

**ROSEATE SPOONBILLS (*Platalea ajaja*) NESTING
ON SEAHORSE KEY, CEDAR KEYS NATIONAL
WILDLIFE REFUGE, LEVY COUNTY, FLORIDA**

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The Roseate Spoonbill (*Platalea ajaja*) is widely distributed in coastal and freshwater wetlands throughout the Gulf of Mexico and in South America (Hancock et al. 1993). In Florida, breeding occurs from Florida Bay north to Brevard and Hillsborough and Pinellas Counties (Allen 1942, Dunstan 1976, Dumas 2000, FNAI 2001, Hodgson and Paul 2006, Hodgson et al. 2010). Here, we report on nesting by Roseate Spoonbills in Cedar Key National Wildlife Refuge in Florida's Big Bend in spring 2013. To our knowledge, these nests represent a northern expansion of the Roseate Spoonbill's historic breeding range (described by Allen 1942).

STUDY AREA

Seahorse Key (29° 6' 9.14" N, 83° 4' 12.84" W; 66.78 ha) has been known as a mixed-species wading bird and seabird breeding colony of varying size for more than 50 years. Seahorse Key is located 4 km southwest of the town of Cedar Key, Florida in Levy County, and is 9 km from the mainland. The 65 ha island is composed of mangrove mixed with salt marsh, sandy beach, and extensive upland forests. The mangrove is primarily black mangrove (*Avicennia germinans*) with a smaller scattered red mangrove (*Rhizophora mangle*) zone along the tide line. These mangroves increase and decrease in north Florida with winter freeze events; the last major freeze was in the mid 1980's and therefore the majority of trees on the island in 2013 represent regrowth from this period. The upland forest is dominated by sand live oak (*Quercus geminata*), red cedar (*Juniperus virginiana*), sabal palm (*Sabal palmetto*), and red bay (*Persea borbonia*). The island was used by Native Americans for centuries before European Americans arrived in the region. The island has been in federal ownership since the 1830's, was added to the Cedar Keys National Wildlife Refuge in 1936, and was designated as a federal Wilderness Area in 1972. In order to protect the nesting birds on Seahorse Key, the National Wildlife Refuge closes the island and a 300 ft buffer around it to public access from 1 March to 30 June.

Annual surveys to estimate wading bird breeding activity have been conducted by the U.S. Fish and Wildlife Service on Seahorse Key since 1989, although intermittent surveys were conducted since the early 1970s (USDI 1993) using aerial survey counts and flight-line counts. Additionally, annual boat-based surveys have been conducted around the entire perimeter of Seahorse Key by University of Florida researchers since 2002 (H. Lillywhite, University of Florida, personal communication, August 2013). While Roseate Spoonbills have been observed feeding in the Cedar Keys area for many years, breeding activity has not been reported previously. On 7 May 2013, we observed three pairs of Roseate Spoonbills in breeding plumage at Gardiner's Point on Seahorse Key

during a boat survey. These birds were observed flying into and landing in a mangrove fringe. Upon entering this mangrove forest, we located two nests, placed approximately 7 m high in black mangroves. Based on the timing and behavior of the adults, we suspected eggs were in the nests but could not confirm their presence because of the height of the nests. On 16 May, JRS observed at least two chicks in one of the nests; however, the contents of the second nest were not observable due to its height and position. As we did not observe chicks on 7 May, and saw no pinfeathers on the chicks (the chicks were all downy and lacked feather sheaths), we thought that the chicks were no more than 9 days of age. Since the typical incubation period for Roseate Spoonbills is 22 days, this date suggests that egg-laying occurred in the middle of April (approximately 17 April). Based on our subsequent observations of repeated visits by adult pairs to three separate locations in this mangrove stand, we believe at least three nests held chicks. One individual among the three pairs was in sub-adult plumage. This sub-adult stay clung to the nest area in the same manner as the full adults did when we visited the site. There were no other adults around that may have been nesting or paired with the adult that was observed in this area. The plumage of this sub-adult was light colored with a lightly feathered head compared to the local adults. In addition, it was missing the green head coloration of the adults and deep crimson on the epaulettes. Sub-adult breeding has been observed elsewhere (Baltz 1997), and we suspect that this individual was breeding with an adult-plumaged mate.

It seems likely that previous nesting by this conspicuous bird would have been noticed during these various surveys; therefore, we believe that spoonbills have only recently bred at Seahorse Key and that our observation represents a northern expansion of the breeding range of spoonbills on the Gulf coast in Florida. The next closest reported breeding is in Tampa Bay on the Gulf Coast (140 km south, 150 km straight line distance) (Hodgson et al. 2006, 2010) and Merritt Island on the Atlantic coast (60 km south, 235 km straight line distance) (Smith and Breininger 1988).

There is evidence that Roseate Spoonbills are again nesting in 2014 and may even be increasing on Seahorse Key. In mid-May, field observations documented spoonbills carrying nesting material and taking it to the same spots in the mangroves where we saw nests last year (Frederick, unpublished data). Six nesting pairs are believed to be active this year, though no nest- or nesting confirmations have been made yet this year. Numbers appear to have increased, evidenced by aerial surveys in May that found an average of 25.75 spoonbills on our morning flightline counts, a 101% increase over the mean from the same period in 2013 (Doig, unpublished data).

ACKNOWLEDGMENTS

We thank Joel Wixson for field work and photographing the chicks, Harvey Lilywhite and Coleman Sheehy for wading bird survey information, the Cedar Keys National Wildlife Refuge and Seahorse Key Marine Laboratory for field access and logistical support, and Ann Hodgson for valuable improvements in the manuscript.

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