

NESTING OF THE BROWN-CAPPED LEPTOPOGON IN MEXICO

By ROBERT T. MOORE

According to Griscom (Bull. Amer. Mus. Nat. Hist., 64, 1932:275) the flycatcher known as the Brown-capped Leptopogon (*Leptopogon amaurocephalus pileatus*) is "an exceedingly rare and little-known bird in the whole of Central America." Ridgway (Bull. U. S. Nat. Mus., 50, part 4, 1907:463) states that the nidification of the genus is "unknown?" although in a footnote on the same page he cites a publication by Allen (Bull. Amer. Mus. Nat. Hist., 5, 1893:153) whose record his question mark seems to doubt. Allen merely gives the measurements of eggs and states that they are "pure white." Since then, Bertoni (Hornero, 1, 1918:190) has described the nest of *Leptopogon amaurocephalus plumbeipes* of Argentina, mentioning its globular form and its composition of moss. The description of nests of the Mexican form of the species, herein presented for the first time, would seem to add materially to our knowledge of the unusual nesting habits of this group of flycatchers.

In April and May of 1942, Dr. Francis H. Tomlin of Haddonfield, New Jersey, and the author camped for eight days at Presidio, a locality about 35 kilometers south of Córdoba, Vera Cruz, whose altitude is approximately 1000 feet.

On April 29, Abraham Ramirez, my guide, who has a good practical knowledge of the species of his region, told us he had found a nest of an unknown bird, resembling an *Empidonax*, in a valley about two miles from our camp. On April 30 he led us to a fern-bordered ravine shaded by lofty trees on the edge of a banana grove. Beneath a rock some ten feet in diameter, which was bound to the top of a bank by the encompassing roots of a large tree, was a black hole, three feet high and six feet long. So dark was it that the pupils of our eyes had to enlarge for a minute before we could make out a roundish object hanging to one of the roots by two parallel, flat, black tendrils. These tendrils, a sixteenth of an inch in diameter, six inches long and almost straight, proved on examination to be one tendril tied in a knot and looped at the middle. I cannot declare that the knot was made by the birds, for I did not discover it in time to seek confirmation by examining another nest, not collected, which employed the same kind of tendrils. However, the use of two parallel fibers or roots for hanging the nest in the air to an object overhead seems to be a standard type of architecture for this flycatcher.

Subsequently we found two other nests of the species and each one was supported underneath a rock or log practically in the same manner. The general appearance of each is that of a round ball or ellipse of tightly woven moss, five to six inches in diameter, swinging in space about six inches below the point of attachment and depending solely on two tendrils to support it in the air. The top of the first nest has a neck two inches long by one inch wide, which is woven to the knot of the tendril by means of cobweb-like material. This nest consists of green and dried moss, woven around a fragile framework of very fine roots, plant stems and grasses; the dimensions are eight inches long by six inches wide. The entrance is through a hole about one and a quarter inches in diameter placed on one side. Delicacy is given to the structure by tiny white and tan-colored fluffs of thistle-down bound into the outer surface, while the entire lining is composed of the same dainty material.

The second nest also was attached to the bottom side of a huge projecting rock, a mile up on the mountainside in the same dark forest, and it was hung in space by two flat black fibres. A third nest reveals the same type of architecture, but differs in being held up by two roots securely bound deep into the moss and in being more oval in

shape instead of spherical. Furthermore, it is larger—nine inches long by four and three-quarter inches wide. Made of the same material, it is decorated and lined with similar fluffs of thistle-down. One of the roots from above extends through the center of the nest in a curve, being only slightly covered by the lining on the inside; it projects at the bottom for at least four inches. Two inches from it a group of nine other roots protrude through the moss for a distance of four or five inches.

May 1 was vibrant with heat waves and hotter than the previous days. Through the steaming haze we plodded across the half mile of open space through a banana plantation. Having come by a different route than the preceding day, we plunged into the same dark ravine with the intention of taking photographs of nest number one. Feeling through the small hole in the nest with one finger, I found two young birds within. Subsequently, when it was collected, the young proved to have tails three-quarters of an inch long and to be marked almost exactly like their parents, the only difference being that the crowns were a darker brown, almost black. All the rest of the markings were the same, including the two wing bars of dark buff, the green backs, the brown rumps and the yellow posterior underparts. Their bills are not hooked like those of the parents. Although a *Leptopogon* is small, less than five inches in length, its body has a width only little less than the diameter of the hole on the side of the nest.

After putting up the umbrella blind, I soon learned that the task of photography in such a dark ravine would require superhuman ingenuity to obtain results. Even if I had possessed the accessories of Hollywood, there would have been no position from which to reflect sunlight into the nest and there were only two separate hours of the day when there was sufficient light near the top of the rock to take a "still" with super-sensitive films. I failed miserably! During the whole of the first day neither parent came closer than twenty-five feet to the nest. For an instant one of them darted into a sunlit spot directly between me and the sun, where photography was impossible.

May 2 proved to be another futile day; some four hours of it were spent in the blind. Each morning the blind had to be erected again! If it had been left in situ all the night, according to Abraham, it would have disappeared. There were far too many trails, and far too many natives! However, this day's work was not entirely fruitless, since three things were discovered about the habits of *Leptopogon*. First, its dark brown crown is a very good field mark differentiating it from other small flycatchers. Second, its call-note is exceedingly loud and very harsh, seeming to come from a bird three times its size. Third, it does not confine its food to small insects. For nearly a half hour, it attempted to carry to the young a grasshopper one and a half inches long. Indeed its size annoyed the bird, for the grasshopper kept slipping out of its bill, forcing the bird to shift its grip repeatedly. Throughout one period of ten minutes, when it never lost its hold completely on its prey, it continued to call nervously. Although no motion of the bill could be observed, the calling seemed to cause a constant shifting of grip.

The third nest of *Leptopogon* was found by Ramirez on May 3. It was hung by two round roots, five inches long, under a huge log densely covered with moss and tropical growth. The log arched a stream ten feet in width. The three well-incubated eggs which the nest contained were immaculately white with a slight gloss. One of them was broken, but the other two were successfully cleared of their large embryos. One egg measures 18.5 mm. x 14.8 mm. and the other 19.8 mm. x 14.5 mm. In appearance they resemble the eggs of a very small woodpecker, but the shell is much more fragile.

From the above it will be noted that the nest sites were quite different. Number one was in a dark ravine in a forest close to a banana orchard, number two beside a narrow obscure trail high up on a mountain side, and number three swinging in space six feet

above a dashing stream. All of the parent birds were extremely shy, and those of nest two were seen only once by Ramirez. The parent females of both nests numbers one and three were obtained, as well as the two nestlings of nest number one. Only at nest number one were both parents observed at the same time and, as they are marked alike and differ only slightly in size, it was impossible to determine which was the male and which the female. Since both birds collected were females, presumably this was the sex which was observed most often.

On May 3 I made one last attempt to secure photographs of nest number one. This time I placed the blind on the opposite side of the nest, hoping that the parent bird would land on the same root, where it had appeared the day before. She did not! Outwitting me completely she landed in the one sunlit opening on the other side of the huge trunk, where she was obscured by mats of ferns. Throughout this day she signalled her approach by loud flutters of her wings. Knowing that it was my last chance in the blind, I waited for hours until it grew quite dark and black storm clouds blotted out the west. Thus came to an end a photographically unsuccessful, but interesting experience with one of the rarest birds of the Mexican tropics.

California Institute of Technology, Pasadena, California, August 6, 1943.