The Singing

WOOD-RAIL

By Alexander F. Skutch

N my first visit to Central America, I dwelt for half a year in a house set amidst beautiful shrubbery and trees, close by a broad lagoon that wound with many a turn down to the Caribbean Sea. The lagoon, an old channel of the Changuinola River in western Panama, was bordered by tall wild canes, huge-leafed herbs, and vine-draped trees; and behind this fringing vegetation stretched great plantations of cacao and bananas.

Multitudes of birds of many kinds swam in the still water, flew above it, or lurked in the dense bordering vegetation. Sometimes, especially in the late afternoons of April and May, my attention would be arrested by a series of ringing, bell-like notes, floating up to the house from the shores of the lagoon. Clear and loud, tick tock, tock tick, tick tock tock tock tock tick . . . sounded in the distance; and at times there would be an answering refrain that seemed to come from the mate of the first bird. The effectiveness of this remarkable performance, the sense of mystery that it evoked, was increased because it began, and ended, suddenly, and one waited in vain for its repetition.

On my last day in this fascinating region, I went for a farewell voyage on the lagoon, paddled in a dugout canoe by the black man who took care of the garden. Pointing out a large rail that foraged beneath a spreading tree on the shore, he assured me that this bird made the sounds which had so impressed me. Since he was a keen observer of nature, I had little doubt that he was right; but a decade passed before I succeeded in confirming the information he then supplied.

It was not until some years later, when I went to live in the valley of El General, on the Pacific slope of southern Costa Rica, that I became somewhat familiar with this elusive rail. It was a slow process that has required many years. One morning when I set out to collect plants, I met along the road a man over whose shoulder was slung a pair of the woven saddle-bags used by the Costa Rican country people. From one of the pouches projected the head of a bird, whose body was stuffed inside. Noticing my interest, the wayfarer stopped and offered to sell it to me, explaining that it was a chirincoco (pronounced with all the syllables almost equally stressed), which he had caught in a drop-trap. After some bargaining, he reduced his price to two colones or about 30 cents, and I bought the bird. It was a gray-necked wood-rail, Aramides cajanea, a long-legged, short-tailed bird about 12 inches in length. Its back was brownish-olive, deepening to black on the rump and tail. Its head and neck were largely gray, with a white patch on the throat. The breast, sides, and upper part of the abdomen were a lovely shade of orange-chestnut. But what chiefly impressed me was the beautiful bright red of my captive's eyes. After making a careful examination of its plumage, I untied its legs and released it in the next woodland through which we passed. I

was delighted with the alacrity displayed in jumping from hands and running into the under growth.

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oulo Not long after this, while water igh ing from a blind the burrow of The chestnut-tailed automolus in nd t low bank of a stream that mea ight dered through second-growth wodense land, I heard a deep, hollow no he emanating from the thicket on trowt farther shore. Presently a wood-recame into view, walking with slondar measured steps over the let mp ground at the top of the bank. he pushed aside the fallen leaves wirred its short, green and yellow bast searching for food, then stood er side and repeated the sounds that I have just heard. They reminded me em the plunking noise made by the ree try of air into a very large, near all empty bottle from which water ood-being poured, or the beating of so ind, hollow, yielding, non-metallic boher The bird's light throat swelled with each repetition of the peculine note, but it kept its bill closed.

Then the lagging mate joined foremost of the pair; and the proceeded silently with long, de erate strides of their bright red until they passed from view around the proceeding of the stream. After the stream of th ctob the bend of the stream. After hey had vanished, I heard the long-udy tinued song, of which the bird's ys.



AUDUBON MAG, UARY

cal name, chir-in-co-co, is such a happy rendering. This was, so far, my most intimate encounter with a free wood-rail, and the best evidence I had yet obtained that it utters the far-crying notes that made such a lasting impression on me during my first visit to Central America.

When, about two years after this meeting, I bought a farm in another part of the broad valley of El General, I built my house on a high terrace close by a small stream. A little way below the stream enters the Rio Pena Blanca, a broad, clear torrent that rushes noisily down its boulder-strewn channel from the high peaks of Chirripó in the north. The low ground between the affluent and the main stream is covered with light second-growth woods with dense undergrowth; higher along the creek is even denser shrub growth surrounding a small marshy opening. Such impenetrable secondary vegetation, rather than the comparatively open undergrowth of the primary rain-forest, is the preferred home of the chirincoco. At least a single pair is usually in residence here. Over the years I have often heard them and seen them now and then. With two or three exceptions, all of my most revealing meetings with the retiring wood-rail have come while I sat in a blind, watching the nest of some other bird.

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The wood-rails sing through much of the year, from January into October, but most in April, May, and June, the first three months of the long rainy season, when the majority of our birds of all kinds are singing and nesting most freely. They perform far more in wet, cloudy weather than on bright, dry days. They may sing at almost any hour of the day, and also after nightfall, not only when the moon is shining but even in the dense darkness of a clouded, starless night. As Frank M. Chapman long ago pointed out, their performance is, at least at times, a duet; and the two performers are often decidedly unequal in musical ability. This became quite clear to me one day in July while I sat in my blind in our coffee grove watching a blue-black grosbeak's nest. One rail sang at the edge of the thicket in front of me, another along the stream to my right. With the notes reaching me from widely separated points, there could be no doubt that they emanated from two throats. The duettists, doubtless mated birds, kept perfect time; and the voices of both sounded somewhat strained or cracked.

The rails' song is far more pleasing and effective when the birds are so far off that only the clear, ringing notes reach the hearer, than when they are close at hand and the performance is marred by an undercurrent of cackling. I was impressed with this one April morning when the chirincocos sang alternately from the thicket beside our garden and from the streamside possibly a hun-



dred yards away. From the stream only the melodious notes reached me, and I was delighted by their long-continued flow. But soon the rails would come closer, and the cracked notes intruded most annoyingly. Then, after a while, the rails would return to the lower level, and their song recovered its enchanting beauty. This went on for nearly a quarter of an hour. A single song may last a minute or two with hardly a pause.

In addition to the booming sound, which I have rarely heard, and the loud, long-continued duet, the rails have a third utterance, an extremely harsh, stentorian cackle, suggestive of intense excitement or alarm. I have a number of times heard this arresting cackle issue from the thicket across the stream and hurried down only to have it cease before I could come in view of its source.

After sunrise on another day in

April, I cautiously approached in time to see a large opossum chasing a rail along the rocky shore of the creek, beneath the spreading riverwood trees. The bird ran or walked ahead, while the marsupial lumbered clumsily in pursuit. Twice I clearly saw that one member of the pair of rails was following the opossum while the opossum pursued the bird's mate. They turned off into the bushes on the farther side of the stream, then after a while emerged again on the shore. Thus the pursuit ran in circles, at the same time working slowly upstream, until all three of the participants vanished amid the dense vegetation. Once, while the chase continued, I heard the rails deliver a few notes of their chirin co co song, and they also cackled a little more.

The only explanation of these strange proceedings that occurred to me was that the rails had eggs or chicks hidden somewhere in the vicinity, and that one was luring the opossum from them, while the mate followed to watch, or to deflect the animal if it should turn back. In somewhat similar fashion, domestic chickens sometimes walk with upstretched necks toward a small animal which alarms or puzzles them.

Between this stream and the house is a shady pasture, in which for years stood a shed with a highpeaked roof thatched with leaves of the sugar cane. The horses took shelter in the lower part, which was open on all sides, and in the top, maize was stored. Squirrels frequented this rustic granary, cutting open the husks to reach the corn; grosbeaks, blue-black chested doves, and white-tipped doves came for the grains which the rodents exposed for them. Some of these loose grains fell through the palm slats on which the maize rested, and then the wood-rails would pick them from the dusty ground where the horses stood, although I never saw them enter the granary above, where richer stores were available. Sometimes two rails visited the shed together, but I could watch them only through a binocular from a distance. The moment they glimpsed me, they would run rapidly into the bushes which bordered the stream, a few yards away.

(To be concluded in the next issue)

The Singing

WOOD-RAIL

By Alexander F. Skutch

(Part II)

ON the other side of my Costa Rican house, beside the coffee grove, grow some pejibaye palms, whose tall, slender trunks, bristling with long, needle-like, black thorns, bear spreading crowns of graceful, plumy fronds. The fruits, about the size of plums, are borne in heavy, compact clusters just below the leaves. When they begin to ripen in July or August, tanagers, finches, woodpeckers, and other birds flock to feast on them, and they drop to the ground many fragments and half-eaten fruits, in addition to a few that are whole.

The wood-rails venture forth from the neighboring streamside thicket to devour these fragments made available to them by the smaller birds, but they are so shy and wary that I have seen them do this only while I was hidden in a blind. In the course of one morning, I witnessed four visits by a rail, whether always the same individual I could not tell. It never stayed in the open long enough to swallow its prize, but each time it hurried off holding the whitish fragment of fruit in its bill. On the first three occasions it carried the morsel right back into the thicket beyond the palms, but on the fourth it walked through the edge of the plantation, between the coffee bushes, taking long strides and looking cautiously from side to side, then breaking into a run as it neared the bank of the stream, into whose dense shrubbery it vanished. With its long red legs, rich chestnut breast, big red eyes, and green and yellow bill, how bright the rail appeared as it crossed the open spaces of the plantation!

Pejibayes are edible by humans only after they have been well cooked, preferably with salt; for when raw they sting the mouth. But

the birds appear not to be troubled by the stinging sensation, if indeed they feel it. Dry maize and pejibaye fruits are the only foods that I have seen the rails eat, although doubtless their diet includes a variety of insects, worms, frogs, lizards, small snakes, and other creatures that they find beneath the fallen leaves which, as I once witnessed, they push aside with their bills. One day while I watched a royal flycatcher, a woodrail jumped with a noisy splash into the shallow rivulet above which her long nest hung, frightening her from her eggs. Apparently the rail was trying to catch a minnow or a tadpole.

The wood-rail's nest is a large, compact mass of dead leaves and twigs, measuring from 12 to 14 inches across the top and, in the bulkier examples, about 9 inches in height. In the top is a shallow depression, whose depth is sometimes less than the thickness of the eggs it holds, and this is lined with twigs. This nest resembles the masses of dead leaves and branchlets that frequently accumulate in the tangles of vines, and I should not have paid much attention to the first that I found if a rail had not slipped from it as I approached.

The three nests that I have seen in the valley of El General were at heights of from 6 to 10 feet in dense, vine-laden thickets or light second-growth woods. Each contained three large, strongly ovate eggs, about two inches in length by nearly an inch-and-a-half in diameter, which were dull white, spotted and blotched with bright, rusty brown and pale lilac. These markings were heaviest on the thick end but sparsely scattered over the remaining surface. All of these nests were discovered in the early part of the rainy season, from mid-April to the first week of July.

On the island of Trinidad, according to Belcher and Smooker, this wood-rail builds a deep bowl of small

twigs, dry weed stems, fibers, les v leaves, which it lines with Hays bamboo leaves. These nests The placed from 3 to 20 feet above pred ground, or at times over the ed N a waterway, 8 feet or more above surface. These authors found from late May well into August NAT the sets were larger than I have in El General. They consider to be the normal complement, on they found up to 7 in a nest, a erv the other extreme sets of on ohi or 4 eggs, which they surmised plan second layings.

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Belcher and Smooker believed or if a nest is touched by a huwi hand, the rail sometimes destroy eggs and deserts it, and this may are pen if the sitting bird is merelying denly flushed. My own experienn somewhat different. When I fani my first nest, in a tangle of climing razor-sedge in light woods near coffee plantation where I sawit rails eat pejibaye fruits, I picket the eggs to measure them; yet in ward, the rails continued to bate. On the following day of them watched me from the while I looked at it from a disas of only 3 or 4 yards. Hopinio learn something about the dn coco's domestic arrangements, I'a set up a blind and screened it leafy boughs; but this caused rails to stay away. When, lateri day, I found the eggs cold, I prom removed the offending tent; but the birds refused to return to nest.

The second nest, 10 feet up wery dense tangle of vines in a spring tree, was discovered by a law while cutting down the light with to plant bananas. The rail tinued to incubate while he won noisily felling the trees, and slipped from the eggs only whe cut two tall saplings so close they fell against the vines in midst of which it sat hidden

view. When the boy took me to see his discovery, the rail, which had resumed incubation, remained at its post while we stood beneath the nest. It unobtrusively vanished when I turned my back to cut a stick to which I might attach a mirror that would reveal what the nest held. Next day incubation continued, at the very edge of the new clearing, where work had been suspended for the benefit of the rails and the studies which I hoped to make. But two days later the eggs had vanished. They were probably taken by some predator.

My third nest, situated 8 feet up

in a dense tangle of bushes and vines in a low second-growth thicket, not far from a rivulet, was without eggs when I found it on May 18, 1947. By half-past seven on the morning of May 22, 3 eggs had been laid. In the ensuing days, 4 times I found a rail sitting on them, so well concealed by the leaves that clustered thickly around that I could see nothing of it save from a single point, where a gap in the foliage permitted a view of its head from the eye up and part of its bill - nothing more. It sat motionless and steadfastly returned my gaze. I never touched these eggs, viewing them only in a

mirror raised on a stick; but by May 29 the nest was empty, with fragments of the shells scattered over the ground below — the work, I believed, of some mammalian predator. Because of the premature loss of all my nests, I have never seen the chirincoco's newly-hatched chicks, nor have I ever met parents leading downy or half-grown young through the woodlands or thickets.

In May two years ago, while prowling through the dense, bushy growth across the creek where the woodrails live, I discovered a platform composed of dead leaves, weed stalks, and coarse bits of vegetation. It was 6 feet up in a bush at the edge of the marshy opening, and was 10 by 12 inches across the top and about 4 inches thick. The top was hard and compacted, as though it had long been in use, and so flat, without the least rim, that an egg placed upon it would have been in danger of rolling off. Although canopied above by a tangle of vines, it was completely exposed on the side toward the marsh, from the farther edge of which it was visible.

I suspected that this was a rail's sleeping platform. After nightfall I waded the stream and stole up to it as silently as the tangled vegetation permitted. When in a favorable position, I threw the beam of my flashlight upon the platform. There, sitting beneath the canopy of vines, staring into the blinding rays with big red eyes and nervously twitching its short tail, was a chirincoco, whose sleep I had interrupted. After taking one good look, I extinguished the light and crept away as quietly as I could.

Next day I returned to look for the dormitory of this bird's mate, or its nest with eggs; but my search was Since the surrounding thicket was so dense that I could scarcely move without opening a path with my machete, and visibility was limited to a few yards, I might have passed close by what I sought without finding it. After making this discovery, I have often wondered, when the chirin co co song rings out in the night, whether the rails are performing on their sleeping platforms or wandering over the ground in the dark. This is one of the many questions about the life of the elusive chirincoco which will doubtless long await an answer.

- THE END.

NATURE IN THE NEWS

Continued from page 65

From the program at its completion comes an understanding of both conservation and another tenet of Audubon philosophy—we know that soil, water, plants, and wild creatures depend upon each other and are vital to human life.

The Audubon program offers an opportunity to escape to reality.

WHEEL OF LIFE

The final lecture of the two weeks presented "The Wheel Of Life," which finds in balance—minerals in the soil unlocked by green plants, plant eating animals, predatory animals and scavengers. Man was pictured in the center of the wheel and is admonished he can either make it or break it.

The laws of nature are as they always have been and unless man understands and observes them our complicated civilization of human society is threatened.

All this study of nature is no laborious task, but intensely interesting instruction carried on in the great outdoors in a delightful section of the Sierra Nevada.

Campers are kept busy with morning, afternoon, and evening sessions, the latter indoors, except for study of the stars, and usually lectures or motion pictures presenting information on natural history, together with social features.

Of the 54 who comprised the fifth session, 24 were teachers, 2 school administrators, 1 librarian, 4 youth organization leaders, 3 students, and the balance miscellaneous. Addresses showed: northern California 28, southern California 13, Arizona 2, Illinois 2, Nevada 1, New Mexico 1, Texas 2, Virginia 1, Washington 4.

The natural setting of the Sugar Bowl, a noted winter sports center, provides the trees, streams, lakes, and mountains needed and for study of species not in the immediate area there are trips by

station wagon to Boca Reservoir, east of Truckee, and to Washoe Lake, Steamboat Springs, and Mt. Rose south of Reno.

Campers are divided into groups of 12 to 15 and spend three half days with each of five leaders, all with degrees in biology, zoology, or kindred subjects and all teachers, some in state colleges and others in high schools and elementary school programs.

Directing the camp and program is William Goodall, Pacific coast representative of the National Audubon Society. A philosopher and humorist, in addition to his purely professional qualifications, he is today's Will Rogers and his personality gives the camp a strong appeal to all who come under his influence.

The camp has many customs and traditions which enliven and make pleasant and profitable the days spent there. These should not be revealed else the edge be taken off for the "first timer" when he learns them.

TEACHERS, LEADERS

In these days when education is so much in the public mind it was interesting to return to the status of pupil. From the experience came confirmation of a truth which should be universally recognized—the importance of the teacher to the individual pupil and the class. The teacher is all-important. Whatever the method, whatever the program, its success depends on the teacher. This is recognized to a far greater degree by adults than by the younger generation, who comprise most of the pupils.

Our leaders were outstanding teachers, dedicated to nature and to teaching. They had an additional burden of dealing with adults who had, for the most part, not been pupils for a long time. Their qualifications and their interest, their special training in the Audubon program and especially the influence of "Bill" Goodall, aroused and maintained the interest of their pupils and left

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