FIRST RECORD OF PEREGRINE FALCON (*Falco peregrinus*) GROUND NESTING ACTIVITY ON THE U.S. ATLANTIC COAST

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KEY WORDS: Peregrine Falcon; *Falco peregrinus*; Atlantic coast; barrier island; ground-nesting; reproduction.

Between 1975 and 1985, 307 captive-reared Peregrine Falcons of mixed heritage were released within the mid-Atlantic Coastal Plain as part of the eastern peregrine recovery program (Watts et al. 2015). The self-sustaining coastal population from this effort exhibits relatively high reproductive rates (>1.5 fledged young/pair/year since 1999) and nests primarily on artificial structures such as fishing shacks, duck blinds, wooden peregrine nest towers, bridges, and buildings. The breeding population in the coastal plain of Virginia currently exceeds 25 pairs and most pairs nest on artificial structures in the barrier island/seaside lagoon system located seaward of the lower Delmarva Peninsula (Mojica et al. 2014).

On 19 June 2013, we discovered a pair of Peregrine Falcons (*Falco peregrinus*) nesting in the sand dunes on Cedar Island (37°36’N, 75°37’W), a barrier island located in Accomack County, VA, U.S.A. Both adults were marked as nestlings with unique leg bands that can be read in the field. The female hatched in 2009 at a coastal New Jersey nest tower located approximately 190 km north of Cedar Island and the male hatched in 2010 at a nest tower on another Virginia barrier island approximately 38 km south of Cedar Island. We first discovered the territorial pair when we unknowingly approached their nest site during a shorebird survey. On closer inspection, we found an overturned wooden bushel basket with missing slats on a low dune vegetated with saltmeadow cordgrass (*Spartina patens*). Two Peregrine Falcon nestlings, approximately 2 wk old, sat outside of the basket (Fig. 1a). Weekly visits revealed that the flightless young wandered onto adjacent sandflats and dunes within 50 m of the basket. On two of the visits, we observed the nestlings next to the bushel basket, indicating they returned to the nest site periodically. We banded the young, both males, on 10 July, 1 wk prior to fledging. They remained on territory, with the attending adults, until mid-August.

In 2014, the same peregrine pair returned to Cedar Island. We found a ground nest (scrape) with two eggs on 4 April on the same dune where we found the nestlings in 2013, approximately 4 m east of the bushel basket, which was crushed sometime after the 2013 breeding season. This first nesting attempt failed. On 3 May, we found two scrapes surrounded by peregrine tracks next to a second broken bushel basket on another sand dune approximately 50 m from the first nest. On 11 May, an adult flushed from a nest of three eggs laid next to the broken bushel basket and over the next several days, the female laid a fourth egg (Fig. 1b). We placed a trail camera (Bushnell NatureView HD Max, Overland Park, KS, U.S.A.) 1.5 m from the nest several days before it was due to hatch. The camera was positioned on the ground and contained a sensor that measured ambient ground temperatures. Two young hatched on 13 June during a week when ground temperatures rose to 60°C (Fig. 1c) and generally remained well above 37°C from 0900 H to 1700 H EST. Despite continuous efforts by the adults to shade and feed the young, both nestlings had succumbed to the heat by 18 June. The adults abandoned the site shortly after the nestlings died. Weekly site visits throughout the spring and summer of 2015 indicated the pair did not return the following year.

Ground-nesting is not uncommon among Peregrine Falcons, particularly in locations where ground predators are absent (Ellis et al. 2009). However, Virginia’s Peregrine Falcon ground nest is the first documented along the Atlantic Seaboard. Pagel et al. (2010) found a peregrine ground nest in 2006 at the San Diego National Wildlife Refuge (SDNWR) near San Diego, CA U.S.A. They postulated peregrines nested on the ground at the SDNWR in response to the seasonal absence of mesopredators, a profound abundance of prey a short distance from the nest site, and a clear, unobstructed 360° view of the surrounding landscape. We speculate the same may