

Nesting of Red-winged Blackbirds.—Observations were made of the nesting of Red-winged Blackbirds (*Agelaius phoeniceus*) in a swamp near Harrisburg, Pennsylvania, during the spring of 1937. The swamp, in a public park, was subjected to damage by fishermen who may have destroyed some of the nests. The swamp, two acres in extent, was mostly of bur-reeds (*Sparganium angrocladum*) with ten clumps of cattails (*Typha latifolia*). Although I had seen a female redwing in this swamp on January 1 and 7, 1936, the first migrant in 1937 was seen here March 12, with a flock of males March 25, the females not arriving until April 22. The first trip into the swamp, May 12, revealed three nests, one with eggs.

The nests, when discovered, were given numbered tags and marked with rayon streamers, rayon not getting as heavy as cotton when wet. Five of the nests could not be found the second time, and during the nine weeks and sixteen trips of the investigation the reeds grew from a height of two or three feet to five feet for the bur-reeds and to seven feet for the cattails. Within the swamp also nested Virginia Rail, a Bittern, and Song Sparrows. Owing to the constant movements of the redwings it was not possible to make an exact count of the adults, but there appeared to be over ten pairs and the charted records show sixteen occupied nests on June 1.

All nests were made of the same material, cattail leaves wound around stalks and leaves of reed and lined with grasses, except for a few which contained green algae from the pond and a little mud. No nests were built in any available bush or tree. All but one were built over water and from one to three feet above the surface. One nest which was dissected had been built into eighteen bur-reed stalks, was composed of 142 strips of cattail leaves up to thirty-four inches long, and 705 pieces of grass. The cattail leaves made 273 laps around the reeds, with only one making a complete circuit. The tensile strength of this matting was shown by the fact that the nest could withstand a weight of four pounds before beginning to slide down the stalks. The size of the nests was very uniform; the dissected nest had an inside depth of two inches, inside diameter of three and one-half inches, outside depth and diameter of about four and one-half inches.

Forty-two completed nests were found, but eleven of them were never used although seen repeatedly. No nest was used for a second brood, and no nest would survive the season. The abandonment of the nests resulted from different causes. Some were not used after the birds were frightened away, others were. Redwings will not abandon eggs because of being discovered, as will Robins. The only natural enemies discovered in the swamp were three large water snakes (*Natrix sipedon*). One nest which had contained eggs was later found to be pulled over, as by a snake. No nest contained any Cowbird's eggs; no Cowbirds were seen in the neighborhood.

Twenty-nine nests contained ninety-four eggs among which were two infertile eggs. There were two completed clutches of two eggs, eleven of three, and fourteen of four eggs. One nest with a single egg was abandoned early. Most eggs were of the usual pale blue or bluish-green with erratic brown or black lines, but one set had a pure white background and one clutch of four bluish eggs had no

dots or lines whatever, but over the larger end had sepia washings of varying shades and tones as though painted on with a brush. Freshly laid eggs were found from May 12 to July 12, suggesting two broods for this locality. Sixteen of the thirty-seven nests which were followed through had successful broods, a nest efficiency of forty-two per cent. Including all nests which were built, only one-third produced full grown young which left the nests. Twenty-three nests contained seventy-three eggs of which fifty-three (seventy-two per cent) hatched; the balance had been infertile, deserted, or destroyed. Only thirty-five full grown young birds left the nests, a productivity of forty-eight per cent.

In an adjoining swamp Merrill Wood made a previous study of redwings, reporting in *Bird-Lore* (July-Aug. 1928, p. 262). Twelve nests contained thirty-nine eggs, with two infertile, producing thirty-three nestlings and twenty-one fledglings, a productivity of fifty-two per cent. The incubation period was definitely determined, eleven days in three cases and twelve days in one instance; the young birds left the nest in from eight to eleven days. These young were banded but never heard from again.

The incubation period was not determined by me. Incubation by the Red-winged Blackbird evidently begins before the entire clutch is laid, as all birds are not hatched on or near the same day. Laying with the redwing is probably not a momentary operation, as with some birds such as swallows, but requires several hours upon the nest during which time the eggs laid previously are subjected to incubation. Eleven days seemed the approximate time spent by my young birds in the nest. Twenty-three were banded. The young redwings have a few small sparse tracts of black natal down, located as parietal, occipital, ulnar, scapular, lumbar, sacral, and femoral, with an oblique abdominal.

The ability of a nestling redwing to take care of himself was tested. A nestling less than two or three days old would be apt to drown if it should tumble out of the nest. As they grow older they become more able to save themselves. Placed in water, the half-grown nestling will float and can swim, but in a very excited manner. They will swim to the reeds and hold on, calling for their parents. When well covered with feathers, but yet a few days before being ready to vacate the nest, they readily swim, but excitedly, and can climb up the cattails to the nest. They are not combative and can not protect themselves against enemies. None of these young had any ectoparasites. An attempt was made to determine their stomach contents by aspiration with an eye dropper, but only liquids and digested material were obtained. By dissection, one stomach was found to contain flies and other insects, no seeds. All of the birds left the swamp on their southern migration early in August.—HAROLD B. WOOD, M. D., *Harrisburg, Pa.*

Blue Goose in Western New York.—On November 11, 1937, I discovered a lone Blue Goose (*Chen caerulescens*) in immature plumage on a small pond which is cut off from Lake Keuka by a willow-grown sandbar. I notified Mr. Verdi Burtch, who made the bird's presence known to a number of Yates County bird lovers and it was visited by several observers in the next couple of days. It remained on this pond for five days and was last seen on November 15. Eaton ("Birds of New York", 1910) mentions the Blue Goose as "one of the rarest waterfowl which visit the waters of New York State". He gives data on but six collected specimens known to that date.—CHAS. J. SPIKER, *Branchport, N. Y.*