increased the probability of making a mistake since many of the visits were brief. Similar feeding errors in Bank Swallows (*Riparia riparia*) have been reported (Hoogland and Sherman, Ecol. Monogr. 46:33-58, 1976; Beecher et al., Anim. Behav. 29:86-94, 1981). But in this species, as in Barn Swallows, the parents are usually able to chase off or evict alien fledglings.

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Cowbird control and its effect on Kirtland's Warbler reproductive success.—Kirtland's Warbler (*Dendroica kirtlandii*) is the subject of international interest and was officially listed in the U.S. as an endangered species in 1967 because of its precarious status. Reasons for the decline of the Kirtland's Warbler population are complex and not fully understood. Parasitism of warbler nests by Brown-headed Cowbirds (*Molothrus ater*) has been suggested as one cause. Kirtland's Warbler is particularly vulnerable to nest parasitism (Mayfield, *The Kirtland's Warbler*. Cranbrook Inst. Sci., Bloomfield Hills, Michigan, 1960).

Since 1972 the U.S. Fish and Wildlife Service has conducted an intensive program of cowbird removal in the Kirtland's Warbler nesting areas in the northern lower peninsula of Michigan. Shake and Mattsson (Jack-Pine Warbler 53:48-53, 1975) reported on cowbird control efforts from 1972-1974. The present report summarizes the Fish and Wildlife Service's cowbird control program and its effect on warbler nesting and fledging success from 1975-1981.

Cowbird decoy traps were erected on nesting areas located in Crawford, Kalkaska, Ogemaw, Oscoda, Iosco, and Roscommon counties in Michigan. The number of traps in operation varied from 28-40 during 1975-1981. Traps were placed at approximately square mile (1.6 km²) intervals within nesting areas. A more detailed description of decoy traps and trapping methods is given by Shake and Mattsson (1975). The nesting data for 1972-1981 were collected by Nicholas Cuthbert and Lawrence Walkinshaw under contract with the U.S. Fish and Wildlife Service.

During 1975-1981, 24,158 cowbirds were removed from the Kirtland's Warbler nesting areas, an average of 3451 birds per year. When combined with data from 1972-1974 the total number of cowbirds removed by trapping is 33,536 (Table 1).

Concomitant with the cowbird control program there was a substantial decrease in cowbird parasitism on Kirtland's Warbler nests. Walkinshaw (Am. Birds 26:3-9, 1972) reported that from 1931-1971, 59% (54 of 91) of Kirtland's Warbler nests examined were parasitized. In 1972, the parasitism rate dropped to 6% (2 of 31) of the nests examined (Fig. 1). Cowbird parasitism of Kirtland's Warbler nests has ranged from 0-9%, and averaged 3.4% over the 10 years of the cowbird control program.