

## The Center Furnace Swamp

BY RICHARD C. HARLOW

FAR up on the Nittany Plateau, shut off from the exterior world by rugged ranges of hills, lies a swamp picturesque in situation but ordinary in appearance, just a common, mud swamp, yet one whose features are indelibly impressed upon my memory. On all sides stretch the fertile farms of the valley extending up and far away, until they are gradually absorbed by the towering hills. To the east runs the Nittany Range mile after mile, southward the Tusseys hoard many an ornithological treasure—the remnants of its primeval forest still concealing the Wild Turkey, Pileated Woodpecker and Raven—against the western horizon rear the barren wastes of Bald Eagle Range, while just behind it sweeps the main ridge of the Alleghanies. Yet of all this region of romantic beauty, of towering hills and fertile valleys, I do not intend to write, but of just a plain, ordinary, mud swamp.

Lying about two miles east of State College the Center Furnace Swamp covers an area of perhaps five acres. Sticking up here and there are gaunt stumps, which bear witness to a time long since, when cedars were the characteristic trees. Now beautiful willows fringe the swamp-stream, that runs at one side, and there a sufficient undergrowth has arisen to attract those birds which like such haunts. The main body of the swamp is covered with dense swamp-grass and dotted with patches of cat-tails. Where the water is deepest, perhaps two feet, Marsh Marigolds and water-cress grow rankly and the center of the swamp is marked by scattering shrubs. Altogether it is an ideal spot for birds and one where they might live unmolested, were it not for frequent invasion by gunners from State College.

Winter bird-life is not so abundant as it might be, but a

chance for novelties is afforded and offers that incentive which spurs the ornithologist on. Here the Short-eared Owl comes in search of field mice, Redpolls and Prairie Horned Larks make erratic visits, while the commoner species, Crow, Sparrow Hawk, Downy Woodpecker, Nuthatch, Kinglet, Song Sparrow, Tree Sparrow, and an occasional Junco, take their turns, either as marauders or innocent haunters of the willows. Meadowlarks were observed and taken here all through the winter of 1909, as well as the Wilson Snipe, which even in ordinary years lingers far into December. The latter finds here a suitable feeding ground and during the spring may be found singly or in bunches of from two to ten. So, too, the Killdeer is nearly resident, being obtainable from late February to December.

With the first vernal breath appear the earliest Bluebirds, Robins, Phoebes, and Flickers, followed by the hordes of Redwings, Cowbirds, Rusty Blackbirds, and all the gradations between the Purple and the Bronzed Grackles, mixed in a motley noisy flock. Along the creek I have shot the Green-winged Teal, while others have secured the Pintail, Mallard, American Merganser, and Pied-billed Grebe. Late April and early May bring the Spotted and the Solitary Sandpiper, the former as a summer resident and the latter as a transient, and with them flocks of the less common Pectoral and the Least Sandpipers. Both species of Yellowlegs have been taken and also the Black-bellied Plover, the rarest of all. The willows along the stream furnish admirable haunts for many of our rarer warblers and here during the migration I have secured the Nashville, Orange-crowned, Blackburnian and Canadian besides all the more common species. The undergrowth below has yielded such birds as the White-throated and the White-crowned Sparrow, as well as the Yellow-bellied Flycatcher.

The summer residents, however, have been the source of most interest to me and have caused more than one memorable trip to the swamp. On one of these I made my first acquaintance with the Virginia and the Sora Rail, as nesting birds. Their presence all through the spring of 1909 made us hopeful that they might breed, and we also had expectations for three American Bitterns and some Swamp Sparrows. The bitterns

were shot but the rails survived. Finding them still present on May 29th, we decided to investigate at an early date. At this time we identified several Short-billed Marsh Wrens, but on subsequent trips were unable to flush them. On June 7th we started for rails' nests with the following results set down in my note book and copied here exactly:

“June 7-1909.—This afternoon Foster White and I started for the Centre Furnace Swamp, where we saw the Rails and Marsh Wrens on May 29. . . . We . . . entered the swamp and, though seeing no marsh wrens, I was agreeably surprised at our luck with the Rails. We saw several of these, both Virginias and Soras, several being flushed from their nests. While looking about I came on a nest of the Virginia Rail containing ten eggs. The nest was a frail structure of marsh-grass, placed under a tussock and cunningly hidden. The bird was flushed about ten yards off.

“About twenty yards off I found a nest of the Sora Rail in the midst of a grass tussock. It also held ten eggs, quite distinct (as was the nest) from those of the Virginia. The nest was cunningly concealed in the center of a grass tussock about three inches over the water, which was about ten inches deep. Several of the eggs laid on top of the others. Not far from here I found an incomplete nest of the Virginia, as well as one of the Sora. Down in the east end of the swamp I flushed a Sora and several yards off found her nest in a tussock, poorly concealed and somewhat in the open. It held one fresh egg (afterward destroyed by Snapping Turtle). Not far from here a Sora rushed off her nest hurriedly, and in a moment I saw her nest neatly concealed in a tussock and holding six hatching eggs and one young, black, little Rail. Nearby were two broken eggshells of birds already hatched. About 50 yards off I flushed a Virginia Rail and soon found her nest, built in a thick clump of marsh-grass and raised eight inches above the water. It held 10 eggs. Some 75 yards off, White came on still another Virginia's nest with 10 eggs. It was built over shallow water about one foot up in the thick marsh-grass. The bird was seen nearby. All the nests were compactly made of dry marsh-grasses and shreds of flags. The Rails usually run off and fly up when you

are still several yards distant. We saw one or two Swamp Sparrows but found no nests, though two of the Song Sparrow were found with four young and five eggs. Several Redwings' nests were found with from one to four eggs, and I collected one set of the latter number. In a dead tree near the swamp we found a Red-headed Woodpecker's nest, 25 feet up, with young."

The total number of nests discovered was four of each species of rail, one of each being incomplete.

The following year, 1910, I found a number of the Soras' nests, collecting two sets of nine and eleven eggs respectively, but discovered none of the Virginia's. David Harrower, however, found several nests, and one of these, a Virginia's, contained an egg which was unmistakably a Sora's. An interesting incident of this trip was the detection of a Snapping Turtle in the act of robbing a rail's nest. I succeeded in killing it, and found that it weighed twenty pounds. The rails were observed again in the swamp in 1911, but their number had decreased, so we did not bother them.

This rather unusual discovery of the two species nesting side by side in the same swamp made it possible for me to compare their nesting habits in the field and to ascertain some distinctive traits of each. The nests of both species are very cunningly concealed and very difficult to see, even when one stands directly above them. Then both run off when one is still some distance away, being very hard to flush. But after noting these two similarities one comes upon distinct differences. The Carolina Rail usually places its nest directly over water in the deeper portions of the swamp, while the Virginia often choose situations where the ground is barely wet. The Carolina builds its nest more compactly, concaves it more deeply, and prefers cattails and shred of flags for lining, whereas the Virginia generally uses dry marsh grass. Eggs of the Carolina are much darker, being covered with brownish and olive blotches, and the shell itself is harder; the Virginia's have a lighter cream-colored background, speckled and spotted with light buff and brown. The Carolina seems to begin incubation with the first egg laid, for the reason that in a set of ten eggs some will be fresh while

others will exhibit various stages of incubation. In a set of eleven they varied from a condition of freshness to that of being nearly full developed. Sets of the Virginia show some variation in development, but not to so marked a degree. Each species seems to be fairly uniform in its nesting habits, so that there is little difficulty in distinguishing them.

May 28th to May 30th is the period when the majority of both species possess fresh eggs, but it may be noticed from the dates given above, that nidification must begin in some instances as early as May 10th, hardly a week after the arrival of the birds. Like the Clapper Rail and the Florida Gallinule, both these species exhibit a tendency to construct sham nests, as a large number are never finished nor laid in. Both species are solicitous when their homes are threatened and they have some reason to be, for they have a few enemies. Crows destroy some sets, large Snapping Turtles in the deeper portions raid others, and probably the Muskrats take their share at times. On the whole, however, their natural enemies are few in number.

As I sit here writing, the memories of these bygone trips come over me, and once again I seem to be travelling muddy areas in search of things ornithological. Poor this swamp is in external appearance, but unusually rich in feathered inhabitants, so that for me it has an attraction and a lure that increases in power as the spring days approach. Soon I shall be drawn irresistibly and once more will be watching the warblers in the willows and listening to the rattling call of the Virginia Rail in the old Center Furnace Swamp.