

is compared with the 15.8 ha foraged by Clan A adults, the 1.3% difference here, and the 1.9% difference in total area foraged, must be considered insignificant due to the crudeness of the technique. This tends to substantiate the opinions of other researchers that this species can be found in habitat judged unsuitable, by human standards, while often absent from areas similarly judged as ideal.

It is also of interest to note that neither pair of birds foraged in hardwood trees during peak food abundance in summer. However, 10% of all trees foraged in winter were hardwoods, indicating that the available prey on pine trees during this season may be a limiting factor.

These data clearly indicate that the increased winter foraging requirements of this species must be considered by forest managers attempting to reconcile the dictates of timber production with the conservation measures necessary to insure the future survival of these birds.

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Choice of nest boxes by Starlings.—In 1973 a series of experiments was started to determine the preferences of cavity nesting ducks for nest boxes with various features. The boxes were located in Ontario on Elk Lake (44°44'N 80°20'W) and Long Lake (47°52'N 79°00'W), Timiskaming District, on the Nonquon River (44°06'N 79°00'W), Ontario County and on the Lindsay sewage lagoons (44°20'N 78°46'W), Victoria County. Starlings (*Sturnus vulgaris*) made substantial use of these boxes and their preferences for certain features are clear.

The boxes used were made from 1.27 cm sheeting grade plywood with a rough surface. They were of standard design but there was some variation in the dimensions (generally less than 2%). Internally the boxes were approximately 45 cm high at the back with a sloping roof to a height of 42.5 cm at the front. They were 24 cm from back to front and 21 cm wide. The majority were mounted on trees close to the shore, facing the water, and about 3 m above ground. Branches and shrubs were trimmed so that the boxes were clearly visible from the water.

The first test was a comparison of interior colors. Two boxes were mounted about 60 cm apart on horizontal supports. One of each pair was painted black inside, the other was left unstained. All exteriors were stained light brown. All boxes had oval entrances 10.5 cm wide by 8 cm high, with the lower edge located 31 cm from the bottom of the box.

The second test provided a choice of 3 entrance hole sizes, large (13 × 10 cm), medium (10.5 × 8 cm) and small (7.5 × 6 cm). These boxes were mounted about 45 cm apart on horizontal supports nailed to trees. All boxes were stained gray externally and painted black inside. They were arranged in sets of 3 in a latin square design, with the sets spaced roughly 0.6 to 1.2 km apart.

Jackson and Tate (1974 *Wilson Bull.* 86:435-449) in a survey of nest box use by Purple Martins (*Progne subis*), House Sparrows (*Passer domesticus*) and Starlings

(*Sturnus vulgaris*) reported that the latter showed no statistically significant preference for white or dark interiors in their nest structures. However, they found that 1% of the white interior structures were occupied by Starlings compared to 1.6% of those with brown or natural wood interiors.

In 132 sets of the interior color test in the present Ontario study, 34 pairs of Starlings laid eggs in boxes with black interiors and only 3 nested in the unstained boxes, a highly significant difference ($\chi^2 = 21.3620$, $P < 0.001$).

Forty-two pairs of Starlings laid in the 102 sets presenting a choice in the size of entrance hole. Thirty-five chose the small entrance hole, 7 the medium, and none the large. This also is a choice pattern that is highly significant ($\chi^2 = 40.7879$ 2 d.f. $P < 0.001$). Starlings might be expected to choose the center box which was in line with the tree trunk. Seventeen chose the left, 13 the center and 12 the right side box, indicating no such selection ($P > 0.10$).

The boxes used are of a suitable design for cavity nesting ducks. Their dimensions are probably much too large to be optimum for Starlings.

Nevertheless, Starlings showed a clear preference for boxes of this size with a black interior and with the smallest of the 3 sizes of entrance holes offered. I have seen Starlings trying unsuccessfully to squeeze into a bluebird type box through an entrance hole 3.5 cm in diameter. The optimum size of hole is probably much smaller than the 7.5 × 6.0 cm chosen in this duck nesting study.

I wish to acknowledge the help of G. Bain, J. Knowles, F. Close, R. Stitt, D. Rivett and A. O'Donnell who helped to check the boxes. This is Fish and Wildlife Research Br. Contribution No. 76-3.—HARRY G. LUMSDEN, *Fish and Wildlife Research Branch, Ministry of Natural Resources, Maple, Ontario. Accepted 13 July 1976.*

Wing-flashing and other behavior of a Mockingbird toward its dead young.

—On 7 June 1975 my dog caught a fledgling Mockingbird (*Mimus polyglottos*) that was still being fed by the parents. The fledgling was the only young of the unmarked pair. At the time of capture, both adults gave the usual distress calls and diving flights. When the dog released the still living fledgling, one of the adults immediately flew to the young. A few minutes after I picked up the young it died. I then placed the fledgling in a crotch formed by a branch and the trunk of a nearby tree. One of the adults saw me make this placement. Throughout the remainder of the day an adult Mockingbird flew to the dead young. Sometimes the adult produced a soft squeak-like sound as it cautiously approached the dead fledgling. Each time the adult flew to the dead bird, it gave a series of quick wing-flashes—in most cases while facing the young. The wing-flashes appeared to conform to the "low-intensity" type as described by Horwich (Wilson Bull. 77:264-281, 1965). In addition the adult frequently pecked and nudged the dead bird with its bill. I never detected food in the adult's bill. Until noon of the following day the same events previously observed occurred. They culminated when the adult pulled the young from the tree. At first the adult returned to the young lying on the ground; these trips soon ceased. Though the subject of wing-flashing in the Mockingbird and closely related species has received considerable attention in recent years (e.g. Horwich op. cit.; Michael, Wilson Bull. 82:330-331, 1970) no author has mentioned wing-flashing involving a situation as described above.

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