

Although this swamp was hunted over regularly by a male Marsh Hawk (*Circus hudsonius*), the Bittern nest was never disturbed.—DAVID B. VESALL, *Carlos Avery Nursery, Forest Lake, Minnesota.*

A Suggestion Concerning Territorialism In *Tapera naevia*.—So little is known of the breeding habits of *Tapera naevia*, the only Western Hemisphere cuckoo proven to be parasitic, that it seems desirable to record fragmentary yet suggestive observations concerning the territorialism of the species. Present knowledge of the breeding habits is summarized by Friedmann (*Ibis*, 1933:532-9). To these records of the hosts I wish to add that on Dec. 27, 1939 near Santa Elena, Entre Rios, Argentina, I found a young *Tapera* in the nest of the Oven-bird, *Schoenio-phylax phryganophila*. In addition there were two young and three eggs of the host ready to hatch. The *Tapera* had probably hatched about two days before the others.

In the vicinity of Santa Elena the species is abundant, and although seldom seen, is conspicuous because of its loud, persistent call. About the first of November the birds begin to repeat their monotonous two-syllabled note, "crespín," frequently calling throughout the night. Each bird calls from one circumscribed locality and remains there for a long time. Four birds, presumably the same although not marked for identification, called for a month, each from its own limited area. This habit of calling from one location is also known to all the natives and may be considered a universal behavior. Friedmann (*loc. cit.*) states that both sexes call and proved that the female calls by collecting one in the act. The sex ratio of the species is not known. The fact that in museum collections there are many more males than females (74 to 28) may be interpreted to indicate that the male calls more frequently and thus is more frequently collected or that there really exists a surplus of males in the population. This latter condition is the more likely since a species with abnormal breeding habits usually has an abnormal sex ratio (Mayr; *Amer. Nat.*, 73, 1939:156-79).

The fact that *Tapera* calls persistently from one circumscribed area is of great importance in relation to the territorialism of the Cuculidae. In order to ascertain the sex of the bird calling from one definite spot I tried unsuccessfully for three weeks to collect one of the four calling birds but their wariness and ventriiloquial ability always outwitted me. For *Cuculus canorus* it is known (Makatsch, 1937, *Der Brutparasitismus der Kuckucksvogel*) that each female has a definite territory and also that the males live in a more or less limited area. Molnar (*Aquila*, 1939: 257-64) reports that each female has a territory but mates with several males. However, at times other females lay eggs in this territory. In the parasitic African Cuckoos, Friedmann (*Auk*, 45, 1928:33-8) finds that, although two species have weak territorial instincts, several species establish definite territories which are dependent upon available nests to be parasitized. The male is more faithful to the territory than the female. Thus the habit of maintaining one definite area occurs in two subfamilies (Cuculinae and Geococcyginae) which are widely separated geographically and taxonomically.

In terms of the phylogeny of the Cuculidae there are two possible interpretations of the development of territorialism. Either the habit of maintaining a territory has developed independently in the Cuculinae and the Geococcyginae (the subfamily to which *Tapera* belongs) or the Geococcyginae are descended from a cuculine stock which had already developed territorialism. If this latter interpretation is correct, then, since many members of both subfamilies are non-parasitic, it is necessary to conclude that territorialism developed in the group prior to parasitism and also before the family spread to the western hemisphere.—DAVID E. DAVIS, *Sheldon Traveling Fellow, 1939-40, Harvard University, Cambridge, Massachusetts.*