

Migration and habitat of the Long-billed Dowitcher on the coast of Georgia and South Carolina.—A recent study by Jehl (1963. *Wilson Bull.*, 75:250–261) discusses the ratio of the Short-billed Dowitchers (*Limnodromus griseus griseus* and *L. g. hendersoni*) during the autumnal (midsummer) migration, in New Jersey, a welcome addition to our knowledge of these two similar subspecies. It also makes brief mention of the Long-billed Dowitcher (*Limnodromus scolopaceus*).

The purpose of this brief note is to place on record the times of occurrence of *L. scolopaceus* on the coast of Georgia and South Carolina, together with some notes on the habitat, as I have known it for many years along the lower Savannah River.

The Short-billed Dowitchers are abundant on the tidal flats and beaches of the river entrance in spring and fall migrations, and a few may be found at any time of year. They occur in various stages of plumage. In the 1920's and 1930's I collected quite a number, hoping to find the Long-billed Dowitcher in the same habitat. It was some years later that the difference of habitat in the two species came to be understood. Others have recognized this preference, and once understood there is little difficulty in separating the species.

In this region the habitat preferred by *scolopaceus* consists of shallow impounded waters with scant vegetation. In another work (Tomkins, 1958. *Occas. Publ. Ga. Ornith. Soc.* No. 4) this has been called the "borrow-pit" habitat, a term which is neither more nor less satisfactory than such terms of restricted terminology usually are. Of course, such habitat must contain food and, without it, will not retain any birds that may drop in. The Long-bill shares this habitat with a group of scolopacine birds, the Lesser Yellowlegs, White-rumped Sandpiper, Stilt Sandpiper, Pectoral Sandpiper, all species not normally found in the Short-billed Dowitcher domain on the tidal flats and the beaches. Salinity does not seem to be a restrictive factor.

In this region, with abundant rainfall and a fertile substrate, the "borrow-pit" habitat is seldom found naturally, partly because of the lush vegetation, but it usually occurs following some disturbance of the natural conditions by the works of man. A typical place is where soft material dredged from the river has been pumped into an area surrounded by ring dikes, or where small undrained pools are left in the construction of a road. Even in those places vegetation soon takes over, or continued baking by the sun renders it unusable. The only place I have found such habitat formed by natural causes was on Turtle Island, South Carolina, where a tidal flat was flooded after storm winds and seas closed the mouth of the creek that drained it. This pool produced the specimen of *L. scolopaceus* mentioned in Sprunt and Chamberlain (1949. *South Carolina Bird Life*), the only specimen then known from that state.

At several times and places over the years, such islands of habitat have developed, matured, supported considerable numbers of birds at the peak, and then became obsolescent. The largest one was an area of perhaps four or five hundred acres on Hutchinson Island, Georgia, where silt from river dredging was impounded by dikes. Shorebirds were very numerous there at times, when there was sufficient rainfall. At present it is no longer suitable habitat. At the peak in 1958, as many as 200 Long-billed Dowitchers were counted at a time. There was also a high count of 138 Stilt Sandpipers. The area was too great, and the bottom too soft, to get an exact count. Such numbers of these two species have not been reported elsewhere from either state, and usually the sight of only a few is considered noteworthy.

Another small pool, between a roadway and an abandoned railway bed, with a sill that maintained a fairly constant water level between the spring tides that flooded it at times, often attracted a few Long-billed Dowitchers but no Short-bills. Across the road,

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 behavioral 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