

the structural side the development of feathers has been worked out; and the development of pigment in the feather, which was cleared up by the researches of Dr. R. M. Strong, has just been followed by a demonstration of the underlying principles of the distribution of that pigment in the feathers, in a paper by Dr. Oscar Riddle, in the *Biological Bulletin* for May. Dr. Riddle has also worked out "The Cause of the Production of "Down" and other "Down-like Structures in the Plumages of Birds," and the results appear in the *Biological Bulletin* for February of this year. On the side of color change and molt, Mr. C. William Beebe has experimented with birds in captivity, and his results seem to indicate that molt and the sequence of plumages, in the birds experimented with are "not in any way predestined through inheritance bringing about an unchangeable succession, . . . but that it may be interrupted by certain external factors in the environmental complex." On the psychological side Professor Francis H. Herrick has contributed several articles to *Science* relating to "Cyclical Instincts" of birds—migrating, courting or mating, nest building, incubating, care of young, etc. And still there is abundance of room for other studies by as many people as may have the inclination to enter upon research within this group of animals.

FIELD NOTES.

THE "FARTHEST NORTH" RECORD OF THE CARDINAL IN IOWA.—On the bottom lands of the Mississippi River at the mouth of Sni Magill Creek, which is four miles south of the 43d parallel of latitude, on April 17th, 1908, a pair of Cardinals was seen by me. The female singing in a tree was noticed first, and she was soon joined by the male, also in song. From a resident of that locality it was learned that birds of their description were seen on a neighboring island on April 9th of this year. These birds are believed to be several miles farther north in Iowa than any of their species hitherto reported.

ALTHEA R. SHERMAN, *National, Iowa.*

A QUAIL TRAGEDY.—On the morning of February 27, 1908, near Sidney, Ohio, a flock of quails was noticed flying at full speed directly toward a house. The next instant they struck the building with a thud. We then observed that they had been pursued by a large hawk, possibly a Cooper's, although it seemed to be as large as a Red-tail. However, we failed to identify it. An examination showed that four quails had been killed instantly by the impact, and that two more had been stunned, one of which died in a few minutes. The other soon recovered, and upon hearing one of the scattered flock calling, we turned it loose. The ground was covered with snow and the sun

was shining brightly. These conditions, together with the fact that the house was painted white, probably favored the collision.

MISS FARIDA WILEY.

BACHMAN'S SPARROW IN TUSCARAWAS COUNTY.—I have the pleasure of reporting a Bachman's Sparrow for this county. It was seen April 22, on a weedy and bushy hillside in the northeastern part of the county, about a mile and a half northeast of Strasburg. As it sat on a fence-post about three rods away from me, and sang divinely, while my field-glass was fixed upon it, there could be no mistake of its wonderful vocal performances to be in error regarding it. According to Dawson's "Birds of Ohio," this bird has not hitherto been identified in this State farther north than Fairfield County. If any record of the bird's appearance has been made since the publication of Dawson's work, I have not seen it. My record brings the summer range of this lovely songster considerably farther north. The little minstrel rehearsed all the varieties of tune, now sprightly and glad, now slow and pensive, which Mr. Dawson describes so graphically. It is really wonderful that such a common-looking little bird should have so superb a syrinx.

LEANDER S. KEYSER, *Canal Dover, Ohio.*

BALD EAGLE (*Haliaeetus leucocephalus*) AND GREAT HORNED OWL (*Bubo virginianus*) OCCUPYING THE SAME NEST.—On the 15th of January, 1908, I received a box of Eagle's eggs from Florida, among which was one set collected under unusual circumstances as well as furnishing a remarkable record for a large sized nest of this species.

The locality was in Desota county, and the date of collection, December 17, 1907.

The gentleman who collected the eggs, writes that the old bird left the nest as he neared the large pine tree in which it was placed. A climb of 70 feet brought him to the top of the nest, but ere he had reached this point, he flushed a Horned Owl from a rude cavity in the side of the Eagle's nest, in which she had formed a nest and deposited two eggs.

This nest had been used for years by Bald Eagles, each annual addition of materials increasing the height until it reached fifteen feet up between the main forks of the tree. At the bottom it was eight feet through, where it was jammed in between the forks, and from here it tapered to four feet, ten feet up, and again spread out to six feet on top where the two Eagle eggs rested on soft, dry grass in the rudely-formed depression.

Four feet from the bottom of this huge pile of branches and debris was the Owl's home, containing two freshly laid eggs.

The Eagle's eggs must have been laid quite early in the month, as the embryos were beginning to form. They are large, clean, hand-