## Field Notes

THE INCREASE OF THE CARDINAL IN THE UPPER MISSISSIPPI VALLEY.

The recent appearance of the Cardinal along the banks of the Mississippi River in the territory lying on either side of the forty-third parallel of latitude has already received mention in the ornithological magazines; but the reports of its remarkable increase in numbers, together with additional data seem to warrant further reference to a twice told tale.

The mouth of the Wisconsin River is in latitude 43 degrees exactly, in about the same latitude that we find Milwaukee, Wis., Grand Rapids and Port Huron, Mich., Buffalo and Syracuse, N. Y., and Portsmouth, N. H., nevertheless its remoteness from a large body of water gives this Mississippi Valley point a decidedly colder winter climate than have most places into which the Cardinal has advanced in recent years.

The dates of the first observations of the Cardinal in the vicinity south of the mouth of the Wisconsin River have been given by Miss Elma Gertrude Glenn of Wyalusing, Wisconsin, in a recent letter a portion of which is given here: "In November, 1906, Mr. H. W. Brown, of Lancaster, Wis., a camping companion of my father, observed one, a male, just north of the village of Wyalusing. The following February, (1907), my father found one at the base of the bluff along the Mississippi River, near where the first was found about one mile south of the Wisconsin River. Since that time they have become more common each year until last year; during 1910-'11-'12 several pairs were noticed."

On the Iowa side of the Mississippi River, directly opposite Wyalusing, at the mouth of Sny Magill Creek, on April 17, 1908, I found a pair of Cardinals; until a year ago I supposed these were the first of this species identified in Clayton County, but the notebook of Mrs. Mary E. Hatch of McGregor, shows that she saw one there for a moment on December 11, 1906. The winter feeding of the Cardinal in McGregor began in the autumn of 1908, when one came to the yard of Mrs. M. A. Jordan; it has been continued since then with a gradual increase in the number of these birds. Last winter by the aid of the telephone it was learned that five Cardinals were eating at the same time in two yards, distance about a mile apart. The summer of 1913 has shown a very marked increase in the number of this species about McGregor, until peoplesay of them: "They have become as common as Robins." About the village the summer locations of eight pairs, in private yards,

on the bluffs, and on neighboring islands have been mentioned. In the yard of Mr. B. A. Kinsley a pair built a nest, which was not occupied, but in the trees back of the home of Mrs. M. A. Jordan, two broads of young were brought out about a fortnight apart.

The progress of the Cardinal above McGregor to the mouth of Yellow River, a distance of five miles, has been marked. Mr. W. H. C. Elwell, who is on the river often in his launch, reports that he frequently sees or hears the species up to that point, but the bird has not yet appeared in Lansing, Iowa, a few miles farther up the Mississippi River. Its increase westward from the river has not been notable except up Sny Magill Creek for about four miles, where it has been found in small numbers. A farmer tells me that in April, 1913 he saw nearly a dozen Cardinals on the bluffs near this creek, and one was noted by the roadside in a severe blizzard on March 1. Still farther westward from this point the appearance of this species has been but temporary.

In Wisconsin the northern advance of the species has been at about the same rate of speed. It had pushed up the Wisconsin River as far as Blue River by the spring of 1909. In the next two years they had followed the course of the Kickapoo River for twelve miles to a point a half mile north of Steuben, where about the home of Mr. Lee Wanamaker they are fed in winter, and may be seen almost daily throughout the year.

In Wisconsin the northern advance of the species has been more rapid and over a wider territory than in northeastern Iowa. It had pushed up the Wisconsin River as far as the village of Blue River by the first of 1909. About the same time it was following the course of the Kickapoo River northward, until it was found in Gays Mills toward the last of December, 1908, a female Cardinal baving been identified there by Miss Ellen Hammond. A year later she saw a pair of these birds six miles farther north, and not infrequently afterward the species was either observed by her, or reported to her as seen by others in various portions of the Kickapoo Valley.

A brief summary of the progress made by the Cardinal shows that from a very rare bird in 1906, by the autumn of 1913 it has become fairly common in several localities. From a point two miles below the mouth of the Wisconsin River it has pushed eastward along that stream upward of thirty miles, and northward along one of its tributaries a distance of thirty-two miles. On the lowa banks of the Mississippi it has advanced and become common for at least eleven miles.

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