

**LATE-SEASON NESTING BY FLORIDA SANDHILL
CRANES (*Grus canadensis pratensis*)**

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Florida Sandhill Cranes (*Grus canadensis pratensis*) typically nest from January to June with a peak in egg-laying from late February through March (Wood and Nesbitt 2001). Nesting activity after May is rare (personal observation). In this note I summarize observations of a late-season nest and pre-fledged young. Age of young was estimated using plumage characteristics and body size relative to that of the adults. Egg-laying and hatching dates were estimated by back-dating; forward-dating was used to predict fledging dates. I compare the dates of these late-season observations with those found in the literature and discuss possible reasons for these anomalous nesting efforts.

I observed six late-season broods and one nest of Florida Sandhill Cranes in four Florida counties (Table 1). Nesting for these six broods was estimated to have been initiated in June, with hatching in July, and fledging in September. Five of the broods were observed in 2009. That year, most crane-nesting marshes were dry and unavailable for nesting until May. Then record-setting rainfall resulted in one of the wettest Mays in history. After marsh water levels stabilized enough to allow nesting in June, some cranes did attempt nesting even though normally it would have been too late in the season. Apparently, some pairs were still physiologically disposed to nesting. This may have been facilitated by the combination of rain and sudden presence of water in marshes; marsh water levels are an important influence on crane nesting chronology (Bennett and Bennett 1990, Bishop 1988, Layne 1983, Walkinshaw 1982).

An active nest was discovered on 27 August 2013 and the pair of cranes incubated the eggs through 10 September. On 11 September the cranes were not tending the nest, and therefore it was assumed to have failed because newly hatched chicks typically spend about 24 h at the nest with one or both parents before leaving the nest to forage nearby. This nest was likely initiated in August and is the most extreme late-season nest I am aware of for Florida Sandhill Cranes. Bent (1926), however, gave dates of 89 eggs of Florida Sandhill Cranes as "January 28 to August," but the details of the August reference were not present.

Information from the literature (Table 2) is consistent with my observations that nesting by Florida Sandhill Cranes is generally rare in May and later. Florida Sandhill Cranes may renest, even multiple times in a season, if their nests fail (Nesbitt 1988), and this may explain some late-season nesting. Bennett and Bennett (1990) noted that nests of Florida Sandhill Cranes in the Okefenokee Swamp initiated after 10 May were usually renesting efforts by pairs that were unsuccessful on their first and second attempts. The late-season cases in 2009 (Table 1) may have been associated with rainfall and wetland water levels, but that does not explain the most extreme nest I discovered, in August 2013.

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Table 1. Late-season breeding activity of Florida Sandhill Cranes observed in Florida.

| Sighting date | Brood size | County | Location | Estimated age (days) of chicks at sighting | Estimated beginning of incubation ^a | Estimated hatching date ^b | Estimated fledging date ^c |
|---------------|------------|---------|------------------------------------|--|--|--------------------------------------|--------------------------------------|
| 8 Sep 1972 | 1 | Alachua | 29° 36' 36.69" N, 82° 19' 35.95" W | 55 | 15 Jun 1972 | 15 Jul 1972 | 18 Sep 1972 |
| 5 Jul 2009 | 1 | Osceola | 28° 07' 16.71" N, 81° 26' 26.64" W | 1 | 2 Jun 2009 ^d | 5 Jul 2009 ^d | 14 Sep 2009 ^a |
| 10 Jul 2009 | 2 | Osceola | 28° 08' 21.15" N, 81° 26' 46.30" W | 7 | 3 Jun 2009 | 3 Jul 2009 | 6 Sep 2009 |
| 24 Jul 2009 | 1 | Polk | 27° 52' 06.29" N, 81° 36' 24.82" W | 21 | 3 Jun 2009 | 3 Jul 2009 | 6 Sep 2009 |
| 10 Aug 2009 | 1 | Osceola | 27° 59' 09.95" N, 81° 10' 51.52" W | 28 | 13 Jun 2009 | 13 Jul 2009 | 16 Sep 2009 |
| 14 Aug 2009 | 2 | Osceola | 28° 03' 35.18" N, 81° 16' 59.57" W | 35 | 10 Jun 2009 | 10 Jul 2009 | 13 Sep 2009 ^e |
| 27 Aug 2013 | Nest | Sumter | 28° 49' 34.15" N, 82° 10' 43.12" W | — | — | — | — |

^aCalculated as estimated hatching date - 30 d (average incubation period, Wood and Nesbitt 2001).

^bCalculated as sighting date - estimated age (days).

^cEarliest date these chicks would have been able to fly based on an estimated hatching date + 65 d (time to first flight, Wood and Nesbitt 2001).

^dThese dates were verified by observations of M. L. Folk.

^eA family with two recently fledged chicks was observed in the same location 7 October 2009 and this confirmed fledging of that brood.

Table 2. Extreme dates published for late-season nests of Florida Sandhill Cranes.

| Source | Years covered during study | Location | Dates |
|-----------------------------|----------------------------|---------------------------|--|
| Bennett and Bennett 1990 | 1985–88 | Okefenokee Swamp | For 123 nests, four were initiated in May and one in June (all others were initiated before May) |
| Bent 1926 | Unknown | Unknown | Described egg dates for 89 eggs as “January 28 to August” |
| Bishop 1988 | 1984–86 | Central and south Florida | Latest nests were observed in mid-May |
| Dwyer and Tanner 1992 | 1988–89 | Green Swamp | Latest nest initiation was 22 April |
| Layne 1983 | 1973–79 | South central Florida | Latest of eight nests observed was 26 May |
| Nesbitt 1988 | 1983–87 | Paynes Prairie | Latest laying date 22 May |
| Stevenson and Anderson 1994 | Unknown | Unknown | Latest “egg collection date” from “more than 100 sets” was 2 June 1899 |
| Thompson 1970 | 1964–68 | Loxahatchee NWR | Latest nest with eggs 27 April |
| Toland 1999 | 1987–94 | Central and south Florida | Latest nest initiation 29 May |
| Walkinshaw 1982 | 1938–81 | Kissimmee Prairie | Latest egg laying observed in April |

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