

interspecific dominance relationships, such as those discovered among small mammals by Calhoun (1959, N. Am. Cen. Sm. Mamm., Release No. 10, Adm. Pub., U.S. Dept. Health, Education, and Welfare, Public Health Service). These in turn may enable us to understand the structure of avian communities much better than we now do.—ARYAN I. ROEST, *Biological Sciences Department, California State Polytechnic College, San Luis Obispo, California.*

**Nest-Shifting Behavior of the Ashy Wren-Warbler.**—The Ashy Wren-Warbler, *Prinia socialis* Sykes, is a common bird found mainly in the central, western and southern parts of the Indian Union, East Pakistan, and Ceylon. Its nesting season ranges from March to September but more commonly immediately after the onset of the monsoon. It is known to build two types of nests (Salim Ali, 1956; Dharmakumarsinhji, 1955). One is similar to that of a tailor bird (*Orthotomus sutorius sutorius* Pennant) and is constructed by arranging fibers in a circular manner inside a funnel formed by one or two leaves stitched together at the margin. The other is an oval bag of woven fibers stitched together with several supporting leaves. I have noticed a third variety in a hedge (*Clerodendron phlomidis*) where the bag of fibers was attached to the slender twigs only by means of cobweb without incorporating the small leaves of the plant. The species is known to require about two weeks for completion of its nest. The clutch size is three or four, and the period of incubation 12 days.

Early in July immediately after the first rains, I noticed in my garden a pair moving about together and copulating on a tree at a height of about five meters from the ground. On 12 July they started building a nest on a plant (*Nyctanthus arboritris*) at about 65 cm. from the ground, both the male and the female participating in the construction. The nest was of the first type, with only two leaves sewn together because the leaves of this plant are large. On the 17th I built a hide at a distance of about one meter from the nest and took photographs. With the click of the camera the bird was visibly restless and agitated. I again took photographs on the 19th. On the morning of the 20th, when I was in the hide watching the birds, to my astonishment I found them by turns removing the nest material bit by bit. They first started with some of the cobweb material and then with the fibers. Each time the bird flew directly to a spot about 30 meters away, and I found that a new nest was being built there with the material of the old nest, this time on another plant (*Lantana camara*) at about the same height. This nest was of the second type, probably because the leaves of this plant were smaller. During the building of the first nest the bird always came to the nest by a circuitous route through shrubs and hedges, and the rate of building was also rather slow. But in the building of the second nest, flight was direct from the original nest to the second; the frequency of the flights to the nest was naturally several times greater. By the evening of the 22nd practically all of the nesting material had been shifted. On the 23rd I watched both the birds bringing material at dusk late in the evening. On the morning of the 24th I noticed in the new nest the first egg of the clutch; the second appeared on the 25th, the third on the 26th, and the 4th on the 27th.

On 6 August I built a hide near this nest and took a few photographs. On the next morning to my surprise I found that all the four eggs had disappeared from the nest and that there were no pieces of the shell to be found anywhere around. However, I did see the bird visit the nest until noon but not later. On the 9th I noticed the pair again selecting a nesting place. They even inspected the

remnant of the nest but did not build there. The hide at this nest had been removed after the second nest was completed, and so there was nothing to dissuade the birds from nesting there. They selected a spot on the opposite side, thus making the location of the three nests at the three angles of a triangle, more or less equidistant from each other, with the second nest at the apex of the triangle. The second nest was completely abandoned, and the third nest was built by the side of the compound wall with freshly collected material. This time the plant chosen was *Bougainvillia spectabilis*, and the type of nest was the same as the previous one. The process of nest building was at the usual speed. On 18 August when this was nearing completion, I noticed, and so did these nesting birds, a Crow-pheasant (*Centropus sinensis* Stephens) that came from the direction of the second nest to this nest and put its head into it for eggs or young ones. This suggested the fate of the four eggs in the second nest. The birds thereafter abandoned the nest and did not nest again for the year. Ordinarily their nesting season extends from March to September.

## LITERATURE CITED

- DHARMAKUMARSINHJI, R. S. 1955. Birds of Saurashtra (India) Dil Bahar, Bhavanagar. 362 pp.
- SALIM ALI. 1956. The Book of Indian Birds. The Bombay Natural History Society, Bombay. 440 pp.
- J. C. GEORGE, *Division of Avian Biology, Department of Zoology, M.S. University of Baroda, Baroda, India.*

**A New Method of Preserving Bird Specimens.**—In the fall and winter of 1957–1958 I had occasion to preserve more than a hundred birds, mostly passerines, which had been killed at a television tower south of Aiken, Aiken County, South Carolina. In the course of this work I evolved a method whereby both the skin and the major part of the skeleton of a given specimen could be saved. This method is as follows.

The mouth and deep gashes are plugged with cotton. The wings and legs are then examined; the side on which the appendage bones are unbroken is the one where the opening incision is made. This incision extends from the eyelid back along the side of the neck to the shoulder region. It is continued as a circular incision, which is made against the body around the base of the wing. From this stage on, an absorbent, cornmeal or perhaps hardwood sawdust, is liberally applied and serves to keep the feathers dry. Skin and feathers are then stripped off the wing. From the circular incision in the shoulder area an incision is carried back to the area where the thigh meets the trunk, and another circular incision is made around this joint. Skin and feathers are stripped off the thigh. The incision is extended back to the region of the base of the tail. The skin is then loosened from the body both dorsally and ventrally, with cuts being made through the tail-base region (the pygostyle and some caudal vertebrae admittedly may be lost in this process) and through the knee joint and humerus of the appendages on the side opposite the opening incision. The skin is reversed over the neck and skull, this being facilitated by the split extending to the eyelid. Just anterior to the lacrimal bones a transverse cut is made. This leaves the bill with the skin. If the bill is to go with the skeleton, the skin is carefully detached from the skull in the region of the bill base. This of course leaves one with a more nearly complete