

After several birds had missed the feather, one caught it in mid-air and the chase continued. Apparently, picking it out of the air was more fun than taking it off the surface of the water, for thereafter the swallows generally tried to get it in mid-air. This observation lasted several minutes. At this time there were hundreds of Tree Swallows over the reservoir but only about a half-dozen were playing with the feather.—CHARLES W. LINCOLN, 392 Highland Avenue, Upper Montclair, New Jersey, October 24, 1955.

Nesting heights of some woodland warblers in Maine.—During 17 summers at the Audubon Camp on Hog Island (and adjacent mainland) in Lincoln County, Maine, we found a great many nests. I kept a record of the height from the ground of many of the nests of woodland warblers (Parulidae) and tabulate herewith the accumulated data. The heights reported for the lower nests represent actual measurements. The remainder, although estimates, were obtained mostly with the aid of a camera range finder and may be considered reasonably accurate.

Species	Total nests	Height of the nests from the ground (in feet)								lowest	highest
		0-5	5-10	10-15	15-20	20-30	30-40	40+			
Parula Warbler	71	0	7	16	22	9	11	6	5 $\frac{1}{12}$	54	
Magnolia Warbler	33	18	13	2	0	0	0	0	1 $\frac{1}{12}$	14	
Myrtle Warbler	44	0	4	12	17	6	2	3	6 $\frac{1}{12}$	43	
Black-throated Green Warbler	58	1	5	15	19	10	6	2	3	51	
Blackburnian Warbler	7	0	0	0	0	0	0	7	43	76	
Bay-breasted Warbler	4	0	1	2	1	0	0	0	7 $\frac{1}{12}$	16	
American Redstart	50	2	6	18	11	5	6	2	1 $\frac{1}{12}$	52	

The study area is located in red spruce (*Picea rubens*) and white spruce (*P. glauca*) woodlands or in mixed spruce and hardwood forests. All the nests of the Parula Warbler (*Parula americana*) were located in *Usnea* lichen. All nests of the Magnolia (*Dendroica magnolia*), Myrtle (*D. coronata*), Blackburnian (*D. fusca*), and Bay-breasted (*D. castanea*) warblers were located in red or white spruce or in balsam-fir (*Abies balsamea*). Nearly all the Black-throated Green Warblers (*D. virens*) nested in conifers, whereas all but two of the American Redstarts' (*Setophaga ruticilla*) nests were found in deciduous growth.—ALLAN D. CRUCKSHANK, R.R. 1, Box 1590, Rockledge, Florida, October 18, 1955.

Nest-building movements performed by a juvenile Olive-backed Thrush.—A captive juvenile Olive-backed Thrush (*Hylocichla ustulata*), when approximately 17 days old and while snuggling down into my wife's cupped hands, performed perfectly typical nest-shaping movements characteristic of adult females. The bird simultaneously kicked backward with both feet and forcibly thrust its breast against the side of the cup. The wings were held rather high on the back but not unfolded and the tail was rather depressed. The bird would perform a few rapid thrusts and kicks and then turn slightly in the cup and repeat these acts. It fell asleep after a few such attempts.

Several hours later I held this bird in my cupped hands in order to see if I could observe this behavior pattern again. The performance was repeated and by increasing

a gentle pressure with the edge of my hand against the pushing breast I could provoke an increased effort at this particular spot. It would seem likely that the irregularities of a nest as it is being shaped provide a tactile-proprioceptive stimulus to the bird's breast which acts as a releaser for the thrusting response; the thrusting ceases when the nest fits as the thrusting ceased when I allowed the bird to "push" my hand into shape.

Other similar observations have been made; for example, D. Goodwin, (1954. *British Birds*, 47:81-83) describes nest-building movements performed by juvenile Mistle Thrushes (*Turdus viscivorus*). These observations indicate that the innate releasing mechanisms responsible for reacting to nest-building releasing stimuli must be present at an early age. These precocious behavior patterns are probably not observed more often because of lack of observers and because the stimuli releasing these acts seldom are available to juvenile birds, which, in any case, must have a low state of internal readiness to perform patterns of behavior associated with nest building and other reproductive activities.—WILLIAM C. DILGER, *St. Lawrence University, Canton, New York, October 22, 1955.*

Water moccasin as a predator on birds.—During field investigations of rails in the coastal marshes of Cameron Parish, Louisiana, a water moccasin, *Agkistrodon piscivorus*, with an engorged digestive tract was observed and collected on April 13, 1955. Upon dissection a male Sora Rail (*Porzana carolina*) was found in a fairly fresh condition with only the head and forequarters digested.

On October 13, 1955, in the same locality, a water moccasin was collected and found to contain the feathers, feet and bill of a Seaside Sparrow (*Ammospiza maritima*).—WILLIAM H. ADAMS, JR., *Department of Forestry and Game Management, Louisiana State University, Baton Rouge, Louisiana, October 25, 1955.*

Pleistocene Birds from Crystal Springs, Florida.—Among several lots of fossil birds submitted to me for identification by S. J. Olsen of the Museum of Comparative Zoology are three specimens from Crystal Springs run, in the southeastern corner of Pasco County, Florida. This material was collected on June 4, 1941, by Dr. L. J. Marchand of Gainesville. The bones are well mineralized and resemble Pleistocene material from other Florida spring deposits; all represent living species.

Anas carolinensis. Green-winged Teal. Left humerus. Recorded from the Pleistocene at Seminole Field, Florida (Wetmore, 1931. *Smithsonian Misc. Coll.*, 85(2):21), as well as from several localities in the western United States.

Aythya collaris. Ring-necked Duck. Left carpometacarpus. The previous fossil records of this species are somewhat unsatisfactory. Shufeldt (1913. *Bull. Amer. Mus. Nat. Hist.*, 32:156) recorded it with a query from Fossil Lake, Oregon, and Howard (1946. *Carnegie Inst. Wash. Publ.*, 551:174, 191) also queried the determination. Wetmore (1940. *Smithsonian Misc. Coll.*, 99(4):26) listed it from the Lower Pliocene of Nevada. This record is based on a report by Merriam (1916. *Univ. Calif. Publ. Dept. Geol. Sci.*, 9:173), whose specimens were so fragmentary that it would have been preferable to confirm the determination with better material before extending the record of living species of birds back to the Lower Pliocene.

Aramus guarana. Limpkin. Right carpometacarpus. Previously recorded from two Pleistocene localities in Florida (Wetmore, 1931).—PIERCE BRODKORB, *Department of Biology, University of Florida, Gainesville, Florida, November 11, 1955.*