

# THE FAMILY LIFE OF CENTRAL AMERICAN WOODPECKERS

By Dr. ALEXANDER F. SKUTCH

SAN ISIDRO DEL GENERAL, COSTA RICA

Few birds, it seems to me, lead such easy, comfortable lives as the woodpeckers. The specialization of bill, tongue, feet and internal structure which enables them to carve into fairly hard wood places at their disposal rich supplies of food quite inaccessible to all their bird-neighbors. But while they have the more deeply imbedded wood-boring grubs all to themselves, the majority of the woodpeckers remain sufficiently flexible in structure and mentality to take advantage of other sources of nourishment. They eat fruit, catch flying insects, and some even store acorns and dead insects for less bountiful seasons. By virtue of their energy, resourcefulness and forehandedness, they easily satisfy their appetites and enjoy much spare time for rest or play. In this they contrast sharply with such small insectivorous birds as warblers and gnatcatchers, which must devote most of their waking hours to the unending quest for food.

True addicts to the life of ease and luxury, they disdain to pass the night exposed to rain and wind, in the manner of the majority of birds, but as evening falls seek the snug bedchambers they have carved for themselves in dead trunks and branches, where they sleep warm and dry. Compared with most other kinds of birds, they as a rule go early to bed and get up late, for, like other creatures with comfortable beds, they are frequently reluctant to quit them. Their eggs and nestlings, placed in these same neatly carved cavities, generally at a good height, are less exposed to attack by snake and hawk and

weasel than those of birds that nest in the open. Hence baby woodpeckers can afford to linger longer in the nest than the young of most small birds; for as a rule, the greater the nestlings' exposure to attack, the more precocious their dispersal. Young woodpeckers do not venture forth from their snug nursery until they can fly well and escape most of their enemies. Because of its relatively high reproductive efficiency, added to its adaptability, the woodpecker family has been highly successful in the struggle for existence, has evolved a great number of species, spread to most of the wooded regions of the earth, and even become established in certain areas practically devoid of native trees, such as the pampas of Argentina, where a species of flicker is at home.

To other birds as well as to man, woodpeckers are among the most useful citizens of the bird-world. They serve man by devouring wood-boring insects that destroy trees. The holes they carve into dead wood for dormitories and nest-cavities later become the sleeping and nesting places of a variety of other birds. Numerous kinds of wrens, flycatchers, cotingas, ovenbirds (*Furnariidae*), toucans, etc., raise their families in holes originally carved by woodpeckers, or else use them as dormitories. Birds such as the tityras of tropical America would have a hard time, indeed, finding sites for their nests, were it not for the activities of the woodpeckers. They and many other kinds of birds owe the woodpeckers a great debt of gratitude. Even the little hummingbirds, which sometimes sip the sweet sap or gather the insects that collect in the pits made in the bark of



trees by sapsuckers, benefit by the work of this industrious family.

Because they are so clever and industrious, and appear so happy, I have found particular pleasure in studying the habits of woodpeckers. What nature-lover has not been amused by the woodpecker who hides behind a trunk, peeking around the side from time to time to see whether he is still being watched? Who can fail to sympathize with the woodpecker peering through the round doorway of his snug bedchamber on a wet, chilly morning, gazing out upon the forbidding, rain-drenched earth, reluctant to forsake his dry retreat, yet very hungry for the breakfast he can find only out-of-doors—the very picture of indecision? Or what bird-watcher of feeling can fail to enter into the spirit of play of the idle, well-fed, ant-eating woodpeckers—as I have watched them in Guatemala—shifting little bits of acorn from one cranny to another, an occupation aimless yet doubtless amusing, and certainly very childlike. And who does not understand the delight of the flicker who chanches to discover some particularly resonant surface on which to beat his tattoo?

The Central American woodpeckers range in size from the great, scarlet-crested ivory-bill, big as a crow, to the tiny, olive-brown piculet, one of the very smallest of birds, but every inch a woodpecker. In dress they vary from the harlequin attire of the ant-eating woodpecker—white, glossy black and red—to the almost uniform tawny-olive of the oleaginous woodpecker. In their family life, there is also great variation. According to their degree of sociability, those which I have had an opportunity to study in detail may be classified as follows:

I. A single pair attend the nest.

A. Individuals past the nestling stage always sleep singly; the male attends the nest by night; the fledglings are not

led back to sleep in the nest after their departure. In this division belong:

Wagler's woodpecker (*Centurus subelegans*).  
Hoffmann's woodpecker (*Centurus hoffmanni*).

Golden-fronted woodpecker (*Centurus aurifrons*).

Costa Rican woodpecker (*Chloronerpes rubiginosus*).

Pileated woodpecker (*Ceophlæus lineatus*).

Probably also these others of which my studies are still incomplete:

Guatemalan ivory-billed woodpecker (*Scapanus guatemalensis*).

Oleaginous woodpecker (*Veniliornis oleaginus*).

Guatemalan flicker (*Colaptes mexicanoides*).

B. The mated pair sleep together throughout the year, and both pass the night in the nest while it contains eggs and young; the fledglings return to sleep in the nest with their parents, and may continue to do so until the approach of the subsequent breeding season. In this division belong:

Golden-naped woodpecker (*Tripsurus chrysauen*).

Northern piculet (*Picumnus olivaceus*).

Although I did not succeed in following all stages of their life-history, from what I have seen of their habits, these woodpeckers agree with their congeners listed above:

Little Black woodpecker (*Tripsurus cruentatus*—eastern Ecuador and Peru).

Pucheran's woodpecker (*Tripsurus pucherani*).

Piculet (*Picumnus sp.*—eastern Ecuador).

II. More than two grown birds attend the nest.

In this division I know a single example: Ant-eating woodpecker (*Balansophya formicivora*).

As an example of the woodpeckers most solitary in their habits—in Central America, at least, the largest group by far—we shall take Wagler's woodpecker. A pair of these woodpeckers with red crowns and black-and-white-barred upper plumage dwelt in a new clearing at



the edge of the forest on the steep mountainside above the Río Buena Vista in southern Costa Rica. Here they were within a ten minutes' walk from my thatched cabin; and I followed their activities for nearly a year and a half, including two breeding seasons. Often I spent the last hour of the day in the old cornfield to watch them retire to rest, or arrived at the end of the night to see them begin their day. Like the majority of Central American woodpeckers, they remained mated through the year, permitting no others of their kind to establish themselves in their chosen territory. But they rarely paid any attention to the golden-naped and pileated woodpeckers which slept in the same clearing.

A number of fire-killed trees standing about the clearing furnished these Wagler's woodpeckers a choice of sites for their holes. They preferred to carve into such soft wood as the burío (*Helio-carpus*) and the guarumo (*Cecropia*). The male—usually the more domestic-minded of the pair among woodpeckers—was far more industrious than his mate in excavating cavities; hence he usually enjoyed the newer and sounder dormitory, while his less energetic mate was content to pass the night in such abandoned holes as she could find. They always slept apart, although sometimes their separate dormitories were in the same tree. Since the male's dormitory was the newer, it was natural that when the birds began to breed in February it should be chosen for the nest, in preference to the female's. Now the female, upon leaving her own dormitory in the morning, would come to visit her mate's, but would never enter until after his departure. After the eggs were laid, both sexes took turns at incubation during the day, sometimes sitting for an hour and a half at a stretch, dividing the daylight hours fairly evenly between them, and keeping the eggs almost constantly covered. But by night the male

alone was in charge of the eggs, a natural outcome of their being laid in his own sleeping quarters.

The males of all the species listed in this group—with the possible exception of the oleaginous woodpecker, for which I have no observations on this point—take sole charge of the nest during the night. This is true also of the red-bellied woodpecker and the northern flicker of the United States. While in most species of birds the female incubates by night, there are a number of kinds of which the male is in charge. The male ani (cuckoo family) takes care of the nest during the night and by day sits turn and turn about with his mate. The male and female ringed kingfishers replace each other on the eggs only once in twenty-four hours, with the result that the male incubates on alternate nights. Many sea birds, including petrels, shearwaters and penguins, relieve each other on the eggs at intervals of several days, so that the male performs about as much night incubation as his mate. Finally, there are birds such as kiwis, tinamous and phalaropes of which the male incubates day and night with no help from a female.

When the eggs of the Wagler's woodpeckers hatched, both parents brought food to the nest, and took turns at brooding the naked new-born nestlings. Two distinct methods of feeding the nestlings are found in the woodpecker family. The parents, of some species, including the pileated and Costa Rican woodpeckers, bring food in the throat or crop and regurgitate it into the mouths of the nestlings. Other kinds, among them Wagler's woodpecker, the ant-eating woodpecker, the golden-naped woodpecker and the piculets, carry the food in their bills, where it is readily visible through field-glasses, and pass it directly to their offspring without regurgitation. For at least a month, the parent Wagler's woodpeckers continued to feed their



nestlings in their high hole in the dead guarumo tree. The father slept with them every night except the last. When the month-old youngsters at length departed their nursery, they had long been completely clothed with feathers, and could fly well.

After the departure of the young woodpeckers, the father returned to sleep in the nest-hole, and the mother continued to occupy her own dormitory in a neighboring tree. While the parents slept in their snug chambers, no provision at all was made for the comfort of the fledglings, which were obliged to sleep clinging to exposed trunks or branches until they managed to find unoccupied cavities for themselves. A few days after quitting the nest, young Wagler's woodpeckers begin to seek sleeping holes as night approaches; but since they exercise little foresight and receive no guidance from their parents, a week or more may pass before they are finally accommodated. When one of the fledglings attempted to enter the hole with its father, it was repulsed with pecks; and once when the youngster stole a march on its father and entered the dormitory first, it was rudely evicted as soon as the parent arrived. At an early age, the solitary disposition of these woodpeckers began to manifest itself in the mother's antagonism to the youngsters, and of these toward each other. Yet the parents continued to feed the young woodpeckers until they became self-supporting, when they were driven from the parental domain to shift for themselves.

Among the golden-naped woodpeckers, a far more friendly attitude prevails between all the members of the family. These beautiful little birds, neighbors of the Wagler's woodpeckers in the great forests of southern Costa Rica, will serve as an example of the more sociable woodpeckers of our second group (I B). For four years I have found pleasure in watching these amiable birds, and have

followed the course of events at a number of nests. The mated pair sleep in the same lofty hole throughout the year, except possibly at moving time, when they change from the old hole to the new. Months before the advent of the nesting season, which begins in March or April, the male may work desultorily at carving out a new hole, not far from the old in which he sleeps with his mate and—if he has already raised a family—their full-grown children of the year. Usually he chisels at the new cavity for a short while before retiring in the evening; and at first the undertaking advances very slowly. But as the date of egg-laying approaches, he works more constantly, and in the morning; and now his mate takes a share in the task. If the hole is lost shortly before or during the breeding season, by the falling of the dead tree; or if a pair of mild-mannered but persistent tityras take it from these equally mild-mannered woodpeckers, both sexes labor diligently, turn and turn about, to carve out a new one. I might add here that when a new cavity is needed promptly during the nesting season, male and female of all species of woodpeckers—so far as my observations go—fall to with a will to prepare it. But the male is as a rule the more domestic-minded of the pair, and devotes himself to home-making at seasons when his mate sees no necessity to trouble herself about such matters.

As the golden-napes' new hole nears completion, one of the pair may sleep in it, while the other continues to use the old dormitory until the new one is big enough to hold both birds with comfort. This moving-period of a few nights' duration is the only time in the whole year when mated golden-napes sleep apart—barring temporary arrangements made necessary by the accidental loss of dormitories. This is the time also when any young birds who have remained with the parents since their last year's nesting



go off to shift for themselves—it is an unsettled period when each evening the woodpeckers behave in a different fashion. But as soon as the new hole is completed, male and female sleep together in it, and continue to do so during the whole period of incubation and of raising the nestlings, and for many months thereafter if nothing goes amiss. During the day, they incubate turn and turn about, in the manner of all the other woodpeckers I have watched. It is of interest that the member of the pair arriving to take its turn on the eggs often enters the nest before the departure of its mate; and the two may remain in the hole together for a few minutes before the one relieved of duty goes off to hunt food. The same is true of the piculets, whose life-history closely parallels that of the golden-napes. But in the less sociable woodpeckers of the group exemplified by Wagler's woodpecker, it is indeed rare to witness one bird enter the nest before the mate has departed; and on the few occasions when I have chanced to see this unusual procedure, the impatient new arrival has popped out of the doorway so promptly that I fancy it must have received a peck from the irate partner within.

Fledgling golden-napes quit the nest at the age of about 34 days, when they fly very well. In the evening, the newly emerged youngsters are shown back to the nest by one of the parents, or at times appear to seek it quite spontaneously. Rarely the fledglings are brought back to the hole by a special call of the parents. They may be fed in the nest after their return to it, just as though they were nestlings which had never been flying about in the open air—but this does not occur with all families. The capacious cavity is always kept clean by the parents, which carefully remove all waste matter in their bills. The young birds, and sometimes the adults, too, may take shelter in it during the heavy afternoon showers of May and June. For

many months it remains the nightly sleeping place of the entire family, which dwell together in harmony until the approach of the following breeding season sends the young birds off to set up house-keeping for themselves.

In the eastern foothills of the Andes in Ecuador and Peru and on the western side of the great Amazonian plain, the most conspicuous woodpecker is a small, vociferous species clad largely in black, with a rich crimson patch in the center of the belly. I was not fortunate enough to find this little black woodpecker nesting at the time of my visits to this region; but at widely scattered points in Peru and Ecuador I saw from two to five grown birds retire at nightfall into the same hole. I believe that their nesting habits, when studied, will be found to agree closely with those of their near relations, the golden-napes. Recently I watched a pair of Pucheran's woodpeckers, a third species of the same genus. When I first found them, male and female slept together in the same hole, in which evidently they were preparing to nest. But they abandoned it when a tityra began to fill it with leaves, and started a new hole in the lower part of the same barkless trunk. When finally they began to incubate, the male took care of the eggs during the night, while his mate slept in another hole a yard away. I believe they slept apart because the nest-cavity was too small to accommodate both with comfort, as a result of the difficulty the birds experienced in excavating the hard wood. This observation suggested the answer to a question which had long been in my mind with reference to the golden-naped woodpeckers: Which member of the pair actually warms the eggs during the night? It is impossible to peep into their high holes while darkness covers the earth; but from the behavior of their close relations, the Pucheran's woodpeckers, I think it highly probable that



the male, as with most other woodpeckers, actually covers the eggs, while his mate sleeps clinging to the wall beside him.

Most sociable of all the woodpeckers of whose habits I know anything from personal observation or reading are the jolly ant-eating woodpeckers, so oddly attired in their harlequin costume. Acorn-eating woodpeckers would be a far more appropriate name for them. Doubtless, like many members of the family, they eat a certain number of ants, but acorns are their specialty. Their distribution is closely linked with that of oak trees. In Central America they are birds of the highlands; and both the upper and lower altitudinal limits of their range correspond with those of the genus *Quercus*. They store many acorns against the season of scarcity, in the northern part of their vast range in little cavities specially carved to receive each a single acorn fitting snugly; but in Central America they appear never to carve these special holes, being content to tuck away whole or fragmented acorns in such chinks and crannies as they can find already at hand in the trees.

Ant-eating woodpeckers are usually found in happy, loquacious flocks, containing at times half a dozen birds. Since they are as a rule scattered among the trees, it is difficult to determine the exact number in the flock. At night, the members of the flock sleep together in a cavity they have made, or at times divide up between neighboring dormitories, a few in this and a few in that. Five is the greatest number I have found sleeping in a single hole.

During the breeding season, a whole flock attends a single nest. At one lofty nest I watched in southern Costa Rica, four males and one female were all taking turns at incubating the eggs. With so many incubating, they shifted about very frequently. Seventeen minutes was

the longest uninterrupted session I recorded in nearly twelve hours of neck-straining watching. This is of course an unusually short period for a woodpecker, for with other species sessions of under twenty minutes are rare; and many sit continuously for an hour or more, even by day. At night, the nest with five attendants was occupied by a single woodpecker—whether the female or one of the four males I could not determine, because of the height and the dim light that prevailed when it retired in the late evening and emerged in the early morning. The other four attendants of the nest went off together in the waning light, doubtless all to sleep in the same hole.

Was this a case of polyandry—very rare among birds—or did the nest belong to a single pair assisted by three unmated males? In Guatemala, some years earlier, I had studied nests of the black-eared bush-tits (*Psaltiriparus melanotis*) at which the mated pair were helped in the care of the nestlings by males which had been unable to find mates, because of the great numerical predominance of their own sex. At another ant-eating woodpeckers' nest that I found about the same time, at least two males and two females were bringing food to well-grown nestlings. Possibly there were more attendants that I failed to distinguish. This combination suggested communal nesting by several pairs, such as is found among anis (*Crotophaga*); but here again it was not impossible that a single mated pair was assisted in the care of the nest by unmated birds of both sexes. A count of eggs in a number of nests would help elucidate the exact nature of the association existing between the several individuals that attend each nest. But unfortunately all the nests of the ant-eating woodpecker that I have seen were very high in dead trees unsafe to climb. Nor does the information presented in



Dr. Ritter's book on the Californian race of the ant-eating woodpecker bring us much nearer to a solution of the problem.

But assuming that we are dealing with a case of unmated, sexually immature birds assisting at a subsequent nesting of their parents, it is easy to see how such a situation could arise from that which prevails among golden-naped woodpeckers and piculets. If the young of these species would delay their breeding until their third year—as happens in many species of birds—and remain with their parents just a few months longer than they actually do, they would probably help them attend their younger brothers and sisters, in the manner of

birds so diverse as moorhens, wrens, jays and bluebirds. In eastern Ecuador, I found a nest of a still unidentified species of piculet, in which one male and two females slept every night. Since the full set consisted of only two eggs, it is improbable that more than one of the females had laid. I believe that the second female occupant of the nest was a daughter of the first, raised at her previous nesting. I had high hope of seeing both females as well as the male bring food to the nestlings when they hatched; but unhappily some mishap befell this nest during a long-continued rainstorm, and I never succeeded in finding another of the same kind.