a few hundred yards away, the Short-bills were numerous but preferred to move to some bare beach when the tide flooded their feeding grounds.

In summation, the Long-billed Dowitcher has been recorded numerous times within a few miles of the lower Savannah River. In spring it has been seen from 27 March to 2 May, and the postnuptial migration has brought this dowitcher here from mid-August to the end of November. The obvious conclusion is that these birds regularly come through this area but are not likely to be seen unless suitable habitat is available. It is also obvious that field observations do not give a true picture of the numbers that migrate through here.

A happening verifying this view is that reported by Denton and Post (*Oriole*, 27:43–45) which tells of the gathering of certain scolopacine birds for some weeks in artificial pulpmill ponds near Augusta, Georgia, many of them species which are seldom seen in this area away from the coast.—IVAN R. TOMKINS, *1231 East 50th St., Savannah, Georgia, 28 October 1963.*

Nest-site selection in the American Redstart.—Nest-site selection has been the subject of surprisingly few studies considering its importance to the reproductive success of the species. The behaviorial acts involved in site selection and their sequence are similar in many passerines (e.g., Nethersole-Thompson and Nethersole-Thompson, 1943. *Brit. Birds*, 37:70–74, 88–94, 108–113). I will report here some observations on nest-site selection in the American Redstart (*Setophaga ruticilla*) which were part of a study of the reproductive behavior of this species.

The nest is built at the juncture of three or more small branches, or more uncommonly, in vines. On the few occasions when nests were built on the horizontal limb of a tree they were always placed where several small branches grew upward. A variety of shrubs and trees is utilized. The height of nests in the study area in Ithaca, New York, ranged from about 3 to 35 feet.

The female spends the first day or two after choosing a mate exploring the whole territory and probably learns its approximate boundaries during this time. Then she restricts her activities to certain smaller areas and explores them more thoroughly. During this period she often starts near the base of a small sapling and gradually explores its branches by hopping and flying upward. Next (from a few hours to a day later) she begins standing in a crotch for a few seconds before moving on. Finally site "trying" behavior appears. The female presses her breast down in a crotch, frequently rotating her body while in this position. After she raises her breast the tail is often pressed down. Crotches formed from only two branches are rarely "tried" in this manner, but on one occasion a female "tried" such a crotch and as she turned and pressed downward she toppled forward (probably because of the lack of additional branches), left the site and was never seen to return to it. The only time a female built in a two-pronged crotch, the wind swept the nest away. This bird was probably a first-year female as judged by her late arrival and very dull plumage.

Although male redstarts do not build nests, some try out nest sites during the period that the females are engaged in this activity. The male usually begins trying sites after the female has started. All the sites "tried" by males are those typical of the species and the motor patterns used are the same as the females'. In all of the cases observed (approximately 20) the reaction of the female to seeing her mate trying a site was to approach as soon as he left and then try the same crotch. However, females never built in sites which the males thus "directed" them to.

The inspection of nest sites occurs in bursts. The female often tries five or six in a 10-minute period and then feeds for a while before resuming. She frequently tries as many

as 20 sites before finally bringing nest material to one. It is impossible to predict which crotch will be used for the nest since the bird often builds in one that she tried only infrequently as compared to the others. Although in some individuals the site inspection period lasts 1½ days, in others only a few hours ensue between the first trying of sites and the bringing of nesting material.

After trying a number of sites the female starts tugging at plant fibers. This behavior is usually brief and ineffectual at first and the female soon tries more sites. During the next stage she picks up and drops plant fragments. Finally, a strip is brought to one of the nest sites that has been tried recently (not necessarily the last tried). Although the female may try a few more sites even after she has brought several loads of material to one, there is usually no further trying of sites and nest building commences.

Nest-site selection is a behavioral sequence: there are many separate acts which are more or less dependent on the preceding ones. The usual sequence is: (1) exploration of the whole territory, (2) exploration of specific areas, (3) standing in crotches, (4) site "trying" by performing shaping movements in crotches, (5) tugging at plant material, (6) picking up plant fragments, and (7) carrying them to a site.

The first stages involve primarily visual exploration; later ones, such as shaping, are primarily tactile. Visual "screening" of possible sites eliminates the necessity of "trying" large numbers. Lorenz (Group Processes, N.Y., 1955, p. 188) suggests that the site finally chosen by certain European passerines is one in which there is a maximum of tactile stimulation on all sides. The redstart that once tried a two-pronged crotch and fell out subsequently went to species-typical sites. She seemingly underwent an "unsatisfactory" tactile experience and immediately learned to avoid this type of site. The biological significance of rapidly learning to select sites which give the proper tactile sensations seems obvious when we consider that the only female which built in a two-pronged crotch had her nest swept away by a mild wind storm which destroyed no other nests.—Millicent S. Ficken, *Laboratory of Ornithology, Cornell University, Ithaca, New York* and *Department of Zoology, University of Maryland, College Park, Maryland, 30 December 1963.*

Predation upon flightless ducks.—From 5 June to 29 August 1961, I studied the postbreeding activities of waterfowl at Camas National Wildlife Refuge, Hamer, Idaho. During that time, I did not witness the capture by a predator of any duck capable of flight. On the other hand, several flightless birds were caught by predators. On 6 July, for example, I noticed a flightless drake Mallard (*Anas platyrhynchos*) splashing desperately. I then saw a mink (*Mustela vison*) atop the duck, biting into its neck. A furious struggle took place both above and below the water. The bird's flapping gradually lessened, and finally ceased. The mink and the Mallard submerged for about 15 seconds during which time I saw no struggling. Surprisingly, the duck surfaced and swam off in one direction, the mink in another. The bird appeared to be injured, swimming very slowly and quite low in the water.

On 23 August I saw two adults and a young coyote (*Canus latrans*) walking near a large group of flightless ducks. The pup had an unidentified duckling in its mouth. As my boat approached the flightless gathering, about six American Widgeons (*Mareca americana*) and two Gadwalls (*Anas strepera*) ran onto land directly toward the motionless coyotes. A commotion followed; several ducks reached the water flapping furiously, and the coyotes scampered off with at least one adult duck. The following day I saw a coyote catch another duck in the same manner.—Lewis W. Oring, *Department of Zoology, University of Oklahoma, Norman, Oklahoma, 22 August 1963.*