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GENERAL NOTES

Another colony of the Guadeloupe House Wren.—The Guadeloupe House Wren (*Troglodytes aedon guadeloupensis*), long thought to be extinct, was last taken on that island near the village of Ste. Rose, Basse Terre in 1914 (Bond, Birds of the West Indies, Collins, London, 1974:165). The specimen, a female, was secured on 13 July in cutover forest by G. K. Noble (Greenway, Extinct and Vanishing Birds of the World, Spec. Publ. No. 13, Am. Comm. Int. Wild Life Protection, New York, 1958:173).

After that time, according to Greenway (1958), successive ornithologists working there (Peters 1924, Bond 1930, Danforth 1937, V. Biaggi, a resident of several years; and A. S. Schwartz and R. W. Guth [J. Bond pers. comm.]) failed to find the wren. Pinchon (Faune des Antilles Francaises, Les Oiseaux, p. 198, Fort-de-France, 1964) the current authority, indicated that in his studies of birds of the French West Indies, he had never seen the Martinique race (*T. a. martinicensis*) or the Guadeloupe Wren. On 28 February 1969, M. J. C. Roché saw 3 territorial male Guadeloupe House Wrens and recorded their songs on tape near the hamlet of Cacao in northern Basse Terre (Roché pers. comm. and see also Red Data Book 2: Aves, 1966, entry for 1969). This place is about 8 km south of Ste. Rose. The apparent rarity of this race promps me to report a second small colony of wrens which H. G. Savage and I discovered on Basse Terre in May 1973.

On 25 May 1973 we drove west 5 km along a dirt road from the Station de Recherches de Zoologie, Domaine Duclos, Petit-Bourg District. The road climbed from 150 m to 500 m at its terminus in the mountains. At lower elevations the habitat was cutover rain forest averaging 20 m in height with trees less than 1 m in diameter and with little understory. Along the final km of road the rain forest was seemingly virgin with trees up to 38 m in height and in excess of 2 m at the base. The rank understory of tree ferns and deciduous scrub in this area was broken only by a trail.

At 10:30 while standing at the beginning of the trail at the end of the road a wren sang a few meters down slope then flew to a perch in bright sunlight. We observed it with 7 × 50 binoculars for 1 min at a distance of 10 m, recognizing it as a Guadeloupe House Wren before it flew into dense brush. I taped 3 short song bouts (at 19 cm per sec with a Uher 4000 Report-L). Prior to our departure at 11:30 we saw a second wren in the company of the first.

We returned on the morning of 26 May, and found a bulldozer extending the road farther into the mountains. The spot where the wren was first observed was now leveled, but we located a pair of wrens in the general vicinity and recorded more song. On 28 May I returned to the area in the late afternoon, walked the new road to its end 350 m beyond the termination of the old road, and found 2 singing birds 150 m apart. On 29 May I searched for more wrens. Starting from the research station, I played a taped song at 1 km intervals along the road for 4 km and from that point every 100 m to the end of the old road at the 5 km mark. Two more singing males, one accompanied by a female, were found just east of the first site of observation. The two original singing males were also relocated at this time.

No additional wrens were encountered during our stay on Guadeloupe from 25 May through 1 June, even though several other locales were searched on both Basse Terre and Grand Terre. I visited an especially promising rain forest surrounding Grand Etang, a small mountain lake at 350 m on La Madeleine Mountain, about 20 km by air SSW of the area where the wrens were found. No wrens were located in 3 h of traversing the perimeter of the lake playing wren song.

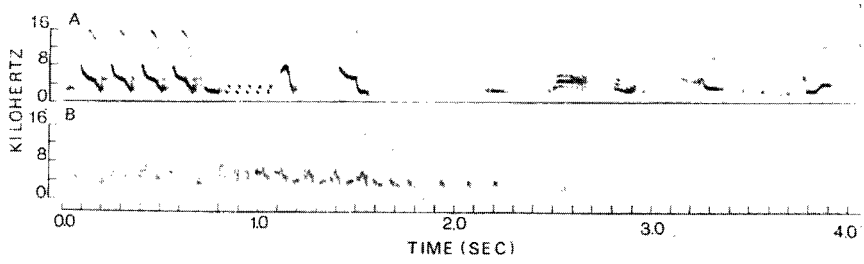

FIG. 1. A single song of the Guadeloupe House Wren (A) compared to that of a mainland House Wren (B) taped in Florida.

Response by males to tape playback was vigorous and consisted of song, rapid flight from perch to perch, and occasional approach to within 2 m of the taperecorder. The rate of song evoked by playback, however, seemed no greater than that of wrens singing without stimulus. Each song type is uttered as many as 50 times before a different song begins.

I compared a song of the Guadeloupe House Wren with that of a House Wren (*T. aedon* ssp.) taped 8 April 1973 at Lake Wales, Florida. The song type of the latter consists of more syllables (30 vs 21), some of which are frequency modulated, and has a shorter intersyllabic interval (0.069 sec vs 0.024 sec) than that of the Guadeloupe House Wren (Fig. 1). To my ear the song of the Guadeloupe House Wren is the louder, richer, and more melodious of the two. Such simplification of song is seen also in West Indian populations of vireos in comparison with mainland congeners (Barlow unpubl. research).

On 26 May when male #1 was first seen, he was being chased by a Plumbeous Warbler (*Dendroica plumbea*). Both birds flew at each other. Then the warbler, in supplanting attack, drove the wren toward us. The encounter lasted approximately 1 min during which the wren sang loudly and the warbler gave an agitated buzzing call. The warbler cocked its tail in wren-like fashion and in general resembled wrens in behavior. Thus, in spite of substantial differences in appearance, behavioral similarities must occasionally bring the 2 species into conflict. The foraging behavior of the wrens seemed typical of that described for House Wrens (Bent, Life histories of North American nuthatches, wrens, thrashers and their allies, U.S. Natl. Mus. Bull., 195:131, 1948).

All the wrens appeared to be on territories. Female #1 was either nestbuilding or feeding nestlings. Twice she was noted carrying something in her beak as she flew into a dead bromeliad on top of the trunk of a tree fern ca. 2.5 m above the ground. I examined this site but found no nest. The male, singing loudly, followed the female as she flew about.

The small colony of wrens reported herein was separated by 8 km of rugged mountainous terrain from the 3 birds found by Roché, and I do not know if any wrens occur in the intervening area. My fruitless searches in other parts of the island suggest that this wren is at best rare and local on Guadeloupe. There are, however, probably hundreds of hectares of forest on Basse Terre comprising suitable habitat for wrens and it would be useful to know how widespread and abundant this bird is at present. A census using a tape recording for locating males should be undertaken in view of the wren's endangered status.

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Pesticide levels and shell thickness of Common Loon eggs in New Hampshire.—Eggshell thinning has been observed in many species of birds over the past 2 decades, and chlorinated hydrocarbons and PCB's have been implicated as the cause of this thinning (Ratcliffe, J. Appl. Ecol. 7:67–116, 1970; Schreiber and Risebrough, Auk 84: 119–135, 1972). Although heavy, widespread use of pesticides has probably never occurred in the Lakes Region of New Hampshire, sublethel levels of DDT, DDD, and DDE were found in salmon (*Salmo salar*), sucker (*Catostomus commersoni*), perch (*Perca flavescens*), pickerel (*Esox niger*), whitefish (*Coregonus clupeaformis*), and lake trout (*Salvelinus namaycush*) in 2 New Hampshire lakes (Seamans and Newell, N.H. Fish and Game Dept. Survey Report No. 10, 1973). The diet of the Common Loon, *Gavia immer*, consists of numerous aquatic organisms, predisposing it to accumulation of chlorinated hydrocarbons if present in the loon's food.

In this note, levels of pesticide residues (DDT, DDE, and dieldrin) and PCB's are compared with shell thickness of eggs of the Common Loon, in New Hampshire.

Methods.—Pesticide residue and PCB levels were measured by gas chromatography by the W.A.R.F. Institute, Madison, Wisconsin. Fourteen eggs, from 3 New Hampshire lakes were collected after they had been abandoned following disturbance or after prolonged incubation, or knocked into the water by an incubating adult. After collection, the egg contents were blown into sterilized containers, frozen, packed in dry ice, and mailed to the W.A.R.F. Institute.

Eggshell thickness was measured with a micrometer. In each egg sample, 4 different fragments were measured to the nearest 0.01 mm. Most measurements included membrane and cuticle, but in 8 cases the membrane was absent. To correct for the absence of the membrane, average membrane thickness, calculated by taking the difference between eggs with membrane and eggs without membrane ($n = 18$, $\bar{x} = 0.1480$), was added to membraneless eggs ($n = 8$).

Results.—Results of toxic residue analysis of 14 New Hampshire loon eggs are presented in Table 1. Average eggshell thickness of these eggs was 0.59 ± 0.05 mm. Residue levels (ppm) on a wet weight basis were: DDE $= 5.88 \pm 1.73$; DDT $= 2.44 \pm 0.741$; dieldrin $= 0.105 \pm 0.025$; PCB's (total) $= 24.6 \pm 5.70$; DDD < 0.05; and PCB's (as arochlor 1254) $= 18.30 \pm 4.82$. Both DDT and PCB levels in New Hampshire eggs were higher than those reported by McIntyre (Ph.D. Thesis. Univ. of Minn., Minneapolis. 230 pp., 1975) in Minnesota and Saskatchewan and those reported by Vermeer (Can. Field-Nat. 87:403–408, 1973) in Alberta. Dieldrin levels were lower, however, in loon eggs from