THE FRIENDLY BICOLORED ANTBIRD

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YOU MAY WANDER far through tropical forest, meeting only here and there a solitary bird. Just as you begin to suspect that the accounts you have read of the splendor and variety of tropical bird life were greatly exaggerated, your attention may be drawn by a chorus of small voices somewhere in the distance. Following the sounds, you come in view of winged figures flitting through the shrubs, low palms and ferns of the dimly lighted undergrowth. It seems that a large share of the feathered inhabitants of the surrounding forest have congregated in this one spot. Most wear subdued colors — browns, olives and grays — which blend with the bark of trees and the dead leaves on the ground. Some perch on low twigs, others grasp slender upright stems, yet others cling woodpecker-like to thick trunks. From time to time they dart rapidly back and forth, or drop momentarily to the ground.

The excited feathered crowd sends forth a medley of churrs, cheeps, rattles, whistles and trills, and in intervals of relative silence the keen ear may detect a low, rustling sound, made by countless tiny feet pattering upon fallen leaves. Looking down, one sees that the ground beneath the birds is covered with swarming ants — dull brown, sightless army ants. As the hunting ants push beneath fallen leaves and file up the trunks of trees, all the small creatures that hide in such places make a dash for safety. Crickets, roaches, moths, centipedes, spiders, an occasional small frog, lizard or snake, rush forth from concealment, and many which escape the ants are snatched up by the attendant birds. It is the ease of finding food above the foraging army that has brought together this motley crowd of feathered creatures.

The Bicolored Antbird is a voluble and friendly follower of the columns of army ants. Typically it is found within a yard of the ground, clinging to vertical stems rather than perching on horizontal twigs.

Conspicuous among the followers of the army ants in the lowland forests of southern Central America is a bird about the size of a sparrow, clad in rich chestnut-brown upper plumage, with a broad, somewhat irregular band of white along the central under parts from the chin to the abdomen. Each large, dark eye is set in an area of bright blue bare skin, below and behind which the cheeks and ear-coverts are black. It stays within a yard of the ground, clinging to slender vertical stems in preference to horizontal twigs. By stretching out the upper and flexing the lower of its bluish-gray legs, it manages to hold its body almost upright despite its peculiar manner of perching. Whenever its keen eyes espy some small invertebrate desperately trying to escape the ants, it darts down and seizes the fugitive, returning in a trice to an erect stem with the victim in its blackish bill. It is a voluble bird, constantly repeating its half-whimsical, half-mocking call, which consists of a series of little clear notes rising in pitch toward the end: *we we we we we we we wheer*. Or sometimes two or three notes falling in pitch terminate the series — this call has many variations. Often three or four, and sometimes as many as six or seven, of these attractive birds gather about a swarm of ants, with many associates of other species.

As I walked through the forest on my farm in Costa Rica, one cloudy morning in February about fourteen years ago, I noticed a lone Bicolored Antbird in the undergrowth close beside

the trail, and it stayed so persistently in one spot that I was led to look for its nest. I searched the more eagerly because I had never seen the nest of this species, although I had hunted much for it in forests where the bird is fairly abundant. While I peered into the hollow center of a palm stump and scrutinized the crevices between its crowded prop-roots, the antbird appeared to be examining me from the bushes only a few feet away. But I found no nest. As I began to walk away, the antbird followed me. Moving slowly and watching it out of the corner of an eye, I saw that it was snatching up the insects driven from the fallen leaves by my passage. Taking care to shake the ground litter and to avoid abrupt movements, I led it through the undergrowth for nearly a hundred yards, a leisurely journey on which it was rewarded by many small creatures that it ate. Clearly it was using me in lieu of army ants to stir up the insects so difficult to find as they lurk motionless beneath fallen leaves with whose color they blend.

This was the first of many similar excursions that the antbird and I took together. As we became intimate, I needed a name for my little woodland friend, and "Jimmy," short for *Gymnopithys bicolor,* seemed as good as another. As we walked together through the forest, I would repeat this name in order to accustom him to my voice. But I was doubtful as to the appropriateness of this masculine appellation, for the sexes of the Bicolored Antbird look very much alike, and "Jimmy" might well have been a female.

Sometimes as I walked through the woodland near the house I found Jimmy, but far more often he found me. While I stood watching some other bird he might apprise me of his presence by a low, questioning note, and looking down I would see him clinging to an upright stem, a foot from the ground and hardly a yard away. Often he would wait patiently close by me, perhaps preening his feathers, until I finished my observation of the other bird. Then, if I could spare the time, we would begin the leisurely journey which he liked, for he would not try to keep up if I walked fast. Frequently I used a stick instead of my shoes to stir up the ground litter. Whenever a suitable morsel was exposed, Jimmy would dart up and seize it with a *clack* of his bill. He had definite preferences and paid no attention to certain insects which to me looked just as appetizing as those which he eagerly devoured. Among the creatures he disdained were certain moths, although he ate other kinds of moths. In the wet season he varied his diet with small frogs, an inch or less in length, which he beat against his perch before he swallowed them. If he saw an escaping insect dive beneath fallen leaves, he would alight on a low twig or the ground and flick them aside with rapid sideways movements of his bill, just as ant-thrushes, antpittas and many other ground-feeding birds do. Sometimes while seeking a fugitive he would fall some yards behind me, but soon a rapid flight, low above the ground, would bring him to my side again. Or if I delayed too long in one spot, he would remind me of his presence by repeating his low, throaty note while clinging to a sapling close beside me.

In the breeding season Jimmy sometimes followed me while I searched for birds' nests to study, but these trips were more profitable to him than to me, for they provided many insects for him and rarely a nest for me. At times our journeys together lasted an hour or more, and once we went an estimated half-mile, which seems a long distance in the forest. This must have taken Jimmy far beyond his home area. Although he refused to follow when I returned along a little-used wood road, he apparently had no difficulty in finding his way home, and a few weeks later I met him in the part of the forest where he lived.

He could not be enticed beyond the border of the heavy woodland into the brighter light of neighboring second-growth thickets or pastures, although here I might have chased up fat grasshoppers for him. Although he picked up insects at my feet, he always flitted away when my advancing hand was a few inches from him and never permitted me to touch him. Yet he did not object when I ruffled his feathers with the end of a short stick. After he had become thoroughly accustomed to me, I tested his reactions to noises and found him unmoved by my loudest clapping or shouting. Nor was he alarmed when I shook the sapling to which he clung. He was not estranged by a long separation, and after an interval of several months in which we did not meet he would come to me as though our last meeting had been yesterday. No other free bird has ever been so intimate with me.

Since I had neither known nor heard of any other Bicolored Antbird or bird of any kind which followed men through the woodland, I concluded that Jimmy was an original genius who had discovered that featherless bipeds may be utilized as purveyors of food, just as Cattle Egrets and anis use cows, horses and other grazing animals to stir up insects and in the East certain hornbills are said to employ arboreal monkeys. My walks with Jimmy extended over a period of sixteen months, after which for nearly three years I could induce no antbird to follow me. I missed his quiet companionship on my solitary woodland walks.

Then one day a Bicolored Antbird followed me much as Jimmy had done. Considering the long period when no antbird had accompanied me, I concluded that this was a different individual, perhaps a descendant who had inherited Jimmy's peculiar trait. Hence I called him "Jameson." In subsequent years, I have from time to time been followed through the forest near our house by Bicolored Antbirds and sometimes by two together, apparently a mated pair. It is possible that Jimmy started a custom which has been spreading through the local population; but we should need to know far more about the habits of the species in other parts of its range before passing final judgment on this surmise. Sometimes young Bicolored Antbirds, easily recognized by their darker under plumage and the yellow corners of their mouths, have come almost within arm's length and even followed me for short distances, but they could never be induced to take a longer trip and catch the insects I stirred up, perhaps because they still received food from their parents, who were near by. They were either curious or simply friendly.

At times, especially in June, the antbirds who followed me, instead of eating at once the food they caught, would carry it off through the underwood, suggesting that they were feeding young. To my great disappointment, I never succeeded in following them to their nest, if nest they had. But as I passed along an indistinct trail in the forest near our house in mid-August, a Bicolored Antbird clung to a stem close beside me with a fat insect in its bill, repeating over and over a low, scolding *churr*. This led me to begin a search through the undergrowth, and as I moved about the bird darted so close to me that its wing brushed my leg. Then it dropped to the ground, grovelling and beating its half-spread wings, in an excellent distraction display. It "feigned injury" repeatedly in various spots only a yard or two from my feet.

Finally I discovered two nestlings lying close together on the ground, as though they had been tumbled there. They seemed to be about five or six days old, for they bore long, lead-colored pinfeathers and their eyes were already open. They had great, white flanges at the corners of their mouths. They were cold and sluggish in their movements, and one had fresh blood on its flank.

A little more searching disclosed whence they had come. Near by was the stump of what had been a tall feather-palm. It was only about six inches high, and all the central part had decayed away, leaving a deep hollow surrounded by a papery shell. The frail stump had somehow collapsed, spilling nest and nestlings onto a palm frond that lay close beside it. The nest had consisted of large pieces of partly decayed palm leaf, forming a thin mat, above which was a lining of coarse fibrous roots and similar materials.

While I examined the remains of the ill-fated nest, the parent behaved in most extraordinary fashion. It gulped down with an effort the fat insect it had been holding and with empty bill incessantly repeated a somewhat churred *per-r-r-r*, at once plaintive and protesting. Several times more it grovelled on the ground in front of me, beating its wings in an effort to lure me away from the nestlings. When I held them in front of the parent in the palm of my hand, it advanced and bit a finger three or four times, but not hard enough to hurt. With the exception of a female Slaty Antshrike, who nipped the finger I placed on her nest while her mate "feigned injury" on the ground to lure me away, no other forest bird has ever dared to attack me. Spreading a handkerchief on the fallen leaves, I placed the torpid nestlings on it while I arranged a new home for them. The parent lay or sat on the ground facing the handkerchief with its youngsters and remained motionless, watching or guarding them, for the ten minutes or so that I left them on the leaves.

After I had improvised a sort of nest in the hollow sheath of a palm frond, I placed the nestlings

in it while the antbird intently watched me. Then I went away, confident that so devoted a parent would not neglect its little ones. But when I returned next morning they were both dead, one in the palm sheath, the other lying on the ground close by it.

After this, I looked into every hollow palm stump that I found, and also into the long, almost cylindrical sheathing bases of great fallen palm fronds, for Dr. Josselyn Van Tyne had a short while before published an account of the discovery of a Bicolored Antbird's nest in a similar situation in Panamá. The following May, not far from the point where I had found the fallen nestlings, I peered into a low palm stump to behold a Bicolored Antbird sitting in it and returning my gaze. It stared up at me for nearly a minute, then jumped out and "feigned injury" on the ground close in front of me. Its departure revealed two creamy eggs, thickly marked with elongate blotches of rufous-chocolate, which lay on a nest composed of a double handful of leaf fragments, with a thin lining of rootlets and other fibrous materials. The stump, about ten inches high, had been reduced by decay to a thin shell, so fragile that I did not dare insert a hand into the deep, narrow cavity in order to pick up and measure the eggs. All the while that I examined the nest and made notes, the antbird circled close around me, voicing a churred *per-r-r-r* punctuated with a higher, sharper note. Once it tried to lure me away by approaching within arm's length and then walking in front of me with little, mincing steps. When finally, having completed my note-making, I walked off, the parent followed for a yard or two. Then at once it went to look into the stump to see whether its eggs were still there. It made a second examination, then while I stood watching a short distance away it returned to incubate. Rarely have I seen a bird evince more obvious concern for the fate of its nest.

Setting up a blind, I spent two whole mornings and all of an afternoon studying the antbirds' mode of incubation. The sessions on the eggs were amazingly long even for antbirds, which as a family sit for longer periods than songbirds. One morning a parent incubated continuously from 6:25 to 12:04—nearly six hours. On another morning I timed a session which lasted four hours and four minutes. These were long fasts for a small bird. Afternoon sessions were shorter, but one was continued for about three hours. Yet I never saw one parent replace the other. Sometimes after sitting for hours the bird would go off, leaving the eggs unattended. At other times the mate would come and call the sitting bird from the nest, then both would fly away together. In either case, the eggs might be neglected for periods ranging from five minutes to an hour and a half. Often the bird returning to the nest brought a rootlet or fiber to lay beneath the eggs.

Since I was unable to distinguish the members of the pair, I could not tell whether incubation was performed by the male, the female, or by both sitting alternately. Remembering that Jimmy would permit me to touch him with a stick, I wrapped a little cotton about the end of a long wand, dipped it in paint, and touching the parents as they flitted close around me protesting my intrusion, I placed white stains on one and some vermilion spots on the other. Continued watching of the marked birds left no doubt that both male and female took turns warming the eggs, as seems to be the invariable procedure in the antbird family. In those species in which the sexes differ in coloration, it is not difficult to convince oneself that the female regularly takes charge of the nest by night. The bird on whom I had placed the white marks sat through the night, hence I inferred that this was the female.

Fourteen days after I found the eggs, I visited the nest by moonlight, and looking into the stump with the aid of an electric torch, I saw a mass of feathers so loosely spread and disheveled that they appeared not to be attached to a living bird. Such complete relaxation of the contour plumage is typical of antbirds sleeping on their nests. The parent with the white marks continued to slumber while the light increased and the woodland birds gradually became active. Even after awakening she would not leave when I bent over her and tapped gently on the side of the stump. Soon weak peepings filtering through the maternal coverlet told me the cause of this increased attachment to the nest. When finally she jumped out, it was to grovel at my feet in realistic "injury-feigning" acts repeated again and again, until I put an end to them by with-

drawing a few paces. Then the parent promptly returned to her newly hatched nestlings. The empty shells had not yet been removed.

The young antbirds had dark flesh-colored skin wholly devoid of down, and the interior of their mouths was orange-yellow. On the second day after they hatched they were fed eleven times between daybreak and noon, seven times by their father and four by their mother. On each visit the parent brought a single insect, which it held in its bill and delivered while it clung inside the stump in an inverted position, its tail in the air. Both parents took turns brooding the nestlings, each of them sometimes sitting well over an hour at a stretch.

When the nestlings were five days old, they bristled with long pinfeathers and their eyes could be opened, although most of the time they drowsed with closed eyelids. Their parents had by now simulated injury before me dozens of times – far more than any other birds I have studied. Yet when a predator arrived their wiles failed to save their nestlings, possibly because it came in the night. I returned on the sixth day after the young hatched to find that their nest had been raided, as happens to the great majority of the nests that one discovers in the tropical forest. But from the tremendous loss of eggs and nestlings one may deduce the pleasant thought that the adults must be long-lived, for otherwise they could not rear enough progeny to replace themselves and their kind would vanish from the earth. It is now nearly nine years since these nestlings were lost, and since then I have not succeeded in finding another nest of the friendly but secretive Bicolored Antbird.