

Song Sparrows, and a Cowbird; these activities belong to Stages 4 and 5 in the development of passerines. The Redwing hopped at 10 days and walked at 12; at 4 weeks she walked exclusively. Exploratory pecking appeared at 13 days; 5 days later she was catching insects. A social bond existed between her and a young Nighthawk, and between her and human beings, but her reactions to a year old Meadowlark were largely hostile.

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A LARGE SANDPIPER CLUTCH

In his "Comments on Recent Literature" relating to clutch size in birds, Amadon remarks that sandpipers "lay 4 large eggs; apparently this is the maximum number that can be covered by the parent" (*Wilson Bull.*, **61**(2): 117. 1949.) In view of this statement it may be of interest to record a nest with 5 eggs of the spotted sandpiper (*Actitis macularia*) that I found in early July, 1948, on the border of Mamagekel River, north of Nictau, New Brunswick. By July 7 the eggs had hatched, but the 5 young were still in the nest. Of the many nests of this species that I have examined from Maine to Maryland none has contained more than 4 eggs. Virginia Orr reports finding 5 newly hatched young "in a marshy bit of tundra" in Newfoundland Labrador on July 8, 1946 (*Auk*, **65**(2): 222. 1948.)

Possibly clutches of 5 eggs of the spotted sandpiper are more frequent in eastern Canada than in the eastern United States. It is worth noting that among plovers the average clutch in North America is 4, in the Antilles 3, and in northern South America (e.g., Trinidad) apparently only 2.—JAMES BOND, Academy of Natural Sciences, Philadelphia, Penna.

SWAINSON'S WARBLER ON COASTAL PLAIN OF MARYLAND

Investigations of remote areas in the eastern United States are continually extending the known breeding range of Swainson's Warbler (*Limnithlypis swainsonii*) northward (e.g., southern Illinois, central West Virginia, and recently into southern Delaware and the portion of Maryland east of Chesapeake Bay).

The "Eastern Shore" records, dating back to Cadbury's sight record in 1942 near Willards, and Stewart's specimen in 1946 at Pocomoke City (Stewart and Robbins, *Auk*, **64**: 272, 1947), do not indicate recent invasion of the more northern part of the Atlantic Coastal Plain. Conditions in the Pocomoke Swamp, where this warbler occurs, seem to have been ideal since time immemorial, and there are many records of its occurrence in nearby Dismal Swamp, Virginia, dating back to the latter part of the last century. The occurrence of this species can be correlated with the southern element prevailing in the swamp.

Pocomoke Swamp, which appears to be the northernmost of the true southern swamps on the Atlantic Coastal Plain, extends along the Pocomoke River from lower Sussex County, Delaware, to within a mile or so of Virginia. The plant geographer may think of the Pocomoke as a disjunct (area of discontinuous distribution), since this swamp is separated from similar areas. The long sandy peninsula of the "Eastern Shore" of Virginia and the mouth of the Chesapeake Bay separate the Pocomoke from the Dismal Swamp, while the bay lies between the Pocomoke Swamp and the bottomlands of "Tidewater" Virginia.

Principal known nesting areas of Swainson's Warbler in the Pocomoke are (1) near Willards, Maryland, and Selbyville, Delaware, 0.25 miles south of the Delaware line; (2) five miles south of Pocomoke City near the Virginia line. These areas are almost identical in character, and lie on the upland side of the swamp, about a half mile east of the river.

The preferred nesting habitat is the sweet pepperbush (*Clethra alnifolia*) thicket, which is constantly boggy or inundated, where the swamp is in a stage of secondary succession after being cut over to the extent that only second growth forest remains.

The dominant species of the forest community are sweet gum (*Liquidambar styraciflua*), black gum (*Nyssa biflora*), red maple (*Acer rubrum*), magnolia (*Magnolia virginiana*), water oak (*Quercus nigra*), and horse sugar (*Symplocos tinctoria*). Cypress (*Taxodium distichum*) while forming the dominant type along the river, is of secondary importance in the sweet pepperbush swamp. Principal understory plants in addition to *Clethra*, are *Vaccinium* sp., *Smilax* sp., *Woodwardia virginiana*, *Itea virginica*, and *Ilex glabra*.

In drier portions of the swamp, near the Delaware line, a heavy undergrowth of laurel (*Kalmia*) is found in which an occasional Swainson's Warbler is heard singing; near the Virginia line, an extensive Southern White Cedar (*Chamaecyparis thyoides*) stand adjacent to the pepperbush habitat was devoid of this species. This warbler may breed in other localities not yet located.

Robert Stewart and the writer noted the first spring arrival in the Pocomoke Swamp on April 21 (1948). Departure data are incomplete. I have a record for August 30, 1948, but none for September. However, the bird probably lingers a few weeks later. Austin H. Clark (*Raven*, 10; 1, 1939) observed two in a *Baccharis* thicket on Tangier Island, Virginia, in the middle of Chesapeake Bay, just over the Maryland-Virginia line, and almost at the mouth of Pocomoke Sound, September 17-19, 1939. These were probably Pocomoke birds migrating.

It is the latest warbler to arrive on the nesting ground, and is the latest nester. On May 30, 1949, all of the resident warblers were feeding young except this species. The writer observed newly hatched young on June 13, 1948.

In a survey of the 2 known breeding areas in the Pocomoke on May 30, 1949, 6 singing males were observed in the lower (southern) area, and 2 near the Delaware line (a single singing male noted in the Delaware extension of the swamp was also noted on this date). These 2 small breeding populations are only a sample of the potential carrying capacity of the swamp, as the entire Pocomoke has many areas of the same type of ecological communities favorable to this species that have not been investigated during the breeding season by ornithologists.—BROOKE MEANLEY, 4513 College Avenue, College Park, Maryland.

THE APPETITE OF A BLACK AND WHITE WARBLER

On Sept. 19, 1949, at about 2:00 P.M., a neighbor, noticing a female Black and White Warbler (*Mniotilta varia*) on the porch with her head under her wing, brought the bird in and warmed her in her hands. The bird would take nothing but a little water, and was not able to fly, but by mid-morning the next day she started to hop over the floor. At 5:00 P.M. on the 20th she came into our hands, and after her fast of at least 27 hours at once took mealworms from us. She was fearless, hopping indifferently over the floor, the furniture, or us.

Insects were the only food she would accept, although we offered her tiny pieces of canned dog food (the staple nourishment of our hand-raised Meadowlark, [*Sturnella magna*]) rolled into larvae-like shapes. Different kinds of berries were also refused. A grasshopper 2 inches long was ignored, as well as a full-grown cricket, small ants, a yellow and black striped beetle, and a red mite. Most of the insects caught by sweeping the grass were eagerly taken, even squashed and battered specimens at the bottom of the net. Small moths, leaf-hoppers and tree-hoppers, a small stink bug, a black beetle 0.05 inch long, small crickets, and grasshoppers up to an inch long suited her.