

General Field Notes

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An Insular Group of Red-cockaded Woodpeckers

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The Red-cockaded Woodpecker (*Picoides borealis*) is an endangered species restricted to mature pinewoods of the southern United States. Although Red-cockaded Woodpecker distribution includes 13 states, biologists have expressed concern over the increased fragmentation, small size, genetic isolation, and long term survivability of many Red-cockaded populations (Reed et al. 1988).

We report here on an island group of Red-cockaded Woodpeckers at Persanti Island in Lake Marion, Clarendon County, South Carolina, that has persisted for at least 20 years. Persanti Island is 2.4 km long, averages about 1.2 km wide, and is 154 ha in extent. This island was formerly a high ridge within the Santee River Swamp until Lake Marion was created by impoundment of the Santee River in 1941 by the Santee-Cooper Public Service Authority. Since then Persanti Island has been bounded on the west by open water and scattered clumps of small cypress (*Taxodium distichum*) and water tupelo (*Nyssa aquatica*) trees mixed with open water on the remaining sides. The nearest high ground is on the mainland 2 km on either side of the island and a small finger of the Santee Wildlife Refuge 1.2 km to the east. The island

receives little use except for makeshift camping along the edges by hunters and fishermen and is under current management as a natural area by Santee-Cooper.

Red-cockaded Woodpeckers have been known to occur on this island since at least 1972 when the senior author saw two birds and found several cavity trees during a brief visit to the northern end.

On 31 January 1991 we made a complete survey of Persanti Island for Red-cockaded Woodpeckers. No obvious changes had taken place on the island since 1972. The vegetation consists of a well-stocked mature loblolly pine (*Pinus taeda*) canopy mixed with scattered shortleaf pine (*Pinus echinata*) and a subcanopy of southern red oak (*Quercus falcata*) and hickory (*Carya* spp.). A 6–8 ha pine plantation approximately 30 to 35 years old occurs on the northern end of the island. The understory is primarily hardwood and surprisingly light in the absence of any active forest management. The presence of fire, probably from unattended campfires, was evident on portions of the island, and undoubtedly accounted for some understory control.

We found a total of 13 active, 14 inactive (or with enlarged cavities) and three "start" Red-cockaded Woodpecker trees on the island. All cavity trees were in loblolly pine. Based on the distribution of cavity trees, we believe 5 active clans of woodpeckers may occur on Persanti Island. However, without more detailed observations of woodpecker clans, a precise clan count is not available at this time. We saw Red-cockaded at three of the five colony sites but never saw more than four birds at any one time.

Damage to Red-cockaded Woodpecker habitat from Hurricane Hugo, whose eye passed near Persanti Island with sustained wind speeds of 145 km/hr recorded from nearby Sumter, was evident. We found 15 cavity trees (33% of the total active and inactive trees) had been snapped off or blown down by Hugo. This figure compares with an average 40% loss of Red-cockaded cavity trees found in an extensive survey of the hurricane-affected area (Cely and Ferral, unpublished). Hurricane damage, however, was fairly well distributed among colonies on the island except for one on the northeastern side (and most exposed to the storm's southwesterly winds) where only one active tree and one "start" was found; many of the large, potential cavity trees were also destroyed at this site.

The land-use history and isolation of Persanti Island make it an interesting study area for Red-cockaded Woodpecker biology and management. At the time of acquisition by Santee-Cooper 50 years ago, Persanti Island was mainly old fields with scattered pine (Robert Petracca, pers. comm.). We suggest that this island was colonized by Red-cockaded sometime after Lake Marion was built in 1941 and that the relict pines serve as the current cavity trees. The earliest age for loblolly pine to become suitable as a Red-cockaded cavity tree is about 75 years (U. S. Fish and Wildl. Ser. 1985), although trees in the 40–60 year range have been used on occasion as cavities (Hopkins and Lynn 1971).

At present the nearest Red-cockaded Woodpeckers to Persanti Island is a small group of 2–4 birds at Santee State Park 2.4 km to the west. Another small group, perhaps no more than two birds, occurs 10 km to the southeast at the Santee National Wildlife Refuge. The isolation of Persanti Island by water would make the woodpecker clans there dependent upon the island resources for their foraging and cavity needs, but the degree of true genetic isolation is

unknown. Red-cockaded Woodpeckers are strongly territorial and non-migratory, but recent information has shown that at least on occasion they can move distances up to 90 km (Walters et al. 1988).

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Tool-making and tool-using by a Brown Thrasher (*Toxostoma rufum*)

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On 15 October 1990 at my banding station at Hilton Pond near York, South Carolina (Lat 34°58'N, Long 81°13'W), I watched a Brown Thrasher (*Toxostoma rufum*) enter a pull-string welded-wire ground trap baited with shell corn and white millet. The bird ignored the bait, instead using its bill to pick up an un-capped acorn that was about 1.5 to 2 cm in diameter and probably from a nearby Southern red oak, *Quercus falcata*.

The thrasher carried the acorn outside the trap door and dropped it onto rain-softened bare ground. With rapid downward sweeping motions of its bill, the bird immediately excavated a hole in the soil about 1.5 cm deep and placed the acorn in it. The thrasher then repeatedly rammed its bill perpendicularly against the exposed surface of the acorn. Although the nut usually stayed in place, the bird returned it to the depression on each of several times the acorn was dislocated by impact from the thrasher's bill.

On about the tenth hit, the thrasher cracked off a small piece of nutshell, exposing the orange meat of the acorn. After this, the bird appeared to aim its blows at the broken shell edge rather than hitting the acorn surface at right angles; several times the thrasher used its bill to rotate the acorn in the hole, ap-