

GROUND-NESTING BALD EAGLES ON THE VIRGINIA BARRIER ISLANDS

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As with all other sea eagles (Brown and Amadon 1968), Bald Eagles (*Haliaeetus leucocephalus*) are tree nesters throughout most of their breeding range and the use of tree species for nesting substrate varies geographically according to availability (e.g., Robards and Hodges 1976, McEwan and Hirth 1979, Andrew and Mosher 1982, Anthony and Isaacs 1989, Dzus and Gerrard 1993). Ground nests are found in treeless regions in the desert Southwest, within the high latitudes of Alaska and Canada and on offshore islands along the Pacific Coast. Grubb and Eakle (1987) found 9 of 17 nests in Arizona placed on cliffs. Sherrod et al. (1976) working on Amchitka Island along the Aleutian chain found nests on coastal sea stacks, ridges and hillsides. Historic Bald Eagle nests on the Channel Islands were placed on outcrops, cliffs and islets (Kiff 1980).

Ground nests within the forested portions of the breeding range are extremely rare. Hines and Lipke (1991) found eagles nesting on the ground on a small island in Minnesota. Burton (2010) found a nest on Vivian Island, a small treeless island in the Strait of Georgia, British Columbia. Curnutt and Robertson (1994) found 3 ground nests in Florida Bay on isolated mangrove keys. In the late 1800s, 2 ground nests were found on low-lying islands near Corpus Christi, Texas (Bent 1937). No ground nests have been described along the Atlantic Coast.

The Bald Eagle breeding population within Virginia and the broader Chesapeake Bay reached a low in the early 1970s (Abbott 1974) but has been growing exponentially over the past three decades with an average doubling time of less than 8 years (Watts and Byrd 2002, Watts et al. 2007, 2008). Bald eagles in Virginia nest almost exclusively in trees, including primarily loblolly pines (*Pinus taeda*) and various hardwoods (Jaffee 1980, Watts 2005). In recent decades, nesting substrates have broadened to include artificial structures such as transmission towers, water towers and cell towers (Watts and Byrd, unpublished data). Here, we describe two nests built on the ground along the Virginia Barrier Islands.

On 26 April 2013 while flying shorebird surveys along the barrier islands, Bryan Watts and Barry Truitt discovered

an eagle nest on the north end of Little Cobb Island in Northampton County (Figure 1).



Figure 1. Ground nest of Bald Eagle on Little Cobb Island, Northampton County, Virginia. Photo by Bryan Watts.

The nest contained 2 chicks that were attended by an adult and were approximately 35 days old. The nest was built between 3 overturned wax myrtle (*Myrica cerifera*) stumps that had washed up on the island and was surrounded by seaside goldenrod (*Solidago sempervirens*). The nest was disc-shaped (shallow and wide). The base of the nest was made of coarse sticks and filled with wrack and fresh marsh grass. Visible in the nest was scattered diamondback terrapin (*Malaclemys terrapin*) shells, bird remains and fish remains. During the last flight of the season on 6 June 2013, the two young were observed flying around the island. In mid-March of 2014 an incubating adult was observed in the nest, but by the first week in April the nest was abandoned and no evidence of eggs or young was found in or near the nest structure.

The nest located on Little Cobb Island was a replacement nest for one that was initially built on the roof of a small shack in 2006 (Watts and Byrd 2006). Both the shack and nest were lost in Superstorm Sandy on 29 October 2012. The replacement nest was built on the ground because there were no remaining structures on the island.

On 5 June 2013 while conducting surveys for beach-nesting birds, Ruth Boettcher discovered an eagle nest built on the ground on Cedar Island in Accomack County (Figure 2).



Figure 2. Ground nest of Bald Eagle on Cedar Island, Accomack County, Virginia. Photo by Ruth Boettcher.

The nest contained two young, approximately 40 days old with both adults present. The nest was built in low dunes around an uprooted red cedar tree (*Juniperus virginiana*) that was washed up on the island. The base of the nest was made of coarse sticks that were covered with wrack and marsh grass. Similar to the nest on Little Cobb Island, the nest was disc-shaped but elevated slightly on the log. Diamondback terrapin shells and fish remains were scattered on the nest surface. Both young were observed flying the last week in May. In early April of 2014, a two-week old nestling was discovered in the nest with both adults present. The chick fledged in mid to late May and remained in the area until late July.

The situations of the two Bald Eagle nests in Virginia are very similar to descriptions of other ground nests. Little Cobb and Cedar are both treeless islands near abundant food resources that are isolated from mammalian predators. Most ground nests that have been described to date occur on offshore islands with no ground predators. Sherrod et al. (1976) suggest that the occurrence of arctic foxes (*Vulpes lagopus*) is one of the primary determinants driving the distribution of breeding eagles nesting along the Aleutian Islands. The lack of suitable nesting substrate is also a key element leading to ground nesting. Bald Eagles nest on other Virginia Barrier Islands including Assateague, Wallops, Parramore and Hog. However, on these islands the pairs are nesting in available trees.

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