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POPULATION CHANGES IN A LONG-TERM NORTHERN ORIOLE WINTER ROOST IN CENTRAL FLORIDA

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The Northern Oriole (*Icterus galbula*) is known to roost communally in groups of a dozen or more on its wintering grounds (Bent 1958). However, such roosts are not well documented in Florida. Previous observations of flocks of orioles in Florida include few details. Stevenson (1972) reported flocks of up to 30 to 40 Northern Orioles at three locations in North Florida, but there was no mention of roosting. An earlier account (S. Grimes in Anonymous 1963) that mentions large flocks in the Jacksonville area apparently consists only of feeder records. This paper describes a roost that occurred at Lake Eva Park in Haines City in Polk County between 1982 and 1989.

On 10 December 1982, I saw four adult Northern Orioles shortly after dusk in a queen palm (*Arecastrum romazoffianum*), a usually frost-resistant neotropical species commonly used in Florida landscapings (McCurrach 1960). It was one of a group of four palms about 4 m high that were growing along the street at the edge of the park. I did not determine that these trees may be a regular roosting spot until later that winter on 16 February 1983. When I visited the site on that date, shortly before dusk, I saw Northern Orioles entering some nearby oaks (*Quercus virginiana* and *Q. laurifolia*) singly and in small groups before settling into the palms. At this time I observed a total of ten birds of various sexes and maturity. Other observers and I visited the roost irregularly between that date and the discovery of the roost's disappearance in 1990.

The earliest date of a year the birds were recorded was 5 September and the latest date was 28 April, which also yielded some of the lowest total number of birds using the roost, three and two, respectively (Table 1). The highest count at the roost of which I am aware was 21 birds on 5 April 1988 (C. L. Geanangel in Langridge 1988). Additionally, the visits revealed that the number of birds present appeared to fluctuate during the winter, suggesting the birds using the roost moved around somewhat while they were on their wintering grounds and may have been present in fewer numbers or absent from the roost during part of the winter.

Table 1. Northern Oriole sightings at the Haines City roost. Some dates (**) only record the presence of the flock, but totals are not provided. Some observations only include totals, because the breakdown of individual characteristics was not determined.

Date	Male	Female	Juv.	Total	Observer
1982					
10 Dec	4	0	0	4	T. Palmer
1983					
16 Feb	–	–	–	10	T. Palmer
28 Mar	–	–	–	**	T. Palmer
1 Apr	–	–	–	**	T. Palmer
12 Apr	10	2	0	12	T. Palmer
18 Apr	–	–	–	**	T. Palmer
23 Apr	–	–	–	**	T. Palmer
28 Apr	2	0	0	2	T. Palmer
30 Apr	0	0	0	0	T. Palmer
16 Sep	–	–	–	11	T. Palmer
9 Oct	9	2	3	14	T. Palmer
1 Dec	4	2	0	6	T. Palmer
1984					
5 Sept	–	–	–	3	T. Palmer
10 Sep	6	2	0	8	T. Palmer
1985					
20 Mar	5	0	0	5	C. Geanangel
1986					
16 Oct	–	–	–	7	T. Palmer
1987					
Roost not visited					
1988					
5 Apr	–	–	–	21	C. Geanangel
1989					
21 Feb	0	0	0	0	C. Geanangel
11 Dec	–	–	–	2	D. Ford
1990					
30 Nov	0	0	0	0	T. Palmer
8 Dec	0	0	0	0	T. Palmer
19 Dec	0	0	0	0	T. Palmer
1991					
7 Jan	0	0	0	0	T. Palmer
10 Mar	0	0	0	0	T. Palmer

On 30 November 1990, I returned to the site and found the birds were absent. Several additional visits (8 December 1990 through 10 March 1991) yielded the same result. Although the oak trees to which the birds flocked in late afternoon are still present, the palms where they actually roosted were gone. The palms were killed by the freeze that occurred on 23 December 1989 and were removed by city employees (W. G. Drummond, pers. comm.). I could not locate any detailed temperature records from Haines City for the 1989 freeze, but according to records at the University of Florida-IFAS Citrus Research & Education Center at Lake Alfred, approximately 6 km west of the Haines City roost, the temperature dropped to –8° C. Between 23 December and 25 December 1989, temperatures remained below 0° C for a total of 43 hours, making it more damaging to vegetation than either the 25 December 1983 freeze or the freeze of 21 and 22 January 1985 (L. Parsons pers. comm.). As to why the earlier freezes did not affect the roost and this one did, Chuck Vilushis (pers. comm.) suggested that many of the queen palms in Polk County were weakened from the previous freezes, and the 1989 freeze killed the trunks' remaining living tissue.

How the weather affected the birds themselves is unknown because I am not aware of any observations of the roost during that period. Nevertheless, it is likely that they survived, based on records elsewhere in the Southeast during the same period, which indicate the Northern Oriole is able to survive sub-freezing weather. Perhaps the best example is the Christmas bird count in Central Beaufort County, N.C., on 17 December 1989. According to Albera and Albera (1990), the temperature during the count period ranged from –9 to 0° C, which is comparable to the temperatures in Haines City. However, the Central Beaufort count produced 14 Northern Orioles, one of the highest counts in the U.S. for that year. According to Rowan (1925), passerines are able to withstand extremely cold weather as long as they can obtain food. Although the Northern Oriole is sometimes thought of as a species that depends on fruit and nectar, a source that could be seriously reduced by a severe freeze, Timken (1970) reported that insects and insect larvae, not plant material, comprise the major part of the diet of wintering Northern Orioles. Insects are generally able to survive long periods of cold weather.

These observations not only confirm earlier reports that the Northern Oriole roosts communally on its wintering grounds, but also document long-term roost fidelity. The fact that the only significant change in the park since the Northern Oriole roost was last observed is the absence of the palms where they roosted suggests that the flock's absence is directly related to the loss of the palms as a result of the 1989 freeze.

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