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## An Unusual Nest Site for Purple Martins

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## NOTES

**An unusual nest site for Purple Martins.**—The Purple Martin (*Progne subis*) is widely known for its propensity to inhabit man-made structures. Although natural cavities and cliffs were traditional nest sites (Bent 1942, Life histories of North American flycatchers, larks, swallows, and their allies. U. S. Natl. Mus. Bull. 179), martins in the United States now are almost dependent upon man-made structures for nesting (Allen and Nice 1952, Amer. Midl. Nat. 47: 606-665). A few of these structures include hollowed gourds, building eaves, flagpoles (Bent 1942: 493), boat masts (Kale 1964, Wilson Bull. 76: 62-67), and a variety of manufactured and handcrafted apartments on poles. Robertson and Kushlan (1974, The southern Florida avifauna. Pp. 414-452, in P. J. Gleason (ed.), Environments of south Florida: present and past, Memoir 2. Miami, Florida: Miami Geological Society) report that martins in south Florida nest only in bird houses. Considering this variety of



Figure 1. Oil rig used by Purple Martins for nesting in the Big Cypress National Preserve, Collier County, Florida. Note the three martins perched along the top of horizontal arm.

potential domiciles, we report an unusual nest site for martins in south Florida.

In the Bear Island unit of the Big Cypress National Preserve (BCNP) on 6 April 1986, we observed at least 11 Purple Martins flying around and lighting upon operating, diesel-powered oil pumps (Fig. 1). Inspections on 15 April revealed nest building activities on 3 different rigs. Female martins were seen collecting mud and twigs from the oil pad surface and entering holes at the base of the pump head (Fig. 2). We later found two nests in each of the three pumps. Nests were constructed of mud and other debris and appeared taller on the side facing the opening. Because the eggs experience continuous changes in inclination, and considerable torque was applied during direction changes, a high-walled nest may have been necessary to prevent egg loss. On 14 May adults were seen feeding three nearly fledged young at one nest while an undetermined number of young were present at two other nests. No young were seen in nests on 15 May, although 3 immature birds capable of flight were seen perched on oil rigs. The age of numerous other flying birds was not determined.

Throughout this period all three oil rigs were active with a change in nest site elevation during a complete arc cycle of 5-6 m every 5-10 seconds. Nest building activities apparently ceased at a second oil pad 1,000 m away when the single pump was shut off. Casual observations at oil pads in the eastern BCNP also revealed martin use at Eleven-mile Road oil pads. Nesting activity was not confirmed at these more remote sites. To our knowledge this is the only reported instance of Purple Martins nesting in active machinery. However, considering the number of birds using this site and observations of martins at other oil well locations, it may be a widespread behavior in south Florida. Further, a perpetually moving nest may afford increased predator protection and improve chances for clutch survival. The

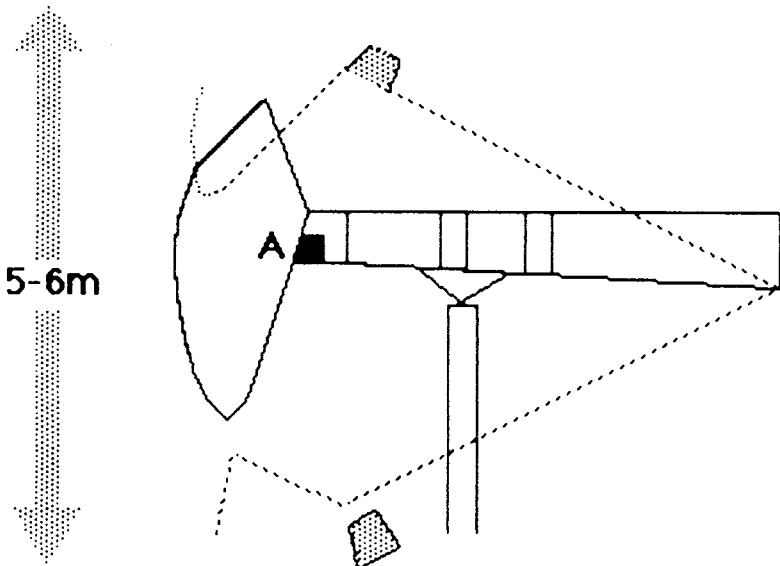


Figure 2. Changes of Purple Martin nest site (A) relative to horizontal.

impacts of this movement on egg and nestling development are unknown, although all observed young appeared normal.

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**A specimen of the Asiatic Marbled Murrelet from Florida.**—On the afternoon of 27 December 1986, while participating in the North Pinellas Christmas Bird Count as a member of Jack Dozier's party (Dozier, Hoffman, Woolfenden, and Manny Lopez), Hoffman found a Marbled Murrelet (*Brachyramphus marmoratus*) on the beach of Honeymoon Island, Pinellas County, Florida. The bird was found about 400 m south of the northern tip of the island's outer sandspit, on a tidal sandflat, just inland from the crest of the spit, near a highwater mark on the sand. The sand surface around the murrelet was rippled in a manner indicating water had flowed down the beach around the bird. It was lying breast downward, with its head tilted forward onto the sand. From the murrelet's fresh condition, posture, and position on the beach, and from the appearance of the surrounding sand, we conclude that it came ashore from the east, or bay, side of the spit, on the previous night's high tide, which peaked at about 19:00 hr EST. We suspect the murrelet arrived on the sand moribund, and expired within the next several hours.

Marbled Murrelets are small secretive alcids of the North Pacific Ocean. Unlike most other alcids they nest solitarily, often several kilometers inland (see Carter and Sealy 1986). The few nests discovered so far were in trees, or on bare ground in treeless areas. One nest was in a cavity on the ground (Johnston and Carter 1985). Marbled Murrelets generally do not gather in large flocks, but rather occur singly or in pairs, usually close to shore (but see Carter and Sealy 1986). The breeding range, as reconstructed from sightings of birds in breeding plumage (Dement'ev et al. 1968, Jehl and Jehl 1981, American Ornithologists' Union 1983), extends from southwestern Alaska to the central California coast (*B. m. marmoratus*) in North America, and apparently occupies the eastern shores of the Soviet Union (the Sea of Okhotsk, Kamchatka, and the Commander Islands south to the Kurile Islands), Japan, and Korea (*B. m. perdix*) in Asia. The North American race appears to be largely nonmigratory, but the Asian race probably is more migratory, as the northern portions of its breeding range often are covered by pack ice in winter.

Marbled Murrelets regularly inhabit large lakes, sometimes several kilometers inland from the Pacific Ocean (Carter and Sealy 1986), but until recently (Sealy et al. 1982) were unknown more than about 100 kilometers inland of their breeding range. Sealy et al. (1982) discussed four inland records: two from Quebec (one is now considered dubious, S. G. Sealy *in litt.* 1987), one from Indiana, and one from Mono Lake, California (first reported by Jehl and Jehl 1981). They referred these specimens to the Asiatic subspecies *perdix*, which can be recognized by its longer bill and otherwise generally larger size. Jehl and Jehl (1981) also noted that *perdix* is characterized by a distinctive white eye-ring.

The Honeymoon Island specimen, prepared as a study skin by Woolfenden (GEW 5848), is a female (ovary granular, 17X4 mm, largest ovum 1.5 mm dia.). The stomach was empty, and the bird was emaciated (mass 199.4 g, no subcutaneous fat), weighing about two-thirds normal weight (see Sealy et al. 1982). The murrelet was in basic plumage except that it retained enough feathers from the alternate plumage to give a distinctive speckled appearance to the belly. These feathers indicate that the bird was more than one year old, and