BREEDING BIRDS OF A CLAY COUNTY, IOWA, FARM.

By IRA N. GABRIELSON.

The title of this paper is not literally accurate, as the territory included parts of several farms as well as the home place. The notes on which the report is based were made during the summer months in the years 1907-1911 inclusive. The land of the farm and surrounding territory is typical prairie land lying in the eastern edge of the county. It is



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gently rolling and is characterized by innumerable "kettle holes," cat-tail swamps, ponds, and small lakes. Much of it is still unbroken and retains a flora of native grasses and flowers. The only timber in the territory covered by this report consists of the artificial groves—mostly willow, maple, box elder, and cottonwood—a small apple orchard on the home place, and a fringe of low bushy willows along one of the ponds. The remainder of the land is in native grasses, used as hay, or pasture, or under cultivation, usually in corn, oats, or clover. There were, during the years of study, two ponds of thirty and forty acres respectively, and fifteen small swamps, ranging from one or two square rods to three acres in size, scattered over the region included. This and much of the surrounding land has been drained since 1911, and it is only a question of a short time until the remainder of the swamps and ponds will disappear. A visit during August, 1913, was interesting because of the glimpse obtained of the



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manner in which bird life had been affected by the change. Only five species of birds, Tree Swallow, Barn Swallow, Bartramian Sandpiper, Killdeer, and Meadowlark, were noted in an entire day in the field where in 1910 or 1911 from forty to fifty species could be noted any August day. Of these five species, the last four were resident and of these only two, the Meadowlark and Barn Swallow, were as numerous as before. While the list may appear as incomplete, the draining of the country makes it impossible to obtain any further data under the old conditions, and it is deemed advisable to publish it at this time as an approximate list of the nesting species of the region. It might be said that the only species noted in



NEST AND EGGS OF LEAST BITTERN

the territory during the breeding season which did not nest there was the Black-crowned Night Heron. These birds visited the ponds daily but nested in the timber along the Little Sioux River some ten miles away.

The species listed here are sharply divided into two distinct groups; viz., those native to the prairie and swamp, and those which have followed man into the country and nest in the artificial groves and about the buildings.

In the first class may be placed the following twenty-eight species which in all probability were in the country in greater or less numbers previous to its settlement: Pied-billed Grebe, Black Tern, Mallard, Blue-winged Teal, Bittern, Least Bit-



NEST AND EGGS OF KING RAIL

tern, King Rail, Sora Rail, Florida Gallinule, Coot, Wilson's Phalarope, Bartramian Sandpiper, Killdeer, Prairie Chicken, Marsh Hawk, Short-eared Owl, Prairie-horned Lark, Bobolink, Cowbird, Yellow-headed Blackbird, Red-winged Blackbird, Western Meadowlark, Grasshopper Sparrow, Lark Sparrow, Dickcissel, Maryland Yellow-throat, Short-billed Marsh Wren, and Prairie Marsh Wren.

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In the second class are included the following twenty-one species which nest only in the artificial groves and about the buildings: Bob-white, Mourning Dove, Screech Owl, Downy Woodpecker, Red-headed Woodpecker, Flicker, Chimney Swift, Phoebe, Blue Jay, Crow, Baltimore Oriole, Bronzed



NEST AND EGGS OF FLORIDA GALLINULE

Grackle, Goldfinch, Purple Martin, Cliff Swallow, Barn Swallow, Yellow Warbler, Catbird, Brown Thrasher, Western House Wren, and Robin.

Of the fifty on the list only the Kingbird is doubtful. This species nests usually in the groves and belongs probably to the second class, but I have found them nesting in the willow growth along the pond, and they may have nested in situations of that kind before the groves were present. However that may be, it was, at the time these notes were made, one of the most characteristic and abundant birds of the region.



NEST AND EGGS OF UPLAND PLOVER

After the young left the nest, they were to be found along the fences and telephone lines and during August were among the most conspicuous bird forms.

1. Podilymbus podiccys. Pied-billed Grebe. Abundant summer resident and breeder. One or two nests found every year in each little swamp. 2. Hydrochelidon nigra surinamensis. Black Tern. Breeds com-

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monly in small colonies in the swamps. Nest generally built on a deserted muskrat house. In the spring and fall they follow the plows in great flocks, picking up the insects turned up. Picture was taken June 18, 1910. The nest was, as usual, on an old muskrat house.

3. Anas platyrhynchos. Mallard. A common migrant, but rather rare breeder. On July 24, 1910, I saw a female and nine partly grown young in one of the small ponds.

4. Querquedula discors. Blue-winged Teal. Common breeder. Nests generally found in the long grass bordering the swamps.

5. Botaurus lentiginosus. Bittern. One nest containing five eggs was discovered in a hay field on the ground on June 15, 1909. June 13,



NEST AND EGGS OF KILLDEER

1910, I found another nest containing four young within a few feet of the place where the 1909 nest was located. Picture taken June 15, 1909.

6. *Ixobrychus exilis.* Least Bittern. Common about the swamps every year, but only one nest was ever discovered. That was found June 10, 1909. It contained five eggs and was a platform built in the reeds over the water.

7. *Rallus elegans*. King Rail. Common summer resident and breeder. Nests usually built in the thick grass around the small swamps, though they were occasionally placed in the hay fields some distance from the water. A photo of a nest of this species containing 14 eggs was taken June 24, 1907. 8. Porzana carolina. Sora Rail. This species was always present in considerable numbers during June and July. While I never succeeded in finding a nest, there is no question of their nesting here, as I noted several times young birds scarcely able to fly.

9. Gallinula galeata. Florida Gallinule. Three nests of this species were found: two in 1909 on June 10, and one on June 18, 1910. They seemed to be quite common throughout the region.

10. Fulica americana. Coot. Abundant breeder in the ponds and cat-tail swamps.

11. Steganopus tricolor. Wilson's Phalarope. I have no definite breeding record for this species, but a pair remained all through June



NEST AND EGGS OF KINGBIRD

and July, 1910. A certain small muddy point projecting out in one of the small ponds seemed to be their particular haunt. At any approach to this place both male and female would appear and circle about the intruder. I thought they had a nest at that point, but although I searched carefully I never succeeded in finding it.

12. Bartramia longicauda. Bartramian Sandpiper. Common summer resident. One nest containing four eggs was discovered in a pasture in a bunch of grass. The nest was well concealed and was found with difficulty after it had been visited twice. The photo of this nest was taken June 4, 1909.

13. Oxeychus vociferus. Killdeer. Common breeder. Nests generally in the cornfields. The eggs are laid on the ground or on a few pieces of broken corn husks, with little attempt at nest building. Picture taken June 15, 1910.

14. Colinus virginianus virginianus. Bob-white. During 1909 and 1910 a pair of these birds nested in the corner of the orchard.

15. Tympanchus americanus americanus. Prairie Chicken. One or more pairs of this species nested every year. Nest built generally along the fences in the tall grass and weeds.

16. Zenaidura macroura carolinensis. Mourning Dove. Nests in the groves.

17. Circus hudsonius. Marsh Hawk. Nested in the damp wild hay fields. One or two nests discovered and destroyed every year by the farmers.



NEST AND EGGS OF BOBOLINK

18. Asio flammeus. Short-eared Owl. Nested in much the same localities as the marsh hawk. The young were very tame and unsuspicious and would allow a close approach as they sat on the hay stacks.

19. Otus asio asio. Screech Owl. Nested every year in one of the groves.

20. Dryobates pubescens medianus. Downy Woodpecker. Nested in the same grove with the screech owl.

21. Melanerpes erthrocephalus. Red-headed Woodpecker. Common summer resident and breeder in the groves.

22. Colaptes auratus luteus. Northern Flicker. Not as common as the preceding. One nest found July 3, 1909, containing six eggs.

23. Chaetura pelagica. Chimney Swift. Two pairs nested in the chimney to the farm house every year.

24. Tyrannus tyrannus. Kingbird. Common breeder. After the young leave the nest they spend their time on the fences and telephone wires. At this season they appear to be the most conspicuous birds of the region. Nests in groves, in the willows along the swamps, on fence posts, and even in machinery left in the fields. June 26, 1910, a nest was found in a large maple tree along the road.

25. Sayornis phoebe. Phoebe. One pair nested in 1910 and 1911 under a small wooden culvert in the road in front of the farm.



RED-WINGED BLACKBIRD'S NEST Containing Two Cowbird's Eggs

26. Octocoris alpestris praticola. Prairie Horned Lark. Nests abundantly. Two broods are generally raised. The first nests are built in pastures and the second ones almost invariably in the corn fields at the base of a hill of corn. I have found as many as ten in a thirty-acre field.

27. Cyanocitta cristata cristata. Blue Jay. A common bird in the neighboring towns, but not often found in the groves. One or two nests have been found in the region covered by the paper. One nest built in an old apple tree and one in a maple grove.

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28. Corvus brachyrhynchos brachyrhynchos. Crow. Breeds quite commonly in the larger groves.

29. Dolichonyx oryzivorus. Bobolink. One of the most common breeders. Nests commonly in the hay fields. Nests are well concealed in the long grass. One found June 12, 1910, contained four bobolink eggs and two cowbird eggs.

30. Molothrus ater ater. Cowbird. Altogether too common. The eggs are most frequently placed in the nests of redwings and bobolinks, although they are sometimes placed in the robin, yellow warbler, and meadowlark nests.



NEST AND EGGS OF GRASSHOPPER SPARROW

31. Xanthocephalus xanthocephalus. Yellow-headed Blackbird. Breeds in colonies in the swamps over the water. The nests are basket-like affairs woven in the reeds about two feet from the water. In 1909 many nests were flooded and the young drowned by high water.

32. Agelaius phoeniceus phoeniceus. Red-winged Blackbird. Probably the most abundant breeding bird. Generally builds in the cat-tails and flags in the edge of the swamps, but sometimes in the meadows in bunch grass. On June 18, 1910, I found twenty-three nests in a small swamp not over two rods square. The number of nests in the territory covered by this report ran into the hundreds if not thousands. In 1909 many nests were destroyed by flooding. A nest discovered June 12, 1910, contained three redwing eggs and two cowbirds' eggs.

33. Sturnella neglecta. Western Meadowlark. Common breeder. Next to the bobolink the most numerous of the ground-nesting birds.

34. Icterus galbula. Baltimore Oriole. One or more pairs nested in the groves each year. I never succeeded in finding an occupied nest, but noted them each year after the fall of the leaves. I also saw the young after leaving the nest.

35. Quiscalus quiscula aeneus. Bronzed Grackle. Nests in groves.

36. Astragalinus tristis tristis. Goldfinch. One pair nested every year in the orchard.

37. Ammodramus savannarum australis. Grasshopper Sparrow. July 14, 1910, I found the only nest of this species discovered in this region. The nest contained two eggs and was in a hay field. It was discovered in mowing, the old bird remaining on the nest until the mower had passed, and then flying off. The nest was abandoned, although every effort was made to leave it undisturbed.

38. Chondestes grammacus grammacus. Lark Sparrow. Nests on the dry hillsides.

39. Spiza americana. Dickcissel. Nests commonly along the fences and in weeds in the small grain fields.

40. Progne subis subis. Purple Martin. Common summer resident in the towns. Several pairs built about the farm building in 1910.

41. Petrochelidon lunifrons lunifrons. Cliff Swallow. In 1909 and 1910 a colony of these swallows built under the eaves of the home buildings. Each year there were about half a dozen nests containing eggs and several others in which eggs were not laid.

42. Hirundo erythrogastra. Barn Swallow. Common about the buildings. Nests found every year at all the farms of the region.

43. Dendroica aestiva aestiva. Yellow Warbler. Several pair built every year in the orchard and in bushes about the house.

44. Geothlypis trichas trichas. Maryland Yellowthroat. One pair built in the orchard in 1909. The nest containing three eggs was found June 12 at the foot of a small tree.

45. Dumetella carolinensis. Catbird. Builds occasionally in bushes about farm houses. The parents and young leave the groves as soon as the latter are able to fly.

46. Taxostoma rufum. Brown Thrasher. Found nesting in 1910 in an old brush pile in one of the groves.

47. Troglodytes aedon parkamani. Western House Wren. Common breeder about the farm houses.

48. Cistothorus stellaris. Short-billed Marsh Wren. Rather a rare resident and breeder. One nest found July 28, 1910, contained six eggs. The nest was built close to the ground in a damp marshy hay field.

49. Telmatodytes palustris iliacus. Prairie Marsh Wren. Nests commonly in the reeds growing in the ends of the larger ponds.

50. Planesticus migratorius migratorius. Robin. Common. Builds in the groves and about the houses.

NOTES ON THE SPOTTED SANDPIPER.

BY ARTHUR F. SMITH.

During the summer of 1913 the writer was privileged to be present at the session of the Iowa Lakeside Laboratory, on Lake Okoboji, Iowa. There are many opportunities here for the intensive study of the life and behavior of birds, and such work is encouraged by the Laboratory.

In the summer of 1913 two nests of the Spotted Sandpiper (Actitis macularius) were found, and at the suggestion of Dr. T. C. Stephens the writer followed their history somewhat carefully. Both of the nests were located similarly, viz., near the extremity of long, low sand spits projecting into the lake for a distance of two hundred yards or more. In each case the nest was about seventy-five feet from the point. The nests, which were located on Gull Point and the Sand Spit in Miller's Bay respectively, may now be considered separately.

The nest on Gull Point was found on Friday, June 27, at 5:30 P. M. At this time it contained four eggs. The ground at this point was sandy, covered by a sparse growth of foxtail grass and a few weeds. The neck of land here was not over thirty or forty feet in width, and was quite low. The nest was afforded very little concealment among the short, dry grass; but, nevertheless, the nest itself is so inconspicuous that it is seen with difficulty even at close range. It was noted that when the parent bird was on the nest her colors harmonized quite perfectly with the surrounding vegetation and ground. The eggs also presented little or no contrast with the environs of the nest.

Visits were made to this nest on June 29, July 1, 5, 7, 8, 10, and 13, and on each occasion one of the parents was