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THE VIRGINIA RAIL IN MICHIGAN

BY LAWRENCE H. WALKINSHAW

Plates 29, 30

MICHIGAN, with its many lakes, small streams, hundreds of miles of lake front, and large areas of marshy shore line, together with small ponds and marshy areas in the interior, affords a wonderful place for nesting marsh birds. Among the commonest of the typical marsh birds is the Virginia Rail (*Rallus limicola limicola*) which may be found throughout the State.

DISTRIBUTION

Barrows (1912) states: "This species is found over the entire state and probably nests wherever found. However, it is much more abundant in the southern part of the state than farther north." I have found it not uncommon on the Seney marshes, Schoolcraft County, and abundant in the Munuskong area, Chippewa County, of the Upper Peninsula. At Munuskong, Francis C. Gillett located two nests, the first for the Upper Peninsula, on June 4, 1934. Later in June, we located eight other nests and broods of downy young. During June 1935, I located four nests without much effort in the same marsh. At Seney, although I did not find any nests, several birds were observed and one displayed the 'broken-wing act' and must have had a nest or young very near. This same display was produced at Blaney, Schoolcraft County, when Dr. Christofferson and I were searching for the nest of the Ring-necked Duck (*Nyroca collaris*). In each case my dog helped to flush the birds.

In the Lower Peninsula the species is common on the Saginaw Bay marshes, the St. Clair marshes, the marshes along Lake Erie, in Monroe County; along the Kalamazoo River overflows near Lake Michigan, and occurs besides in large numbers in the Corey marshes, Clinton County, the Portage Lake and Mud Lake areas of Jackson County, and in a large marsh in Convis Township, Calhoun County, as well as in many other smaller marshes throughout the Lower Peninsula. Any large sedge- or grass-grown marshy region in Michigan probably contains a large number of Virginia Rails. Usually in the smaller swales and marshes there are only one or two pairs to be found. The borders of lakes and streams also afford small marshes for nesting.

MIGRATIONS

The rails are very secretive in their habits, for their first appearance in the spring is not heralded with outbursts of song and their place of dwelling is such that few penetrate in search of them. Probably, therefore, a great deal

VIRGINIA RAIL'S NEST, W. K. KELLOGG BIRD SANCTUARY
C. J. Henry, phot.

VIRGINIA RAILS HATCHING; MUNUSKONG BAY, MICHIGAN

is yet to be learned about their early-spring, late-fall and winter distribution. With the aid of a good dog one can make closer and more accurate observations of distribution.

My notes show the earliest date of spring arrival during the past fourteen years on April 18, 1935. In years of normal temperatures for the latter part of April, the rails become most abundant during the very last days of April or the very first of May. Following is a list of the first and last dates for the Virginia Rail at Battle Creek, Calhoun County, Michigan:

Year	*Spring*	*Fall*
1922	April 30	.....
1923	April 29	.....
1929	May 4	Sept. 22
1930	May 11	Sept. 6
1931	April 30	.....
1932	May 8	Oct. 9
1933	April 25	Oct. 1
1934	May 6	Oct. 7
1935	April 18	Sept. 19

At Ann Arbor, Wood and Tinker (1933) over a period of twenty-five years have twelve records for the spring and three for the fall migration. Nine are for the last ten days in April, one for April 18, 1918, and two for later or in May. These as in my case are probably due to the fact that no one was in the field at the right place at an earlier date, or if there, could not flush the birds. The latest date is October 17, 1908.

Townsend (1926) gives a record for November 24, 1912, from Vicksburg, Michigan. This is an exceedingly late date, for the majority of the rails leave during the latter part of September or during the first half of October, depending upon the severity of the weather.

NESTING

During the past sixteen years I have found or observed forty-four nests of the Virginia Rail. The earliest was found on April 30, 1922, and the latest on July 31, 1920, from which the young hatched and left the nest on August 2 and 3. Another early date, estimated from the time the young hatched, was of a nest with ten eggs which hatched on or before May 27, 1935. Since the incubation period is twenty days, the last egg must have been laid on or before May 7 and the first on or before April 28. In several instances, recently hatched young have been observed during the latter part of July. A late nest was found by C. J. Henry at the W. K. Kellogg Bird Sanctuary on July 17, 1932. Another late date is of an adult with downy young observed by Dr. Josselyn Van Tyne (1923) on August 3, 1919, at Hassel, Michigan.

Undoubtedly these late dates are not of second broods, but nests follow-

ing previous failures to raise young. The majority of the nesting dates for the southern part of the State are between May 10 and May 30. In the Upper Peninsula the Virginia Rail nests most commonly between May 20 and June 10. Of twenty-four nests found in the southern part of the Lower Peninsula the dates of which were known or estimated, incubation began in five between May 1 and 10; in nine between May 10 and 20; in four between May 20 and 31; in three between June 1 and 10; none between June 10 and 20; in one between June 20 and 30 and in two the first half of July. Similarly, in the Upper Peninsula, nine dates fall between May 20 and June 10 and one between June 10 and 20.

The nests show a great similarity in both interior and exterior width, not varying more than twenty mm. in newer nests. As the nests become older the cupped part becomes more stretched and measures a little more. The average of sixteen nests was 12 by 12 cm. inside dimensions, and 15 by 15 cm. for outside dimensions. The nests vary in the depth to which they are cupped from 1 to 6 cm., averaging about 3 cm. They average about 14 cm. above the surface of the water to the rim at the time of beginning incubation. During incubation, however, this varies according to the amount of rainfall. The depth of the water also varies with the rainfall but for the period of beginning incubation, ranges between 10 and 25 cm. However, as in the case of the rainstorm of May 28, 1935, when 3.68 inches of water fell in twenty-four hours, this water depth may become very variable, and in many cases nests are flooded. At the first indication of rising water the birds immediately start to raise the nest by adding to the structure. During a heavy rainstorm I have watched the bird pull dead rushes into the nest and work them under the eggs. In this way the eggs are kept above the surface of the water in any ordinary rain. At other times, as during drought, the water may disappear entirely from the vicinity, and a nest which was in several centimeters of standing water when incubation started, may then be in a perfectly dry area.

The nests are made of whatever plants are closest and most convenient. If built among *Scirpus*, this constitutes the foundation, the rim and often the lining; or if some *Carex* is near at hand the nest may be lined with this finer sedge. If grasses are the chief plant about, the nest is made of them. Usually, but not always, the lining is of finer material than the exterior and foundation. Where the vegetation allows, the nest is usually arched over by a canopy of rushes or sedges. This canopy helps in locating many nests.

The nesting habitat varies according to the location. Along the Great Lakes there are extensive areas of rushes (*Scirpus validus*) which afford a wonderful habitat for the rails. In the interior of the larger marshes are extensive areas of sedges such as *Carex sylvaticus*, *Carex Bebbii* and others closely related, interspersed with cat-tails (*Typha latifolia*) and occasionally

NESTS OF VIRGINIA RAIL

Nest No.	*Date Found*	*Contents*	*Date last egg was laid*	*Date eggs hatched*	*No. of eggs in set*	*Location*
1	May 30, 1920	9 e	Destroyed		9	Convis Township, Calhoun Co.
2	May 30, 1920	7 e	May 17 E	June 6	7	Convis Township, Calhoun Co.
3	May 30, 1920	6 e	Destroyed		6	Convis Township, Calhoun Co.
4	July 31, 1920	7 e	July 14 E	Aug. 2–3	7	Convis Township, Calhoun Co.
5	April 30, 1922	1 e	May 6	May 26 E	7	Convis Township, Calhoun Co.
6	May 14, 1922	9 e	May 14 E	June 3	9	Convis Township, Calhoun Co.
7	May 27, 1923	8 e	May 25 E	June 13–14	8	Convis Township, Calhoun Co.
8	June 3, 1923	8 e	May 26 E	June 13–15	8	Convis Township, Calhoun Co.
9	June 21, 1923	7 e	Destroyed		7	Convis Township, Calhoun Co.
10	May 25, 1929	10 e	Unknown	Unknown	10	Convis Township, Calhoun Co.
11	May 18, 1930	9 e	May 9 E	May 28–9	9	Convis Township, Calhoun Co.
12	May 16, 1931	9 e	Unknown	Unknown	9	Convis Township, Calhoun Co.
13	May 24, 1931	8 e	Unknown	Unknown	8	Convis Township, Calhoun Co.
14	July 17, 1932	7 e	July	July	7[1]	W. K. Kellogg Bird Sanct., Kalamazoo Co.
15	June 4, 1933	5 y	May 15 E	June ? 4	x	Convis Township, Calhoun Co.
16	June 8, 1934	13 e	Unknown	Unknown	13[2]	Munuskong State Park, Chippewa Co., U. P.
17	June 11, 1934	10 e	Unknown	Unknown	10[3]	Munuskong State Park, Chippewa Co., U. P.
18	June 11, 1934	11 e	Unknown	Unknown	11[3]	Munuskong State Park, Chippewa Co., U. P.
19	June 11, 1934	10 e	Unknown	Unknown	10[3]	Munuskong State Park, Chippewa Co., U. P.
20	June 11, 1934	eggshells	Evidently destroyed		x[3]	Munuskong State Park, Chippewa Co., U. P.
21	June 12, 1934	2 e	Evidently destroyed		x[2]	Munuskong State Park, Chippewa Co., U. P.
22	June 12, 1934	7 e	June 14 K	July 3–4 E	9	Munuskong State Park, Chippewa Co., U. P.
23	May 9, 1935	5 e	May 12 K	May 31– K June 1	8	Bedford Township, Calhoun Co.
24	May 14, 1935	3 e	Destroyed		x	Bedford Township, Calhoun Co.
25	May 15, 1935	10 e	May 6–7 E	May 27 K	10	Ross Township, Kalamazoo Co.
26	May 16, 1935	3 e	May 20 K	June 8–9 E	7	Convis Township, Calhoun Co.
27	May 16, 1935	7 e	Destroyed		7	Convis Township, Calhoun Co.
28	May 16, 1935	8 e	Destroyed		8	Convis Township, Calhoun Co.
29	May 16, 1935	6 e	May 18 K	June 6–7	9	Convis Township, Calhoun Co.
30	May 18, 1935	2 e	May 25 K	Destroyed	8	Ross Township, Kalamazoo Co.
31	May 18, 1935	3 e	May 23 K	June 12 K	8[4]	Ross Township, Kalamazoo Co.
32	May 19, 1935	9 e	Unknown	Unknown	9	Convis Township, Calhoun Co.
33	May 19, 1935	8 e	May 12 E	May 31, June 1 K	8	Convis Township, Calhoun Co.
34	May 21, 1935	3 e	Deserted with one egg broken			Convis Township, Calhoun Co.
35	May 26, 1935	7 e	Unknown	Unknown	7	Convis Township, Calhoun Co.
36	May 30, 1935	7 e	Unknown	Unknown	7	Convis Township, Calhoun Co.
37	May 30, 1935	9 e	Unknown	Unknown	9	Convis Township, Calhoun Co.
38	May 30, 1935	5 y	Unknown	May ? 29		Leoni Township, Jackson Co.
39	June 1, 1935	10 e	Unknown	Unknown	10[1]	Corey Marshes, Clinton Co.
40	June 2, 1935	11 e	Destroyed		11	Munuskong State Park, Chippewa Co., U. P.
41	June 2, 1935	11 e	Unknown	Unknown	11	Munuskong State Park, Chippewa Co., U. P.
42	June 3, 1935	10 e	May 29 E	June 17–8 K	10	Munuskong State Park, Chippewa Co., U. P.
43	June 3, 1935	9 e	Unknown	Unknown	9	Munuskung State Park, Chippewa Co., U. P.
44	June 15, 1934	6 e	Unknown	Unknown	6	Convis Township, Calhoun Co.

K = known; E = estimated. [1] Nest found by C. J. Henry. [2] Nest found by F. C. Gillett. [3] Nest found by F. C. Gillett and myself. [4] Nest found by Wayne Tice

swamp loosestrife (*Decodon verticillatus*) and reed (*Phragmites communis*). At Munuskong Bay the rushes predominated but *Carex prairea* and *Eleocharis palustris* were to be found with it. Farther back where the Yellow Rails (*Coturnicops noveboracensis*) were found, the sedges were mostly of the genus *Carex* intermixed with grasses, often of the genus *Muhlenbergia.* Later in the summer one may find showy ladyslipper (*Cypripedium reginae*), calopogon (*Limodorum tuberosum*), water parsnip (*Sium cicutaefolium*), blue vervain (*Verbena hastata*), ferns, asters and goldenrods. Often some small bushes and shrubs may be found in the area or very near to it.

Nest no. 5 was visited on May 21 but the eggs had not hatched; and again on May 28, when the eggs had all hatched. Incubation period over fifteen days.

Nest no. 23 was the first nest checked very closely and a summary of the findings is as follows: May 9, about 6 a. m., five eggs; May 10, same; May 11, 7 a. m., six eggs; May 11, 8 p. m., seven eggs (parent incubating for first time); May 12, 5 p. m., eight eggs (bird incubating); visited regularly; May 29, five eggs pipped at 6 a. m., (not pipped night before); May 30, six eggs pipped at 6 a. m.; May 31, 5.30 a. m., one young still wet (egg no. 2); May 31, 5 p. m., six young, four escaped (egg no. 6 infertile), only egg no. 8 remained unhatched; hatched June 1. Incubation period twenty days.

WEIGHT OF EGGS

	May 11	*May 29*	*Loss in grams*	*Percentage loss*	*Weight of young*
1	9.7 grams	8.2 grams	1.5	15.4%	
2	9.6 "	8.2 "	1.4	14.5%	5 grams
3	8.7 "	7.27 "	1.43	16.4%	
4	9.5 "	7.9 "	1.6	16.8%	
5	9.5 "	7.9 "	1.6	16.8%	
6	8.3 "	7.2 "	1.1 (infertile)	13.2%	
7	8.0 "	6.9 "	1.1	13.7%	
8	8.9 "	7.3 "	1.6	17.9%	
Average	9.02 "	7.6 "	1.41 grams	15.9%	5.4 grams

Egg no. 8 weighed May 13 in first column, no. 6 not averaged in in column 4. Two other young were weighed but the eggs from which they hatched are not known. They weighed 5.4 grams and 5.8 grams, respectively.

Nest no. 27.—The eggs were destroyed by some bird, which did not take them all but left two, and a third with a bill hole in it.

Nest no. 31.—May 18, 6.30 a. m., three eggs. Nest was made of Large-toothed Aspen leaves, with not the least sign of lining. Later, gradually, this nest was lined with a few sedges but the aspen leaves showed through

the lining. May 22, 6.30 a. m., seven eggs and incubation had not started; May 23, 6.30 a. m., eight eggs, incubation started (one egg was accidentally broken).

From this date on, Durward L. Allen checked this nest for me until the young hatched. The following are his notes: June 6, 7, 8, 9, 10, 11, seven eggs warm; June 11, all eggs pipped; June 12, 6.30 a. m., all seven eggs still present; 5.45 p. m., all eggs hatched. Incubation period is therefore twenty days, the same as in nest no. 23.

Nest no. 33.—May 12, eight eggs when found; May 30, a. m., seven eggs pipped; May 31, erected blind at nest at 9 a. m., stayed until 11 a. m. Four young hatched that morning. No. 1 egg (weighed 10.7 grams, May 19), young weighed 8.1 grams; no. 4, weighed 10.0 grams May 19; 8.7 grams just an hour before hatching; the young weighed 7.5 grams; no. 6 egg weighed 10.35 grams May 19; 8.6 May 31; the young one weighed 7.5 grams. All of the eggs had hatched before noon except two, one of which was badly pipped.

Nest no. 38.—There were five young in this nest; all the eggs had hatched. On May 30 the water in this area had risen about a foot due to a rain of 3.68 inches on May 28. The nest was soaked and although the water level had dropped a little below the bottom of the nest, the old bird evidently had not brooded or incubated in it sufficiently to dry it out. Since this was late in the evening the old bird must have brought the young back to their old nest or to one of the extra nests which often are made near the original nest.

Nest no. 42.—Found June 3; eight eggs pipped June 15, a. m.; June 16, spent several hours in blind at nest; June 17, 7 a. m., first two eggs hatched. Both birds incubated eggs.

THE EGGS

In the nests which I have observed the number of eggs ranged from six to thirteen. In the Lower Peninsula, on the interior marshes, where all of the nests above described were found, the average number of eggs was 8.06 per nest in thirty nests which were known to have full complements, while for nine nests at Munuskong Bay in the Upper Peninsula, the average was 10.44, or 2.38 eggs more per nest than in those three hundred miles farther south.

Eggs were weighed at twelve nests, nine in the southern part of the State and three at Munuskong State Park. These weights in nearly all cases were taken near the beginning of incubation. Seventy-four eggs in the Lower Peninsula averaged 9.19 grams; fourteen eggs at Munuskong averaged 9.87 grams, but since most of these were from one set, it is hard to compare with the weights of the others. The lightest of eighty-eight eggs weighed 7.15 grams when newly laid. Another light egg weighed 8.0 grams

when fresh and 6.9 grams when pipped. The heaviest egg weighed 11.3 grams when fresh and 9.6 grams when ready to hatch. The lightest set of eggs, eight in number, averaged 8.28 grams when fresh; while the heaviest, eight in number, averaged 10.57 grams when fresh. Many Virginia Rails' eggs have previously been measured but in handling so many eggs in 1935 I measured 97, with an average of 32.34 by 23.49 mm.

The color has been described as "creamy-white" (Reed, 1904), again as "creamy white or pale buffy (ivory-yellow to pale vinaceous buff); spotted and dotted with reddish brown and vinaceous gray" (Dawson, 1923). Again as "pale buff, varying from 'pinkish buff' to 'cartridge buff' or nearly white. They are spotted—with 'hazel' 'russet'! 'cinnamon-brown' and 'army brown'" (Townsend, 1926). The spots are smaller than those on the eggs of the Sora, and occur over the entire surface of the egg, though chiefly condensed at the larger end. The eggs are ovate in shape.

Usually one egg is laid each day. However, in one nest (no. 5) eight eggs were laid in nine days. The usual time of deposition is during the first few hours of daylight, from 4 to 8 a. m.

THE YOUNG

The incubation period of the Virginia Rail for two nests followed from the beginning of incubation until the young hatched, was twenty days. Incubation started in the majority of cases the day before that on which the last egg was laid. In one nest (no. 31), incubation started the day the last egg was laid and the eggs all hatched during a period of ten hours. The eggs are pipped about forty-eight hours before they hatch. In the first thirty-six hours the young one seems to make little progress but finally loosens itself more and begins to cut the upper third of the egg until it has made almost a circle, then by pushing and straining it forces its way into the world, a breathing wet mass with black down over the entire body and head. In only a short time this down becomes silky and fluffy. There is a small claw about 1 mm. long on the outer digit of the wing. The bill is circled with a black band, about 1 mm. wide at from 1 to 2 mm. from the base. Near the tip of the upper mandible is the egg-tooth, conspicuously white on the light vinaceous-fawn-colored bill. The legs and feet are fuscous in color,—colors taken by Dr. Josselyn Van Tyne with Ridgway's 'Color Standards and Color Nomenclature' from specimen collected at Fish Point, Tuscola County, June 5, 1935.

As one approaches the nest during hatching time, the young leave soon after the adult flushes, clambering over the edge and either swimming away with jerky strokes through the neighboring rushes or hiding in some clump in the vicinity of the nest. Sometimes they become caught among the rushes or sedges and soon their *pee-eep* betrays them. Some leave the nest

even before they are entirely dry and they are then more prone to get thus caught. When this occurs, I have seen the adult rush out from the vegetation, catch the little fellow by the nape of its neck, and rapidly dash back out of sight with the chick dangling from her bill. At such times the mate can be heard calling the other young to a spot remote from the nest, while, if one should enter a blind at the nest, the bird which had rescued the young would be seen to return and incubate the remaining eggs.

At night, when the young are first hatched, the adults bring them back to the nest where they remain during the cooler hours. Even as late as the middle of August, at dusk, I have flushed at least a single bird from an empty nest over water. These nests are often found among the sedges at this time of year and are often dry as though they had been in continuous use.

There is a small pond directly back of the barn on my father's farm. At about 6 a. m., on several mornings during the latter part of July, in the two years 1934 and 1935, an old Virginia Rail would bring a brood of downy young from the reeds about the edge of a pond and leading them, would cross close to the barn-yard, just back of the stables where milking was in progress, up to a neighboring field. One morning she led the brood of about eight young to the tool-shed door and even went under the door, calling from inside to the young, which soon followed her. For several minutes she stayed in the shed, then left for the neighboring wheat field. In 1934, the adult even led the young about the yard, at least a hundred yards from the nearest water.

In other places one may find them wending their way along some reed-grown brook to the different swales. Again, if one be lucky enough, when fishing some lake, he may observe the young one-half to two-thirds grown stalk out from the bordering loosestrife or rushes. In this case they usually appear singly. On other occasions, if several observers are together and one stands motionless while the others work back and forth across the marsh toward the one motionless, the latter may see the adult followed by various young, swiftly cross some open area nearby. Later in the summer, both Soras (*Porzana carolina*) and Virginia Rails and often King Rails (*Rallus e. elegans*) may be found together in certain areas before the autumn migration.

WEIGHTS AND PLUMAGES

Seven downy young were weighed when newly hatched and averaged 6.7 grams or 5.0, 5.8, 5.4, 8.1, 7.5, 7.4, and 7.5 grams, respectively. A juvenal female weighed on September 2, 1934, 99 grams. An adult female on April 28, 1935, 70.9 grams. Two males on September 2, 1934, and October 4, 1934, weighed 118 and 114 grams, respectively. Three other birds were captured

alive, two with the help of my dog, while the third was picked off the nest. These weighed 115, 94.55, and 92.8 grams, respectively.

Plumages of the adult Virginia Rail have been described many times. Following is a description of a young one about six weeks old: throat, white; buff band across upper breast; posterior to this in central part of belly, whitish; sides black, streaked with white; buffy on under tail-coverts; top of head, back and tail black with chestnut tips on a few feathers; wing chestnut or reddish brown, white at bend and black-and-white barred underneath; buff line over eye; dark region around eye; iris red; upper mandible dark above, with buffy tomia; lower mandible buffy, black at tip; legs and feet deep copper.

VOICE

The Virginia Rail has many calls and grunts varying with the situation that arouses them. The young when first hatched and for several weeks have a quavering *pee-eep*. At times when they are excited, this call becomes rather shrill. When separated by an intruder or enemy, the young scatter and as soon as stillness again reigns, their quavering *pee-eeps* can be heard all about, together with the clucking of the parents as the group reassembles. On one such occasion, as I stood motionless with a brood of downy Virginia Rails about, the old one could be heard calling so softly that she could hardly be heard, a low *kik-kik-kik-kik* similar to the call of the Yellow Rail but much fainter. At this time the young began their steady peeping in answer and started to gather in her general direction.

Another call which I heard from a blind, as the adult called the downy young together was a low, *cluck-cluck-cluck-cluck-kuk-kuk-kuk* and still another, when the young all started toward it was *koo-koo-koo-koo-kooo-a*. A call heard several times when after disturbing the young all seemed well after I had vanished and they were all assembled again, was a rather loud call *buzz-z-z-z-zzz*, very much as a buzz-saw sounds at a distance when a large stick of wood is pushed into the saw. Another call uttered by the mate when the other is incubating is a low-pitched *kuk-kuk-kuk-kuk-kuk*, which near at hand is very loud. On one occasion an adult on the nest was heard to utter this call three times in answer to what seemed to be all of the rails in the marsh, both Soras and Virginias. From the action, it would seem to mean 'Everything is all right.' A call uttered commonly by the adult when a person approaches a nest or young, is a shrill *keeeee*. Another call more rarely heard is a quick *kid-ic-kid-ic*, which seems to mean 'scatter.'

The regular song of the Virginia Rail can often be heard in the dusk from the depth of the marsh. To me it resembles, *kí-dic-kí-dic—kí-dic—kí-dic—kí-dic*. A. A. Allen (1934) gives a good interpretation of this as *ticket—ticket-ticket*.

VIRGINIA RAIL ON ITS NEST

TWO VIRGINIA RAILS AT THE NEST

BEHAVIOR

At all times any of the rails in Michigan are very hard to flush. With the help of a dog I have flushed many, especially during the early spring when the going is easier for the dog. In fact at this season, during 1935, we flushed as many as seventeen Yellow Rails besides the larger numbers of Soras and Virginias. At times I have watched a Virginia Rail run along in front of the dog only a few feet from his nose then jump to one side and try to escape by standing motionless. On one occasion the dog worked the bird back toward me and it ran right into my hands. On another occasion I watched the bird 'freeze' and walked over and picked it up. This has been done also with Yellow Rails. I have picked both Virginia Rails and Soras off the nest. When the vegetation is high any of the rails is harder to flush and a dog may work in vain for hours, without flushing a single bird. One may consider himself fortunate to flush a rail by walking alone through rail habitat. However, if one stands motionless and watches closely where rails may be heard, he may see them stalk about among the sedges searching for food, or if sedges border a lake they may be observed by a motionless observer from a boat near the shore. They are very elusive birds. If one be fortunate enough to flush a rail, it flies only a short distance just over the rushes or sedges with dangling feet when it again depends upon its feet to escape. At times I have flushed them from fields, bordering marshes, where they must have been feeding.

SOME OBSERVATIONS FROM BLINDS

On two occasions I have observed Prairie Marsh Wrens (*Telmatodytes palustris dissaëptus*) pecking at Virginia Rail eggs but in each case no harm was done, whether it was due to the fact that the birds were not strong enough to break the shells or because the adult rail returned too soon and frightened the Marsh Wren away.

At one nest, where the eggs were pipped, I erected a blind to watch the adults during hatching time. I entered the blind at ten in the morning, during a rainstorm, and within a period of twenty minutes the adult returned to incubate. After making several exposures I wished to photograph the bird as she entered the nest so tried to flush her by slapping the sides of the blind, then by rustling the rushes at the base of the blind, but without success. When I extended my hand toward the nest the parent fairly leaped at it when it was only a short distance away, pecking it severely, uttering as she did so a low grunting, hard to describe. She (?) ran about the vicinity of the nest with drooping wings and was finally joined by her mate who uttered low grunts in answer to those she made, something like the clucking of an old hen but not nearly so loud. After a period of several minutes, the same bird returned to incubate the eggs and the other wandered off through

the rushes. At one o'clock he returned and with the same low clucking call approached the nest and climbed over the edge right beside the incubating bird and worked himself under her wing, examining the eggs as he did so. He left suddenly when the camera shutter clicked. At 1.20 p. m., I again heard the same low clucking and knew he was in the neighborhood. The mate raised her head, watching him as he approached. He repeated the same act as before and this time both birds left the nest to a distance of about four feet where they seemed to consult. The female left the neighborhood while the male climbed on to the nest to start incubating, but with difficulty covered the eggs. He was much more nervous than his mate and had a lighter line over the eye. Finally after many trials he got nearly all of the eggs underneath him and settled down to incubate as a hard rain came on, the hardest during the day. Rain came down in torrents, causing him to shake his head occasionally and to change his position so that he would cover the eggs on the other side where they were getting wet but at no time did he cover the entire ten eggs. Three times he called from the nest, once, in answer to his mate, and twice, in answer to all of the rails in that end of the marsh.

At 2.10 p. m., a low grunting or clucking sounded and the other bird appeared, very neat and trim, even though the rain had been falling very hard, and in marked contrast to the bird, wet and bedraggled, sitting on the eggs. She came to the edge of the nest, where apparently the birds were communicating for she dashed out across the marsh, looking first this way, then that when she spied what she must have been looking for and returned to give the male an insect, the nature of which I could not determine. But he did not want to incubate so dashed out across the marsh whilst she settled down to the task of incubation.

SUMMARY

The Virginia Rails arrive in Michigan during the latter part of April and leave for the South by the last of September or the first part of October. They have been found nesting from April 30 until August 3. Sets contain from six to thirteen eggs, more in the Munuskong Bay region of the Upper Peninsula than in the southern part of the State. The eggs are laid, as a rule, one each day, and are pipped for about forty-eight hours before hatching and all hatch within a period of twenty-four hours, as a rule, for incubation does not start until the day before or upon the day the last egg is deposited. The incubation period is twenty days. The young can swim and walk about almost immediately.

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