

SOME OBSERVATIONS ON THE CAROLINA WREN IN LA SALLE PARISH, LOUISIANA

BY H. H. CHAPMAN

AN unusual opportunity was afforded the writer for studying the habits of the Carolina Wren, with especial reference to the care and feeding of the young. From 1920 to 1941 the Yale School of Forestry maintained a tent camp at Urania, Louisiana, from March 15 to June 15. The location was in a second growth mixed loblolly pine and hardwood forest, with an acre of open grassland, and the wren population was numerous, resulting in the nesting of three or four pairs of birds in and around the camp. From the first year on, the wrens were interested in the possibilities provided by the interiors of the tents, and built their nests on shelves, in boxes and even in a pair of pants hung from a hook, but never on the floor. Too often their efforts failed, sometimes through removal of the tents on leaving camp, or by reason of use of the receptacle chosen for the nest. Yet the practice continued for several years, and then gradually ceased altogether. There were just as many wrens about, but they abandoned the unreliable tents and reverted to their former nesting sites in the forest. Of this change of habit or adaptation there is no shadow of doubt. Whether inherited experience, or "acquired characteristics" was responsible, the fact is that after about two generations the wrens learned to avoid the tents, which their natural instincts had originally favored.

Before this transition took place, one pair of wrens had built its nest between a table top and a shelf six inches below the top, in a corner within a foot of the chair occupied by the writer. Thus every move by the parent birds, and the crop of young wrens, was under close observation whenever he was in the tent.

While no scientific record was kept as might have been done had the writer had no other occupation, the following data can be cited. Incubation proceeded normally, the bird remaining on the nest without flushing during his entry, presence or exit. On hatching, the diet first consisted of very small spiders, which selection increased in size with the growth of the infants. After a week to ten days, the old birds switched to grasshoppers, from which the legs had been removed. A little later, legs and all went down. In the final stages, large grasshoppers, with legs, constituted the main diet.

The mystery of nest sanitation constituted an almost unbelievable adaptation, but there was not a single deviation from the rule. The pellets excreted by the fledglings were coated with a substance which

made them, in effect, a capsule. But the miracle was this. In not one instance did a young bird evacuate unless one of the parents was perched on the rim of the nest. Then, instead of an indiscriminate action, the small bird, wherever it happened to be in the nest, under or on top, struggled violently until it had freed itself and presented its stern to the old bird. This occurred after the parent had promptly disposed of its mouthful of insectile food down the nearest gullet. As the evacuation took place, the parent bird clamped the pellet in its bill, without its touching the nest, and flew off, dropping it from 50 to 100 feet away. The nest remained sweet and clean until it was abandoned. Query—did the old birds “teach” the young ones the elements of nest sanitation, or was this an instinctive, hereditary behavior? My inclination is to believe the latter postulate.

One evening, as dusk was falling, the writer was giving the students a talk, and was interrupted by a tremendous din of chattering from the two parent wrens, which continued for about ten minutes. As darkness fell, the birds ceased their noise and, following the undeviating demands of nature, went to sleep. Shortly afterwards, when the writer entered the tent, a black snake was discovered raiding the nest. Of the five young wrens, it had killed two. The other three had jumped out of the nest and escaped, though the snake would probably have found them had it not been killed.

But the crowning demonstration was to follow. A day or two later the young birds left the nest and crouched on the floor in a corner, making no attempt to fly. On the following day, it happened that the tent was tightly closed against an afternoon storm and the old birds had no access. Shortly thereafter, with the evening sunshine, the parents were observed to be highly excited and chattering volubly. On entering the tent it was found that all three of the young wrens were flying about the tent. The flaps were thrown back and, one after another, these young birds took flight through the opening, and went a distance of 100 feet or more before coming to earth. Query—do the old birds “teach” the young ones to fly and if so can they impart this knowledge by voice alone, with no possibility of demonstration? I think not, and therefore choose to differ with an author in a recent issue of *Harper's Magazine*¹ who dogmatically states that parents have to teach young birds to fly. In this instance, by accident, the control of the experiment was perfect, excluding all possibility of “instruction” and leaving, as the sole cause of the sudden mastery of flight, the inherited instincts of the race.

¹ Bergen Evans, Professor of English, Northwestern University. From ‘The Natural History of Nonsense,’ *Harper's Magazine*: 543-551, June, 1946.

Undoubtedly there are innumerable ways in which the young of birds and mammals are instructed and educated in the art of survival, and the rôle which instruction plays in this process probably increases with the higher forms of life and the greater progressive development of intelligence, culminating in man. In the reverse direction, with more primitive forms, parental care is minimized, until it is non-existent, and inherited instinct alone can account for the protective actions of the offspring. Parental responsibility and the development of the brain and higher functions of intelligence appear to be closely related. It might be said in closing, that the greater the need for this responsibility and training, the greater the penalties for failure, as witnessed by the antisocial behavior of neglected children. Inherited instincts remain a powerful and compelling force in man, but without deliberate control and training, beginning in infancy, these instincts, instead of serving to protect against danger, to perpetuate the race, and to encourage strong individual efforts directed towards the attainment of well rounded character, become the dominant force which results in the destruction of the individual and immeasurable harm to all who are associated with him.

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LIFE HISTORY OF THE TURQUOISE-BROWED MOTMOT

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Plate 9

DURING my early years in Central America, few birds so attracted and delighted me as the motmots. The first species in this beautiful family whose nest-life I studied was the Turquoise-browed Motmot (*Eumomota superciliosa*) of which I found two occupied burrows (of the race *euroaustriis*) in the Lancetilla Valley near Tela, Honduras, in 1930, and two more (of the race *sylvestris*) near Los Amates in the Motagua Valley of Guatemala, in 1932. The following year, 1933, I was able to work out the life history of the Blue-throated Green Motmot (*Aspatha gularis*) in the high mountains of Guatemala, and in publishing I gave precedence to this more mature and thorough study (*Auk*, 62: 489-517, 1945). In the present paper I wish to make amends for the neglect of an earlier love, and to place on record what I was able to discover of the habits of a member of