

# THE COTINGAS

## A STUDY IN CONTRASTS



By Alexander F. Skutch

THE BIRDS of tropical America have lacked publicity. Nearly everyone with a smattering of natural history or a more than local interest in birds has heard of the birds of paradise, those profusely ornate inhabitants of New Guinea and neighboring islands. But how many have heard of the cotingas, a family twice as large and certainly no less remarkable?

The 90 species of cotingas are confined for the most part to the wooded regions of continental tropical America, from northern Argentina to Mexico. One species, the Jamaican becard, is endemic to that island, and one, the rose-throated becard, reaches the extreme south of the United States, from Texas to Arizona. This family of passerine birds, related to the American flycatchers and the manakins, has an unusual range in size, with some members reaching crow size and others among the most diminutive of birds.

Although the coloration of the cotingas is exceedingly diverse, these birds are less lavishly ornamented than the birds of paradise. Frills and flounces would only detract from the chaste loveliness of the snowy cotingas (*Carpodectes*) or the restrained beauty of the glossy blue cotingas (*Cotinga*).

Other species display brilliant red, orange, yellow, glittering green, rich purple, or bright rufous-cinnamon, while some are clad in modest gray or somber black. In addition to colorful plumage, many cotingas have areas of bare skin, red, scarlet, or bright blue, on the cheeks or covering much of the head and neck. Special adornments are exceptional in the cotinga family. The ornamentation of certain cotingas, however, verges on the fantastic, as in the big, black umbrella birds (*Cephalopterus*), with their helmetlike crest of feathers extending over their bills and a long, fleshy appendage pendent from their forenecks. (Long-wattled umbrella bird appears on opposite page.)

To this family belong the four species of bellbirds (*Procnias*), famed for their ringing calls. The white bellbird of the Guianas and Amazonia, which has a single fleshy wattle hanging stringlike from its forehead, utters a *kong kang* that sounds like a hammer blow on an anvil and a resounding kaaaaaaaang said to be audible at a distance of three miles.

The three-wattled bellbird of the highlands of southern Central America is a stout bird a foot long, clad in a rich shade of brown, with pure white head and neck. From the base of its bill hang three long, flexible wattles, which are not, as sometimes depicted, erectile. This bird's loud calls, uttered with its mouth gaping to reveal a black interior, have a wooden rather than a metallic quality. The females of the bellbirds, as of most of the more striking cotingas, are clad in duller shades and have no wattles.

Cotingas spend much of their lives in tree-tops, where they are difficult to see, and in woodland often teeming with mosquitoes and other pests and by no means free from venomous snakes. A foretaste of what is in store for the diligent observer of cotingas is provided by Barbara Snow's recent study of the calfbird or capuchin bird (*Perissocephalus tricolor*) in Guayana. This big cotinga, about 13 inches long, is chiefly chestnut brown, with black tail and wing feathers and bright orange undertail coverts. The bare skin of the face is bluish gray. The sexes are alike. These birds display communally in trees that are nearly leafless; they perch on branches, from which they snap off twigs to increase visibility. In the most striking of these performances, two calfbirds perch side by side, facing the same way and leaning forward, with their tails cocked up and their orange-brown undertail coverts conspicuously puffed out. Gradually elevating their bodies in unison, they utter a growling *grrr*, which changes to *aaa* and finally, when they have

passed the vertical posture and are leaning slightly backward, to the far-carrying *moo*, like the lowing of a calf, for which they are named. The meaning of this unique display has not been clarified.

Cotingas subsist on a mixed diet including fruits, insects, and spiders. They perch well up in trees, turning their heads from side to side until their keen eyes detect a suitable food item, often a green insect inconspicuous against a green leaf. Then they dart out, snatch the insect from the foliage without alighting, and carry it to a perch.

Some cotingas concentrate on larger prey. A pair of bright-rumped attilas that I recently watched nourished their nestlings chiefly with small lizards and frogs.

The nesting habits of cotingas are as diverse as their appearance and voices. Their nests range from the slightest structures to some of the bulkiest built by birds of their size. Other cotingas breed in holes in trees. Nesting females of certain species are quite solitary, whereas in others males attend their nesting mates. In no cotinga, as in no flycatcher, is the male known to incubate or brood, but he may help to build the nest and do his full share in feeding the young.

Perhaps I can best convey the diversity of habits in the family by telling about three species resident on our farm in the valley of El General in southern Costa Rica.

Of these three cotingas, the masked tityra (*Tityra semifasciata*), which ranges from Mexico to Bolivia and Brazil, is the most conspicuous and familiar. As the male of one of these stout, eight-inch birds flies overhead, he appears to be almost wholly white. Closer scrutiny through binoculars, after he has come to rest on some high perch, reveals that his upper plumage is mostly pale bluish gray. The wings are largely black; the pale gray tail is crossed by a broad black band; and his bare cheeks are bright red, framed in black feathers. The female is browner above and grayer below, and the naked skin around her eyes is paler red. In pairs or small flocks, tityras roam widely through the treetops, not only in the forest but also in plantations and pastures with scattered



Native to the southern highlands of Central America, the three-wattled bellbird has a resounding call.

trees. Their curious low grunts and dry, insect-like notes contrast with the stentorian proclamations of certain other cotingas.

In the dry season, pairs of tityras frequent the forest borders and new clearings where early-nesting woodpeckers are carving their holes or are already rearing their brood. The tityras prospect for the cavity they need for their eggs. They annoy the woodpeckers by filling their holes, in which incubation has not yet started, with leaves and other litter.

Sometimes, tiring of throwing out the steadily accumulating trash, the woodpeckers relinquish their newly made cavity to the tityras and begin another for their own eggs.

Tityras may even dispossess a flock of the much larger araçari toucans from the cavity where the big birds sleep by filling the hole with leaves and twigs until the toucans no longer fit into it. As far as I have seen, tityras always gain possession of a nest hole by indomitable persistence rather than by violence. The female brings practically all the nest material.



Her mate makes a great show of carrying leaves and twiglets but carelessly drops most of them outside.

In regions with tall trees, tityra nests are commonly found from 40 to 100 feet up, usually in decaying trunks whose questionable stability makes a prudent man hesitate before an ascent.

I shall never forget my first visit to a tityra's nest. Years ago, when the coves and backwaters of Gatún Lake in the Panama Canal Zone were studded with the gaunt skeletons of forest trees that had been drowned by the rising waters of the impounded Río Chagres, I saw a tityra enter a hole 35 feet up in a massive rotting trunk about 100 yards from the shore. I should never have dared to climb such a trunk on dry land, but I decided to risk a fall into the water in order to examine the eggs, since I had never seen these described.

From a cayuco, we threw a cord over the top of the broken-off trunk, then drew a rope over, and pulled up a rope ladder. My determination to climb the trunk dissolved as great chunks of rotten wood, dislodged by the rope, splashed into the water around us; but my helpers urged me on. On the way up, I passed a large cavity containing two naked nestlings of the blue-headed parrot. At the very top of the trunk was an irregular hollow, descending obliquely into a short decaying stub. When I peered in, nothing was visible except a loose litter of leaves, but beneath them my fingers encountered two eggs. They had a most peculiar aspect, dark buff or *café au lait*, heavily marbled with brown, especially on the thicker end, and spotted here and there with black. They were typical cotingas' eggs.

Many years passed before I found a tityra's nest that could be reached with only moderate risk. This nest was only 11 feet up, in a hole carved by red-crowned woodpeckers in a slender, badly decayed trunk that stood in a cornfield, near the forest. By propping the trunk at the back and setting a ladder nearly upright against the front, I could reach the hole without toppling the trunk. Since the opening was too narrow to admit my hand, I illuminated the interior of the nest with an electric bulb and looked in with the aid of a mirror.

During the three weeks that the female incubated in this nest, I made numerous visits of inspection without once glimpsing an egg. Whether she departed spontaneously or fled as I approached, she always left the eggs completely buried in the loose litter for their better protection.

Then came a day when my light and mirror revealed half of an empty shell lying upon the leaves. I heard peeping and from time to time saw the leaves move but I could not see a nestling. On the following morning, however, I glimpsed parts of two nestlings before they disappeared beneath the leaves. The few tufts of gray down on their heads, backs, and wings failed to conceal their pink skin. Their eyes were tightly closed. On my inspections during the following days, I sometimes saw the leaves move and heard a little weak peeping; but most of the time the nestlings lay so still beneath the leaves that only continued parental attendance at the nest convinced me that the young remained.

After their tenth day, the young tityras were sometimes found with their heads exposed but their bodies covered. From their fifteenth day onward, however, they rested on rather than beneath the litter, their bodies wholly exposed. Their plumage developed slowly, and they were not well feathered until they were three weeks old. When they were 24 days old, their mother tried persistently but without success to call them from the hole. One remained in the nest a full four weeks, the other a day or two longer. When finally they emerged, their plumage resembled that of the adult female.

Throughout the long nestling period, both parents brought food, the mother somewhat more often than the father. At first the nestlings were given only insects, which became larger as the days passed. Soon fruits were added to the diet, especially the green, olivelike fruits of a tree of the laurel family, each with a single large seed that the nestlings regurgitated. Occasionally there was a spider, a tiny land snail, or even a small lizard. The parents also continued to bring leaves to the nest and seemed stimulated to do so by any exciting event, such as hatching, my visits to the nest,

or the imminence of a fledgling's departure.

The first two articles that the female took to the nest after the eggs hatched were leaves rather than food; just before the first nestling flew, its mother, clinging outside the doorway, dropped a billful of leaves before its open mouth.

A less conspicuous neighbor of the masked tityra, over much of its wide range, is the white-winged becard (*Pachyramphus polychopterus*), a bird hardly bigger than a wood warbler, but with a stouter body and larger head. The male's upper plumage is mostly blackish, with gray on the rump and conspicuous white marks on the wings and shoulders. Below, he is dark gray, paler on the abdomen. The female is prettily attired in delicately blended shades of greenish olive, pale yellow, cinnamon, and buff. These cotingas are most often seen, singly or in pairs, along the forest edges and in the crowns of trees scattered through pastures and other clearings. In contrast to many other cotingas, their voices are soft and melodious. At daybreak in the nesting season, the male repeats over and over, hundreds of times with hardly a pause, an arrestingly beautiful song consisting of about eight dulcet notes.

The female builds the bulky nest, which is usually far out on a thin branch high in a tree standing apart from other trees. The male, who does no work, often perches close by the nest that his mate is making, from time to time singing sweetly or driving away intruding birds with a loud clacking of his short, thick bill. Of the many becard nests that I have seen, only two were accessible to me. These were roughly globular constructions, about seven inches in diameter. A round doorway in the side, one and a half inches in diameter, gave access to a chamber about three inches wide and high. These nests were composed chiefly of long skeins of more or less shredded bast fibers, with dry leaves and grasses lining the chamber all around. One nest contained four eggs and the other three, which appears to be the more usual number. In coloration they resembled the tityra's eggs, but they were much smaller.

Only the female becard incubates, and she sits very inconstantly, apparently depending on the thick walls of her nest to keep her eggs

warm while she is absent. In 10 hours of watching, one female never remained in her nest longer than 38 minutes at a stretch. Her average session was only 15 minutes, and she was in the nest only 45 per cent of the day. She continued to add much material to her nest until her eggs hatched, after 18 days of incubation.

The tiny, blind, pink-skinned nestlings lacked the sparse down typical of newly hatched passerines. As far as I saw, the nestlings received only winged insects and larvae from both parents. When, at the age of 16 days, the young becards were well feathered, they gave fair imitations of the male's day song, sometimes answering when their father sang in the distance. Their soft notes, filtering through the nest's thick walls, sounded much weaker than those of the parents. At the age of three weeks, the young left the nest, wearing a plumage much like that of their mother.

Now, as they roamed with their parents through the treetops about our house, they revealed their presence by the little songs and soft notes that they constantly repeated, but they were most difficult to glimpse amid the clustered foliage.

Unlike the tityra and the becard, the rufous piha (*Lipaugus unirufus*) rarely ventures beyond the forest, where it stays well up in the tall trees, betraying its presence by its sudden, sharp, powerful whistles. Any loud sound, such as the snapping of a dry branch underfoot, a shout, a sneeze, a handclap, a peal of thunder, may be answered by the piha's whistle; but usually one must look long before he spies the bird. The male and female of this robin-sized bird are clad exactly alike, with bright rufous feathers and both can whistle loudly, although apparently the male does so more persistently. The whistle is often a disyllable that suggests the bird's name. Sometimes it is prolonged into a musical trill.

I had found many nests of the tityra and the becard before I discovered one of the piha. One day, while walking along a woodland path, I noticed a female piha resting on a slender branch about 20 feet up in a small tree, in an attitude that excited my curiosity. When, after



Both sexes of the capuchin bird look alike. This bird is chestnut-brown, with black tail and wing feathers, and brilliant orange undertail coverts.

sitting motionless for a long while, the bird flew off, she left exposed a nest so diminutive that it had been largely hidden beneath her. It was a nearly flat pad about three inches in diameter, composed almost wholly of coiled tendrils, and supported by two horizontal twigs no thicker than a lead pencil. Looking up through the meshes of this incredibly slight structure, I could see that it held—most precariously, it seemed—a single egg that was smoky gray, heavily mottled with dark brown.

Of the four pihas' nests that I found later, three were similarly situated on several slender twigs and one rested on a single stouter branch. All were in the lower story of tall woodland, from 17 to 35 feet up, where they were sheltered from the wind that often sways the crowns of the taller trees and would roll the egg from so shallow a nest. These nests had been reduced to the absolute minimum compatible with their function of supporting egg and nestling.

Many hours of watching during building, incubation, and rearing the young failed to disclose that the female was ever helped by a male; indeed, pihas, like bellbirds and blue cotingas, seem not to form pairs.

It was surprising to see a bird as big as the piha, after incubating quietly for an hour or two, spread her wings and fly right up from her egg, just as a hummingbird does. One egg took 25 days to hatch, which is twice as long as the incubation period of thrushes and finches of about the same size. I am aware of no other

passerine, except the far bigger superb lyrebird of Australia, whose eggs take so long to hatch. Probably the poor insulation afforded by the thin, open meshwork on which the egg lies contributes to the length of the incubation period.

Nourished by its mother with insects, spiders, fruits, and an occasional small scorpion, the nestling piha develops slowly. Still largely naked at the age of 11 days, it is feathered at 17 days. Nevertheless, the parent continues to brood it. At night, and in the rain, it was brooded until at least 27 days old. When, at the age of 28 or 29 days, it finally left the nest, it resembled the adults in coloration but had a stubby tail.

From the beginning of nest building to the fledgling's departure, the piha takes about 64 days to rear a single offspring. Yet despite its slow rate of reproduction, the piha is the most abundant bird of its size, or larger, in our forest. No less surprising than the leisurely pace of development is the fact that egg and nestling remain for so many weeks on the narrow platform where they seem to lie so precariously. They owe their survival to the habitually slow, deliberate movements of the parent bird and the quietness of the nestling, who, without competing nest mates, always takes its meals in a leisurely, restrained manner.

These are some of the contrasts that the wonderful cotinga family presents. Doubtless others still more surprising await discovery by diligent naturalists.