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NESTING DISTRIBUTION AND MIGRATION OF GLOSSY IBIS IN FLORIDA

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This paper presents the recent nesting distribution of Glossy Ibis (*Plegadis falcinellus*) in Florida, describes temporal and quantitative aspects of migration by Glossies in the peninsula, and makes some attempt to place these data in the context of their distribution and movements along the Atlantic coast.

Glossy Ibis occur in peninsular Florida during all months and have bred in colonies scattered throughout much of the peninsula (Howell 1932, Sprunt 1954). The number of Glossy Ibis nesting in Florida apparently has slowly increased during this century, although the bird continues to be absent or one of the less common species in most Florida colonies (Sprunt 1954, Ogden 1978a). Robertson and Kushlan (1974) estimated the total Florida breeding population at about 3500 birds. Although the year-around occurrence of Glossy Ibis in Florida suggests that the birds that breed here may be resident, no studies of marked Glossies from Florida colonies have been undertaken and their seasonal movements remain unknown.

In much of the remainder of the Glossy Ibis' Atlantic coast nesting range (Georgia to Maine), this species has experienced considerable range expansion and increase in number during the past 20 years (Beckett 1965, Messersmith 1968, Murray 1957, Post 1962, Sciple 1963, Sprunt 1957, etc.). About 16,000 Glossy Ibis bred in the main portion of the breeding range between the central South Carolina coast and Long Island, New York during the mid 1970s (Ogden 1978a). Recoveries of Glossy Ibis banded as nestlings along the mid-Atlantic coast (primarily Virginia) reveal both a post-breeding dispersal that carries some birds north and a regular migration of birds south into the Greater Antilles (Byrd 1978).

Most winter recoveries are from Cuba, Jamaica, Haiti, the Dominican Republic and Colombia. Byrd reports that banded and color-marked Glossies from mid-Atlantic colonies have appeared in Florida and that southern Florida may be an important migration route for birds headed towards the Caribbean. Byrd also reports that some non-breeding, sub-adult Glossy Ibis may stay on the wintering grounds through the first full year.

NESTING IN FLORIDA

Figure 1 shows locations where Glossy Ibis were detected in nesting colonies between 1976 and 1978 during cooperative aerial surveys of peninsular Florida by Stephen A. Nesbitt, Herbert W. Kale, II, and myself. Also in Fig. 1 are locations of other Florida colonies where Glossy Ibis nested during the 1970s (Kushlan and Schortemeyer 1974, Ogden 1972, 1976, pers. obs.).

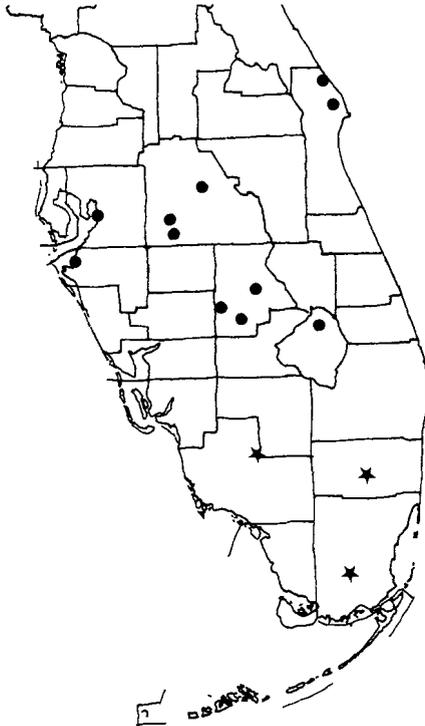


Fig. 1. Location of wading bird colonies that contained Glossy Ibis between 1976 and 1978 (circles) and other 1970s colonies where Glossies were reported (stars).

Relatively few nesting colonies have ever been located in northern Florida, Georgia or South Carolina south of Charleston (for the few exceptions see Hebard 1950, Howell 1932, Shanholtzer 1970, Sprunt 1954). From 1975 to 1978 no Glossies were located in either coastal or inland colonies between Brevard County, Florida, and Charleston County, South Carolina, except for a maximum of approximately 12 to 15 pairs in three Georgia colonies (Osborn and Custer 1978, R. Odom pers. comm., Nesbitt-Kale-Ogden survey). The breeding distribution on the Atlantic coastal plain seems to include a hiatus between the migratory Glossy Ibis to the north and birds with unknown seasonal movements that nest in central and southern Florida.

Glossy Ibis along the mid-Atlantic coast have relatively synchronized nesting, with the peak in laying occurring during May (Byrd pers. comm., Palmer 1962). Glossies in Florida have a more prolonged nesting season, perhaps indicative of a non-migratory population. Howell (1932) reports that Glossies nesting in Florida may begin as early as the last week in March, but eggs are usually laid early in May. Glossies in the Andytown colony (Broward Co.) in 1973 had fledged young by 25 May (Kushlan and Schortemeyer 1974), and in the same colony in 1977 were laying eggs during mid-April (Ogden, pers. obs.). Glossy Ibis in the Taylor Slough colony (Dade Co.) in 1976 laid eggs during early June (Ogden and O. Bass, pers. obs.). At the Moore Creek colony (Brevard Co.) on 8 June 1977, a cursory examination showed several Glossy nests contained feathered young, but one nest held eggs and another had downy young (Ogden and M. Biggar, pers. obs.). Most nests contained eggs and a few had downy young on 8 August 1974 in a colony of about 20 pairs of Glossies in Conservation Area 3A (T. Regan, pers. comm.). Thus the timing of nesting in Florida broadly overlaps Glossy Ibis nesting along the mid-Atlantic coast, and whatever pre- and post-breeding movements that occur in the two regions may occur concurrently.

MIGRATION IN FLORIDA

Documentation of the quantitative and temporal characteristics of a Glossy migration through Florida by means of field observations is difficult due to the presence, in most regions, of local breeding birds with unknown seasonal movements and the possible presence of non-breeding sub-adults from more northern colonies. Perhaps the best measure of a Glossy migration in Florida has been the occasional sightings of overflights of Glossies in Florida Bay and on the upper Florida Keys, Monroe County, in a region where no Glossy Ibis nesting has been reported and where favorable feeding habitats for this species appear to be almost nonexistent (Table 1). Most of these data are previously un-

published observations collected during the course of other field work and are more accurate as a measure of the timing of the migration rather than the quantitative aspects. As the table shows, migration by Glossies in the Upper Keys characteristically is composed of small flocks headed in a southerly direction between late June and early September.

TABLE 1. Sightings of apparently transient Glossy Ibis in Florida Bay and the Upper Florida Keys.

Date	Location	Number of Glossy Ibis	Direction	Observer ¹	Remarks
23 June 1977	Plantation Key	20	SSW	JO	0730
25 June 1979	Key Largo	12	S	OB & RR	----
2 July 1977	Plantation Key	9	S	JO	1000
23 July 1979	Plantation Key	12	S	KS	1930
27 July 1973	NE Florida Bay	10	S	JO	1030; over 500 feet
27 July 1973	NE Florida Bay	8	S	JO	1100; over 500 feet
3 Aug. 1978	N Key Largo	20	S	MB	V-formation; 200 feet
8 Aug. 1974	NE Florida Bay	16	SW	JO	1800; over 500 feet
mid-Aug. 1970	Florida Straits, Key Largo	4	S	SS	Ogden 1970
22 Aug. 1975	Key Largo	26	S	JO	Over 500 feet
23 Aug. 1979	Key Largo	22	S	SS	Over Molasses Reef
27 Aug. 1976	Key Largo	12	S	MB	----
1 Sept. 1976	Cay Sal Bank	8	S	CP	----
2 Sept. 1976	Plantation Key	30	SW	RP	Edscorn 1977
8 Sept. 1977	NE Florida Bay	6	SE	WR	midday; 150 feet
9 Sept. 1973	Florida Bay	10	S	JO	Edscorn 1974

¹O. Bass, Jr., M. Biggar, J. Ogden, R. Paul, C. Patrovic, W. Robertson, Jr., R. Russell, Jr., S. Sprunt, Karen Sunderland

TABLE 2. Early recoveries of Glossy Ibis banded as nestlings on the mid-Atlantic coast (data from M. Byrd, pers. comm.).

Date Banded	Where Banded	Date Recovered	Where Recovered
22 May 1965	South Carolina	20 July 1965	Florida
15 May 1965	South Carolina	18 September 1965	Colombia
22 May 1965	South Carolina	12 September 1965	Dominican Republic
30 May 1970	Virginia	26 September 1970	Cuba
30 May 1970	Virginia	6 September 1970	Dominican Republic

High counts of Glossy Ibis on the Florida mainland have also occurred during late summer. A count of 150 Glossies was made by John Edscorn at Zellwood (Orange Co.) during late July 1971 (Ogden 1971). At the Duda Ranch, Palm Beach County, Paul Sykes has produced annual high counts of 455 Glossies on 7 August 1977, 530 on 23 July 1978 and 1218 on 15 July 1979 (Sykes and Hunter 1977, Ogden 1978b, P. Sykes pers. comm.).

The peak of the southbound Glossy Ibis migration appears to occur during July and August, a fact that agrees with Byrd's (1978) statement that juvenile Glossies may rapidly migrate south from Virginia colonies. Band recovery data (Byrd, pers. comm.) includes examples of this rapid flight (Table 2).

No northbound flights by Glossies in the spring have been reported from the Florida Keys, and large concentrations on the mainland in spring comparable to those seen during late summer have not been reported. A possible exception was a roost that included 1300 Glossy Ibis in western Dade County on 3 April 1973 (Kale 1973). Some or most of these birds, however, could have been the same Glossies reported to be nesting at the Andytown colony later that spring (Kushlan and Schortemeyer 1974). Other possible spring migrants were single Glossies in the lower Florida Keys, 10 March and 18 March 1978 (Kale 1978).

It appears certain that a fairly strong flight of Glossy Ibis moves south into Florida, primarily during July and August. The magnitude of the flight as seen in the Florida Keys is not proportional to the expected flight based on the size of the migratory Atlantic coast population of Glossy Ibis, indicating that some of these birds may winter in Florida or that many of the birds depart the coast in route to the Caribbean before reaching south Florida. Other species of waders, including Cattle Egrets and Reddish Egrets, have been seen in apparent migration off the Atlantic coast of Florida during late summer (Ogden 1974, 1975, 1978b).

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