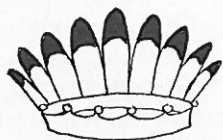


# The ROYAL



## Flycatcher

All photographs by the author

By Alexander F. Skutch, Jr.

OF all the flycatchers' nests known to me, one of the most remarkable is that of the royal flycatcher, *Onychorhynchus mexicanus*. It bears so little resemblance to a conventional bird's nest that the uninitiated may fail to recognize it for what it is. At least, this is what happened to me when, many years ago, I first made the acquaintance of the royal flycatcher and its work among the magnificent forests of the Caribbean slope of Honduras.

After a somewhat hazardous scramble down a steep slope overgrown with small palms that bristled with wicked needle-like spines, I sat to rest on a mossy stone at the brink of an enchanting mountain stream. To my right the cool, pellucid waters came rushing and leaping down their narrow rocky bed, here pouring over a ledge in a glistening spray, there dashing against great boulders verdant with moss. Although there was a bright sun, the light was dim beneath the giant trees whose lofty boughs interlocked far above the channel. The profusion of ferns of many kinds, the begonias, the orchids, the great-leaved aroids, the bromeliads whose rosettes held little pools of water, the cord-like roots sent down by



The "nest" (upper), which the author first thought was driftweeds, accumulated by flood waters. The mountain stream (lower) near which the royal flycatcher hung its nest.



Drawing by Don Eckelberry

air-plants perched far above me in the tree-tops—all bore testimony to the richness of the vegetation in this lowland forest. But in the dim underwood birds were neither numerous nor brilliant. I waited long before I found one which made its home in this sequestered woodland dell.

At last I became aware of a brownish flycatcher of medium size, with pale yellow underparts, tail of a warm shade of dull orange, and an olive-colored crest that lay flat across the bird's crown, projecting in a tuft at the back of its head. When the bird raised this crest slightly, I caught a glimpse of bright red concealed beneath the dull covering feathers. But I did not yet know that this modest bird was one of the most regal of flycatchers, nor did I anticipate the splendor of its crest when fully displayed. The strange flycatcher hovered among the boughs above the cliff across the stream, and uttered at intervals a loud, piping whistle that possessed a weird, melancholy quality as I heard it emanating from amidst the dark shadows of the foliage, rising above the loud murmur of the mountain torrent—a quality in keeping with the wildness of the setting and in turn enhanced by it. Soon this bird's mate appeared, similarly clad. Like most flycatchers, they were active birds, snatching up insects in their broad, flat bills.

Presently one of the flycatchers clung for a moment to a long, irregular mass of brown vegetable material that dangled above the stream, attached to a slender, hanging, green vine. This had been in full sight of me the whole while I sat upon the boulder, yet had failed to excite my interest. When my attention was at last drawn to it by the bird, I took it to be an accumulation of driftweeds such as one often encounters in the boughs of low trees along streams subject to flooding, stranded there by the last high water. But when one of the flycatchers flew up to it a second time, I began to suspect that the bird's purpose was not merely to pluck a stray insect from its surface. Remembering that the nests of the tropical flycatchers present a wide variety of forms, I thought that perhaps this was such a structure, although

far different from any bird's nest I had ever seen. Stepping carefully on slippery, moss-covered rocks, I crossed the channel. By balancing myself precariously on the outjutting point of a ledge that overhung the water, I could reach and draw down the vine that supported the puzzling mass of vegetation. Among its tangled constituents were the long, thread-like flower-stalks of a small tree, fibers of various sorts, rootlets, a few dead leaves, and a few tufts of green moss. My suspicion that I had discovered their nest grew stronger as the flycatchers darted above me piping their protests. But the accumulation was so flimsy and irregular that I could make neither head nor tail of it; I found neither eggs nor any cavity that might hold them.

Only after dedicating several more hours to watching the birds, and making a second and more thorough examination of the pensile mass, did I convince myself that it was in fact a bird's nest and already held an egg. In subsequent years, in Guatemala, Honduras, Costa Rica and Panama, I have found about a dozen more of these extraordinary structures. Although they displayed a certain diversity in detail, all were essentially similar to the one above the mountain torrent which first confused and then delighted me. The nests of the royal flycatcher seem invariably to be suspended above a stream, which may be wide or narrow, swift and tumultuous or slow and meandering, may traverse unbroken forest or flow between cleared lands with a mere fringe of trees along the banks to give it shade. Attached to the ends of slender, drooping branches or thin, dangling vines, the nests hang from about 8 to 20 feet above the water. At two nests which I watched, the work of construction was done by the female alone. Her mate at times kept her company while she built, but brought no material. Two or three weeks or even more may be devoted to the construction of the elaborate nest. One female did the greater part of the building in 12 days, but delayed 10 days more before laying the first egg.

When completed, the long, slender nest measures from three to five feet in length.



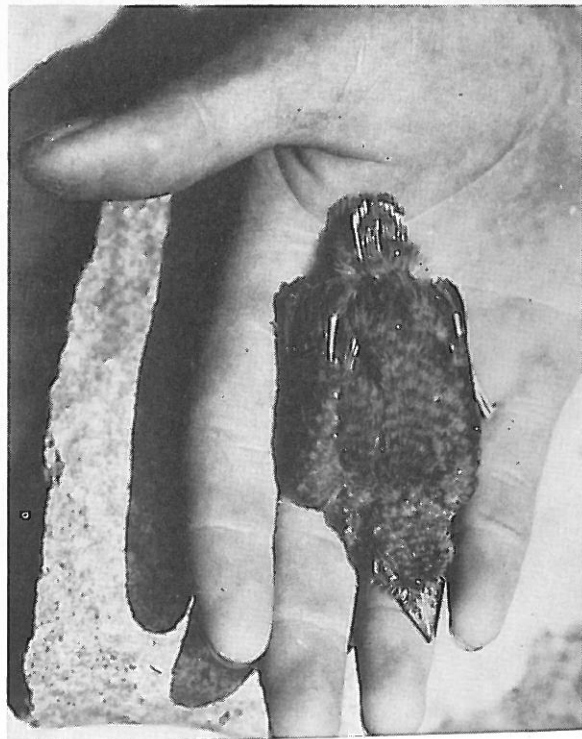
It took a second thorough examination to be certain that this flimsy structure was a bird's nest.

The female royal flycatcher incubates her two eggs for 22 days, with no help from her mate.



The long, thread-like, male flowers of a small tree *Myriocarpa*, used for nest material by many birds

The young royal flycatchers remain in the nest for more than a week after they are fully feathered





Part of this length is accounted for by a loose wrapping of fibrous materials covering over the supporting twig or vine, but the nether half hangs free below the support. Near the middle of the total length of the structure, but always in the free-swinging portion, the fibrous materials are spread apart to form a niche or open chamber, about  $4\frac{1}{2}$  inches in height by  $2\frac{1}{2}$  inches in diameter, which holds the eggs and nestlings. The doorway in the side is almost as long and broad as the chamber itself; it reaches so near the bottom of the cavity that the eggs seem to be in danger of rolling out with a little shaking. Thus after devoting a great deal of time and material to the construction of an elaborate edifice, the royal flycatcher places her eggs in an open, exposed position. Yet most of the flycatchers which build pensile nests provide snug, well-enclosed chambers for their eggs and little ones.

The eggs, regularly two in a set, are laid within an interval of two days. They have a most peculiar aspect, quite different from that of any other flycatcher's eggs that I know; and of all the flycatcher eggs that I have seen, they are the darkest in hue. Deep reddish-brown on the thicker end, they pale to dull buff on the sharp end. The dark color assimilates the eggs to the brown materials of the nest and makes them less conspicuous in the open niche.

The female royal flycatcher incubates with no help from her mate, which darts back and forth over the stream and through the adjoining woodland, from time to time uttering his mellow whistle. She sits invariably with her head at the back of the niche and her orange-tawny tail projecting horizontally through the doorway into the outer air. Were she to sit in the reverse position, there would hardly be room for her tail in the nest. This tail, despite its fairly bright color, is far less conspicuous than one might suppose. As she sits in the shaded interior of the open niche, her head turned sideways beside the rear wall, the olive-brown bird is too dull a figure to attract attention. Her tail, especially when illuminated by a sunspot filtering through the foliage above, is so much brighter than the

modestly attired bird herself that it seems a thing apart from her—a freshly fallen leaf of lighter hue that has been caught up among others in the tangled mass of vegetable fibers that constitute the nest. One royal flycatcher, which I watched for an entire morning, sat on her eggs for periods ranging from 9 to 32 minutes in length, alternating with recesses varying from 4 to 18 minutes. After 22 days of this leisurely routine, her two eggs hatched.

The newborn nestlings are blind and utterly naked, devoid of the sparse natal down usually found upon flycatchers and other passerine nestlings. Fed and brooded by their mother alone, they develop slowly. At the age of a week their eyes are still closed and their sprouting plumage still tightly ensheathed. When they are 10 days old the eyes begin to open and the feathers to escape the horny sheaths. At the age of 12 days they are fairly well covered with plumage. Although in all other species of flycatchers that I have studied the juvenal plumage is essentially similar to that of the adults, with the royal flycatcher the feathered nestling in its barred attire is strikingly distinct from the parents, whose plumage is only obscurely barred. Narrow, alternating bars of yellowish-buff and dusky cover all the nestling's upper parts and also the foreneck and chest. The belly, sides and flanks are sulphur yellow. The nestlings' barred upper plumage blends into the pattern of light passing through the enmeshed fibers of the surrounding walls of their little niche, thereby making them less conspicuous.

From an early age the nestlings rest in their shallow niche with their heads at the rear and their sprouting tails in the doorway—exactly the same orientation as their mother assumes while incubating and brooding. To feed them she clings to the side of the nest below the doorway and passes over their backs the insects which form their fare. As they grow older the youngsters become very crowded in their narrow, swinging cradle, which seems barely wide enough to hold one with comfort. During the last of their three weeks in the nest one nestling usually rests upon the

other. Now they spend much time preening their barred plumage, and when engaged in this activity sometimes spread their small orange crests, just as their parents do while preening. At times they utter, in a voice slightly weaker than their mother's, a note much resembling her mellow whistling.

The young flycatchers linger in the nest for more than a week after they are feathered, then depart at the age of 21 or 22 days. With three or four weeks for building and laying, three weeks for incubation, and an equal period for rearing the nestlings until they can fly, the nesting of the royal flycatcher is a leisurely, protracted occupation. Although some other small tropical flycatchers take an equal period to raise a brood, no small bird of the North Temperate Zone could afford to devote 9 or 10 weeks to the rearing of only two nestlings. The actual occupancy of the nest by eggs and young covers about 45 days. Since the nest itself is conspicuous where it hangs in the free space above a shady watercourse, one wonders how it escapes predatory visits during this long period. Remembering my first baffling experience with a royal flycatcher's nest, I at one time held the theory that it escapes predation through its failure to resemble a typical bird's nest. However, I have seen nest-robbing toucans examine with intention empty structures of this kind, and I doubt not that royal flycatchers' nests are recognized for what they are by the egg-eaters and the nestling-eaters which have been their neighbors for countless generations. But if the nest itself is a conspicuous structure, the coloration of eggs and nestlings has been modified, in a manner unusual in the whole great flycatcher family, to make them more difficult to detect in their open niche in the irregular and confusing mass of vegetable material. Still, I believe that the chief factor in the safety of eggs and nestlings is the inaccessibility of the nest when well situated. Hanging above water, at the end of a long and slender support, it would seem to baffle the attempts to reach it of most wingless predators, and even of such winged ones as the clumsy toucans, which must

cling to some fairly substantial support while they gather food. My conclusion is that the security of the royal flycatcher's brood depends chiefly upon its inaccessibility, to a lesser degree upon the protective coloration of eggs and nestlings, and perhaps in some measure upon the failure of the pendulous mass to resemble a conventional bird's nest.

Artists like to depict the royal flycatcher with his regal crest fully expanded; yet one may spend many hours watching the living bird without being rewarded by this marvelous spectacle. Most of the time the royal flycatcher is a plainly clad bird wearing at the back of its head a little tuft of feathers which fails to suggest unusual splendor. Rarely one catches a glint of brilliant color between the slightly parted olive feathers that cover the folded crest. Probably the crest is displayed in courtship, in conflicts between rivals, or while attacking intruders which jeopardize the nest; yet I have never witnessed these events.

Once, when I took shelter from a sudden shower by crouching beneath an outjutting rock beside a mountain torrent, I had the good fortune to behold the expanded crests of a pair of royal flycatchers whose nest hung above the stream. Enjoying the downpour which I vainly strove to avoid, the birds were washing and preening their plumage on neighboring boughs. In the general shaking-out and rearrangement of feathers, the flycatchers' headdress was not neglected. First the male raised his crest and spread it fanwise to its fullest extent, until it encircled his head as a glorious halo, a scarlet aureole bordered with spots of bluish-violet and velvety black. Then the female opened out her queenly headgear, as widely spreading as her mate's but slightly paler in hue. The display lasted less than a minute; the gorgeous diadems were all too soon folded away; and the birds were transformed once more into plainly attired hammerheads, fit for the domestic cares which at this season engrossed them. But while crouching beneath the dripping rock I had beheld the regal splendor of the royal flycatcher—his title to a place among the aristocracy of birds.