

for (4) the actual contact with the twig, and (5) an upward bound which, in most instances, was also somewhat backward. At times the act of striking seemed little more than a slight contact following a momentary hesitation. Such exceptional instances may be regarded as indicating the bird's reversion to true twig-breaking behavior, with recognition of the inappropriately large size of the branch as nest material.

One should consider the possibility that, instead of playing, these swifts were, in a rather desultory manner, displaying genuine nest-building activity. The breeding season is known to extend into late August on Cape Breton Island, where Dr. C. W. Townsend found half-grown young on August 22 (Macoun, Canada Dept. of Mines, Geological Survey Branch, Publication No. 973: 360, 1909). In Maine, Knight (Birds of Maine, 1908) reports egg-laying as late as July 10. So, as concerns the date, the twig-striking on July 2 might reasonably be regarded as an attempt to gather nest material. But several facts lead me to doubt this. First, these two pairs of swifts had been flying over Grande Grève daily since June 19. The same birds or others had also been seen half a mile distant over the forest in which I believe they nested. Never were they known to enter any of the few brick chimneys nor buildings in the village. Secondly, the yearly arrival of *Chaetura* in Gaspé as early as mid-June is attested by Demille (Auk, 43: 519, 1926) who observed twenty-five entering a hollow tree near Mont Louis on June 19, 1924. By July 2 such arrivals have probably finished nest-building. Thirdly, several recurrences of twig-striking through July and August almost certainly happened after completion of nests. Nevertheless, Dr. Townsend's record of August 22 nesting renders the date an unsafe criterion. I therefore, fourthly, fall back upon the circumstances as recorded above in deciding that these swifts were truly playing.

Finally, as an alternative, one may properly suggest that the sight of the conspicuous dead willow tree provided the stimulus which aroused the slumbering instinct to gather nest material (see F. H. Herrick, 'Wild Birds at Home': 151-153, 1935).—STANLEY C. BALL, *Peabody Museum of Natural History, New Haven, Connecticut.*

Bank Swallows nesting in artificial holes.—During the summer of 1942 I visited, a number of times, a colony of Bank Swallows (*Riparia riparia riparia*) that were nesting in drain holes in a concrete bank situated on the south shore of the St. Lawrence River opposite Montreal just above the town of Laprairie. The concrete bank, which is separated from the river's edge by a narrow strip of marsh and grass, is half a mile long and supports a roadway. The bank averages nine or ten feet in height and the holes are about four feet from the top of it. There are perhaps 100 of them, spaced evenly along the bank. They are about 4½ inches in diameter, inclining slightly upwards into the wall, and are lined with galvanized sheet metal. It did not appear as if water ever seeped through these holes. The colony consisted of about fifty pairs of Bank Swallows. There were also some twenty pairs of Tree Swallows (*Iridoprocne bicolor*) nesting in the holes, and on my first visit (May 21) a pair of Starlings were feeding young in one of them.

By July 2, all but one or two pairs of the Tree Swallows had left and the first of the young Bank Swallows were on the wing. On July 10, when Mr. and Mrs. L. M. Terrill and V. C. Wynne Edwards also visited the colony, several holes held fledged young, but on July 22, noticeably fewer adults were in evidence. On these last two dates, birds were seen carrying white (chicken?) feathers, the bird on

the 22nd taking the feather into a hole. On August 3, birds in still further reduced numbers were entering holes here and there along most of the length of the bank. By August 26, interest in the holes seemed to have disappeared, at least in mid-afternoon, although on this date there was a flock of about fifty Bank Swallows fluttering close to the bank, many of them settling on the top of the wall and some clinging to the concrete face.

The habit of this species of nesting in artificial holes in walls and banks has been noted in England infrequently from the time of Gilbert White (1774) onwards but appears to be unrecorded hitherto in North America.—P. A. D. HOLLAM, *Dorval, Montreal.*

Post-breeding pugnacity of the Pine Warbler.—On the Patuxent Research Refuge of the U. S. Fish and Wildlife Service, located near Bowie, Maryland, the Pine Warbler (*Dendroica pinus*) is a common summer resident. During the breeding season through May, June and July this species is restricted almost entirely to areas that have grown up to pitch pine (*Pinus rigida*) and scrub pine (*Pinus virginiana*). In late August and September, following the breeding season, these birds show a drastic change in habits and frequently occur in small flocks around the headquarters buildings. Here they generally may be found associating with Bluebirds (*Sialia sialis*) and Chipping Sparrows (*Spizella passerina*), feeding on the ground as well as in the bushes and trees of the orchards and landscaped areas. While watching these mixed flocks it was noticed that the Pine Warblers were extremely quarrelsome, frequently fighting among themselves, as well as giving chase to Bluebirds, Chipping Sparrows and, on one occasion, a Vesper Sparrow (*Pooecetes gramineus*). They were especially pugnacious toward the Bluebirds, for when one of these larger but slower-flying birds would leave its perch, it would often be assaulted by one and sometimes two Pine Warblers that darted after it, snapping their bills much in the manner of flycatchers chasing insects.—ROBERT E. STEWART, *Fish and Wildlife Service, Patuxent Research Refuge, Bowie, Maryland.*

Birds and smell.—Mr. P. A. Taverner's article on "The Sense of Smell in Birds" (*Auk*, 59: 462-463, July, 1942) evokes a responsive chord in me. I have a yellow-headed parrot as a pet, and this parrot frequently shares dinner with me; that is, he has a plate of his own alongside mine and enjoys the companionship and food allotted to him. He is particularly fond of steak and even more so of the long bones of chicken, which he will deftly open and from which he will extract the marrow. Most parrot owners are not aware of the carnivorous tendency of their pets. The amount of steak that he is capable of stoking away would do credit to a raptor of similar size.

The thing that has interested me more than the carnivorous habits of this bird has been his power of differentiating between various types of vegetables treated in a parallel manner, and which look similar after preparation. I have noticed that when these are placed before him he shows definite predilections. It is not the sight, apparently, that prompts him to give preference to this or that, but the olfactory sense. I have mixed these things partly and it has been very interesting to see with what precision he is capable of extracting the favored element. Although some of these things look very much alike, those that do not attract the bird cause him to stand aside a foot or more, but the moment that his favorite—particularly squash—comes to the table he shows a decided interest. I have therefore come to the conclusion that his power of selection is not visual as much as