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COLONIAL BIRDS IN SOUTH FLORIDA NATIONAL PARKS, 1977-1978

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METHODS

The colonial bird monitoring was conducted from a fixed-wing aircraft and/or helicopter every month of the year in south Florida national parks and nearby areas. The flight schedule alternates between 3 days of fixed-wing flights one month and 2 days of flights the next month, the first day by fixed-wing and the second day by helicopter. This schedule begins with 2-day flights in October. Observers are the pilot and wildlife biologist. The flights vary from month-to-month according to nesting activity.

The primary objective of the 3-day flights was to cover the entire monitoring area to locate new colony sites. All known colonies were also checked. The primary objective of the 2-day flights was to check all known or suspected colony sites.

The total number of nests of each species were estimated each month. Additional data were obtained by ground censuses. Both aerial and ground counts were used to determine nesting success. Colonial nesting species censused were Great Egret, Snowy Egret, Little Blue Heron, Louisiana Heron, White Ibis, American Wood Stork, Cattle Egret, Brown Pelican, Double-crested Cormorant and Laughing Gull.

STATUS OF COLONIAL BIRDS

As in the 1976-77 breeding season, heavy rainfall during the months of January through April and corresponding high water levels delayed the formation of the typical spring colonies. These two factors compressed the annual drying period and consequently the nesting season of many of the colonial birds. Wood Storks, Great Egrets, Snowy Egrets, and Louisiana Herons appeared to be the most affected by this unseasonable weather.

Colonial birds nested at 48 locations in Everglades National Park during 1977-78. This is approximately the same number as last year (47 sites). The most unusual find was 11 new colony sites in the Shark Slough. These were composed primarily of Little Blue Herons and Louisiana Herons. Overall a decline continued in the number of species nesting at the six major park colonies (Table 1). This may be attributed to the adverse weather conditions and resulting high water during the past season.

At Biscayne National Monument the only colony site was at West Arsenicker Key. During the year 500 Cattle Egrets, 20 Great Egrets, and 100 Double-crested Cormorants nested. Both Cattle Egrets and Double-crested Cormorants increased in numbers over the previous year.

In the Big Cypress National Preserve three new colonies were located, each containing only Great Egrets. The three colonies northwest of the Jetport and Roberts Lake Strand were also active.

In National Park Service areas in south Florida a total of 12,474 colonial birds nested during 1977-1978 breeding season, of which 7,286 were herons and egrets, 860 White Ibis, 847 Laughing Gulls, 2,543 Double-crested Cormorants and 940 Brown Pelicans.

A total of 1,586 Great Egret nests were found at 18 National Park Service locations in 1977-78. Again, there was a decrease in the number of nests in the six

major colonies and an overall reduction in total nest numbers for 1977-78 (Table 1). Although Great Egrets twice attempted to nest at East River Colony, both attempts failed to produce young. Three new colonies in the Big Cypress were small with the largest containing only 20 nests.

Snowy Egrets had a decrease in nests in the six major colonies for the fourth consecutive year (Table 1) with a total of 875 nests. The largest colony was Rodgers River Bay which contained 550 nests. Nesting at the major colonies peaked in June and continued into late August. Overall 937 Snowy Egret nests were found during 1977-78.

During 1977-78 breeding season only 378 Louisiana Heron nests were located in the survey area. This is less than half the number of nests found last year (Table 1) and represents a substantial decrease in numbers since 1974-75 when 3,100 nests were located. The largest colonies this year were at Rodgers River Bay and Lane River, which contained 125 nests each--both fewer than the previous year. Louisiana Herons also nested in small numbers at Frank Key and Sandy Key colonies. No nests were found at the Tern Key and Chokoloskee colonies. Late in the breeding season eleven colonies were located in the Shark Slough. These colonies were found late in the season when young had begun to fledge so no nest count could be obtained. It is possible that those birds that did not nest in the major colonies may have nested in small inland colonies, and the nesting numbers could have been much higher. Overall, Louisiana Herons were found nesting in 18 National Park Service colonies.

Only 95 Little Blue Heron nests were found in the National Park Service areas. The largest colony was Taylor Slough with 50 nests. Last year's large colonies in the Big Cypress which contained 325 Little Blue Heron nests declined to 20 nests, and the colony was composed of primarily Cattle Egrets. Eleven previously unknown colonies were located in Shark Slough. These new colonies may result from relocation of Little Blue Herons from other colonies. Overall, Little Blue Herons were found nesting at 17 colonies in the survey areas.

Wood Storks continued their decline in the 1977-78 breeding season. No nests were seen on any of the aerial surveys and only a few reported nests were found by ground censuses. Of these nests, all failed to produce young.

The number of White Ibis nesting in Everglades National Park continued to decline with only 375 nests being found at the two major colonies, Rodgers River and Frank Key (Table 1). Taylor Slough had the largest nesting concentration with 300 nests. Additional nesting occurred at the three sites northwest of the Jetport in Big Cypress National Preserve. Overall only 860 nests were found at 7 National Park Service sites.

The number of Cattle Egrets nesting in south Florida national parks increased for the fourth consecutive year (Table 2). The Taylor Slough and Hole-in-Donut colonies had fewer nests this year, 3,000 and 150 respectively. A new colony of 150 nests formed near Anhinga Trail. Although there was a slight reduction in the number of nesting Cattle Egrets in Everglades National Park, a dramatic increase occurred in the Big Cypress National Preserve. Those colonies northwest of the Jetport that were predominantly Little Blue Heron and White Ibis last year were mostly Cattle Egrets in 1977-78. There was also an increase in the number of

nesting Cattle Egrets at Arsenicker Key in Biscayne National Monument. Overall, a total of 4,340 Cattle Egrets nests were recorded at 7 National Park Service sites.

Brown Pelican nests were found at 6 sites in Everglades National Park representing a total of 940 nests. The largest colonies were at Buchanan Keys (340 nests), Chokoloskee (225 nests), and Frank Key (200 nests). Nesting also occurred at Upper Arsenicker Key (25 nests) and Nest Key, south (150) in Florida Bay. All colonies successfully produced young except for the Chokoloskee colony which was disrupted by a storm in early July.

As in the previous year, Double-crested Cormorants were found nesting somewhere in National Park Service colonies in every month of the year (1977-78). About 2,543 Cormorant nests were found in a total of 20 sites. The largest colonies were at Frank Key (525 nests), Sandy Key (500 nests) and Buchanan Keys (375 nests). Again, there were two (1976-77) peaks of nesting, one occurring in spring and a second in summer.

In 1977-78, Laughing Gulls nested at 12 sites in Florida Bay with a total of 845 nests. This is an increase in both total nest sites and nest number from 1976-77 breeding season. Nesting began in mid-May and continued through August with a peak in June. The largest colonies were Pelican Key - north (125 nests), Buchanan Key - east (110 nests), Pelican Key - east (100 nests). The Nest Key - south which had the largest colonies in 1975-76 (25 nests) and 1976-77 (230 nests) had only 90 nests this year.

In addition to the Laughing Gull colonies, two colonies of Least Terns were found this year, one on Bottle Key and the other on Barnes Key. Each contained approximately 45 nests.

Literature Cited

Bass, O. L. 1979. Status of colonial birds in south Florida national parks, July-September 1978. Nat. Res. Rept.

Bass, O. L. and L. C. McEwan. 1978a. Status of colonial birds in south Florida national parks, January-March 1978. Nat. Res. Rept. 5.

Bass, O. L. and L. C. McEwan. 1978b. Status of colonial birds in south Florida national parks, April-June 1978. Nat. Res. Rept. 6.

McEvan, L. C. and J. A. Kushlan. 1977. Status of colonial birds in Everglades National Park, October-December 1977. Nat. Res. Rept. 4.

McEwan, L. C., J. A. Kushlan and O. L. Bass. 1978. Colonial bird monitoring in south Florida national parks. Technical Report, T-513.

TABLE 1

Number of nests at six major colonies in Everglades National Park and other colony sites during the 1974-75, 1975-76, 1976-77 and 1977-78 seasons.

Colony Name	Year	Great Egret	Snowy Egret	Louisiana Heron	Wood Stork	White Ibis
Major Colonies						
Chokoloskee	1974-75	252	0	416	0	0
	1975-76	150	75	50	0	0
	1976-77	90	0	2	0	0
	1977-78	95	0	0	0	0
Rodgers River Bay	1974-75	443	1,330	588	0	923
	1975-76	300	400	559	0	969
	1976-77	155	720	431	0	620
	1977-78	250	550	125	0	125
Lane River	1974-75	200	577	842	1,100	0
	1975-76	300	350	225	1,200	0
	1976-77	150	109	150	500	0
	1977-78	140	150	125	0	0
Frank Key	1974-75	350	42	101	0	841
	1975-76	400	300	420	0	1,400
	1976-77	400	100	150	0	650
	1977-78	175	175	50	0	250
East River	1974-75	90	0	0	110	0
	1975-76	200	0	0	75	0
	1976-77	150	0	0	45	0
	1977-78	85	0	0	0	0
Madeira	1974-75	100	150	0	125	0
	1975-76	75	0	0	35	0
	1976-77	60	15	0	75	0
	1977-78	125	0	0	0	0
Subtotal	1974-75	1,435	2,099	1,947	1,335	1,764
	1975-76	1,425	1,125	1,254	1,310	2,369
	1976-77	1,005	944	733	620	1,270
	1977-78	870	875	300	0	375
Other Colonies - South Florida national parks	1974-75	275	243	1,148	0	150
	1975-76	185	22	780	0	504
	1976-77	871	50	100	100	72
	1977-78	716	62	78	0	485
Total (rounded)	1974-75	1,710	2,340	3,100	1,330	1,910
	1975-76	1,610	1,150	2,030	1,310	2,870
	1976-77	1,880	1,000	830	720	1,340
	1977-78	1,586	937	378	0	860

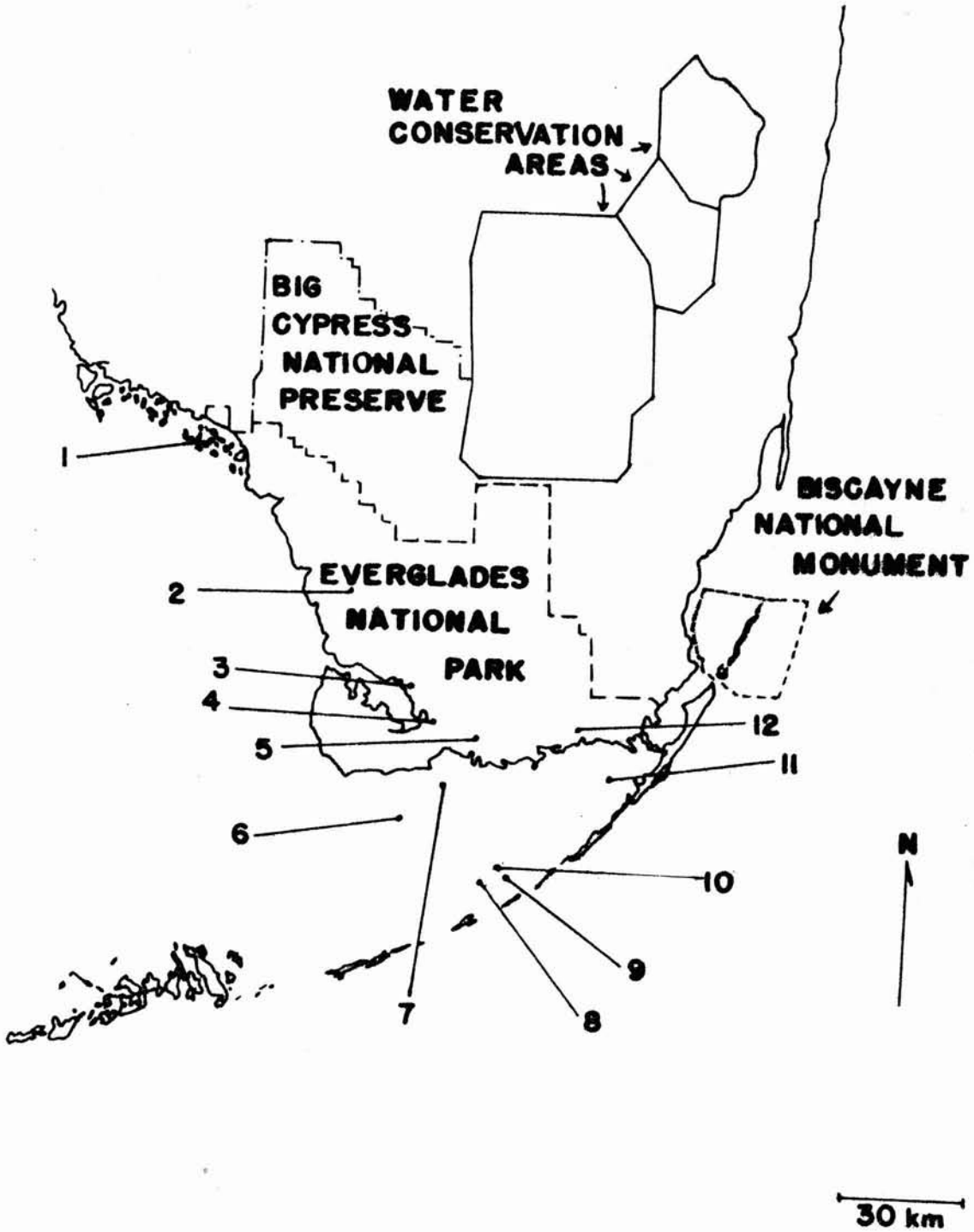
Table 2

Number of Cattle Egret nests in south Florida national parks and nearby areas during the 1974-75, 1975-76, 1976-77 and 1977-78 nesting season.

	Colony Name							
Year	Anhinga Trail	Hole-in-Donut	Taylor Slough	Frank Key	Big Cypress Preserve	Biscayne Natl. Mon.	Chekika	Total (rounded)
1974-75	0	630	1000	12	-	879	0	2520
1975-76	0	600	2000	0	-	-	0	2600
1976-77	0	350	3600	0	60	200	5	4200
1977-78	150	150	3000	0	540	500	-	4340

Major bird colonies in south Florida National Parks. Locations shown on map.

1. Chokoloskee
2. Rodgers River
3. Lane River
4. East River
5. Cuthbert
6. Sandy Key
7. Frank Key
8. Arsnickers Keys
9. Buchanan Keys
10. Green Mangrove Key
11. Nest Keys
12. Madeira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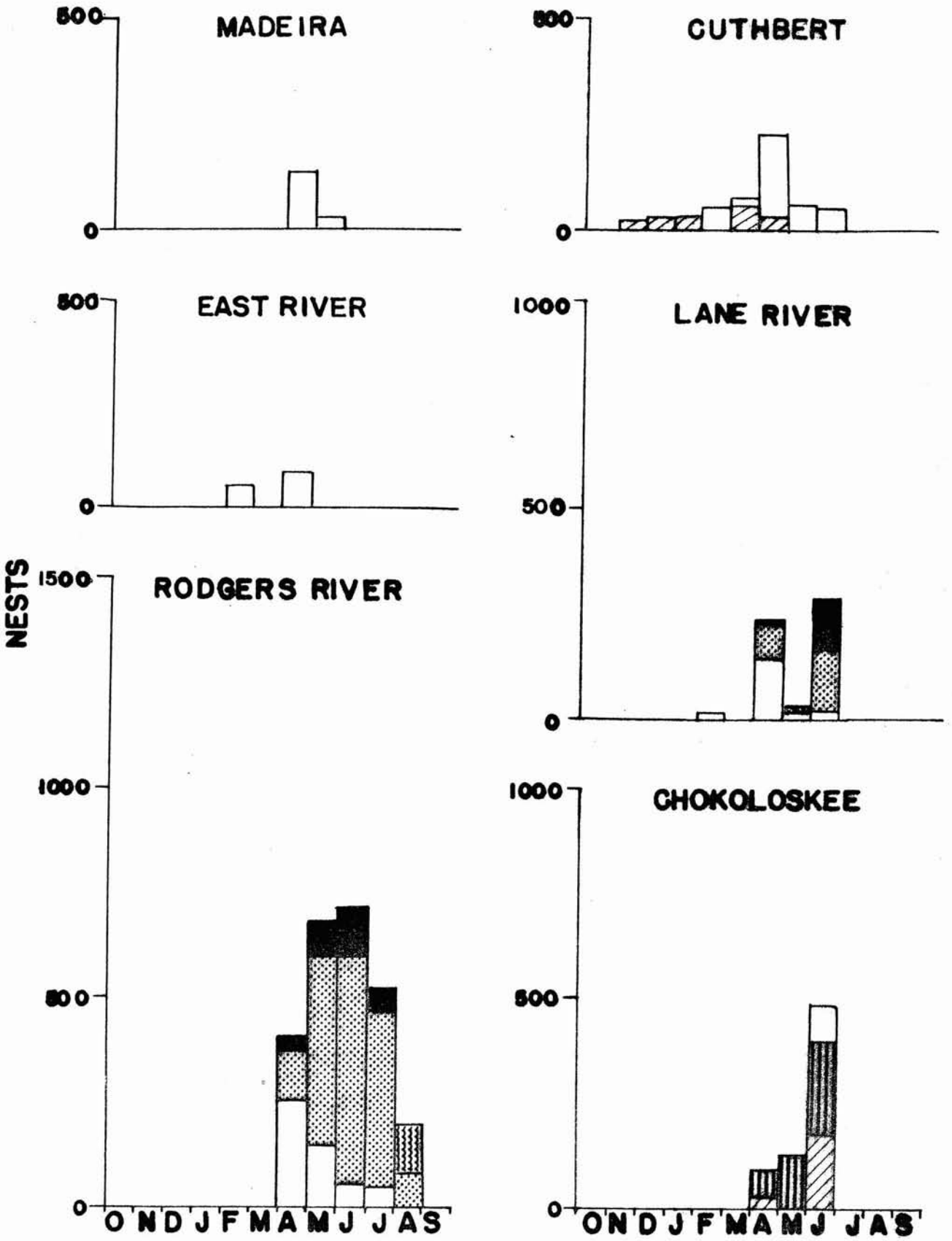
NUMBER OF NESTS AT SELECTED COLONY SITES

- GREAT EGRET
- SNOWY EGRET
- LOUISIANA HERON
- LITTLE BLUE HERON
- CATTLE EGRET
- WHITE IBIS
- WOOD STORK
- BROWN PELICAN
- CORMORANT
- LAUGHING GULL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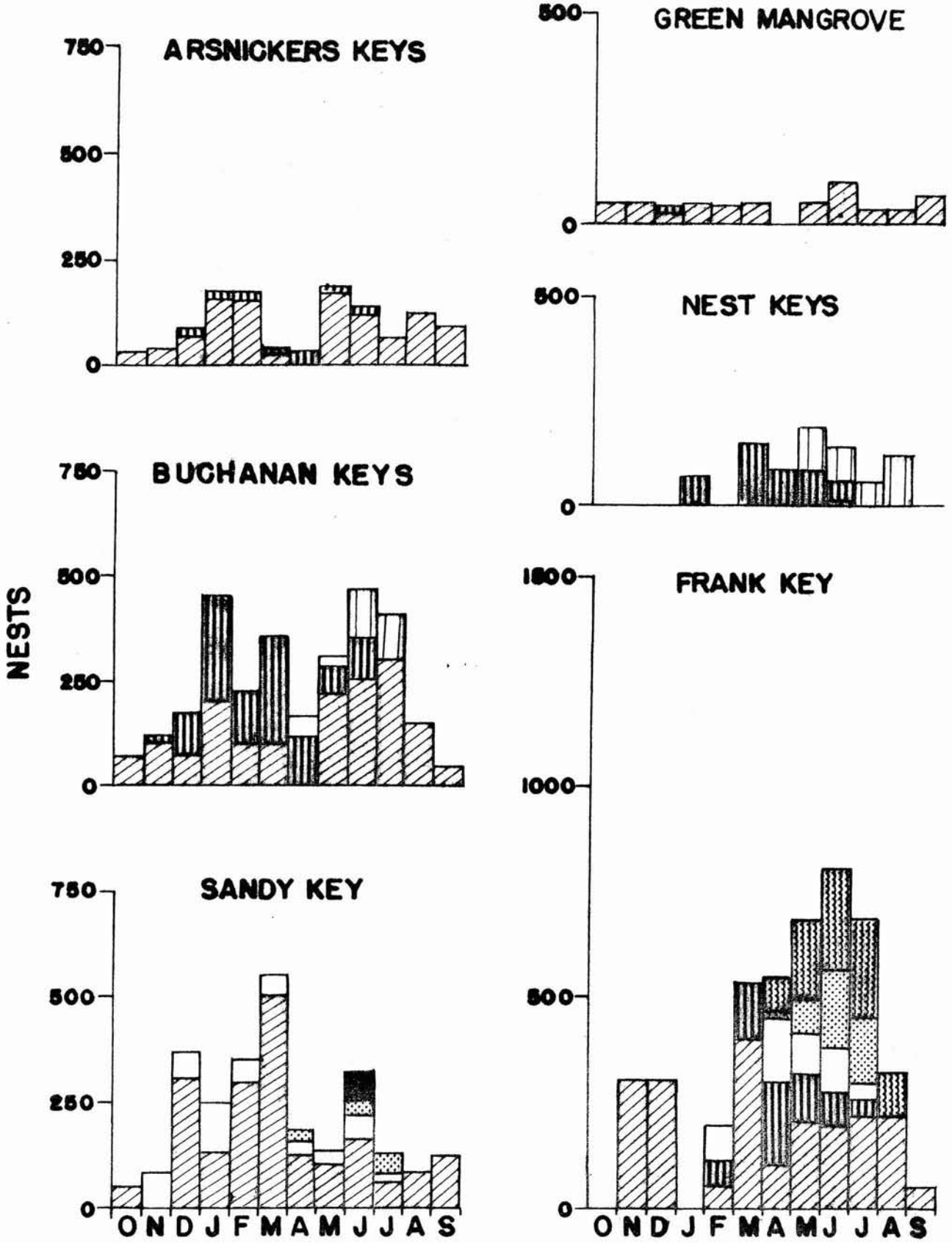
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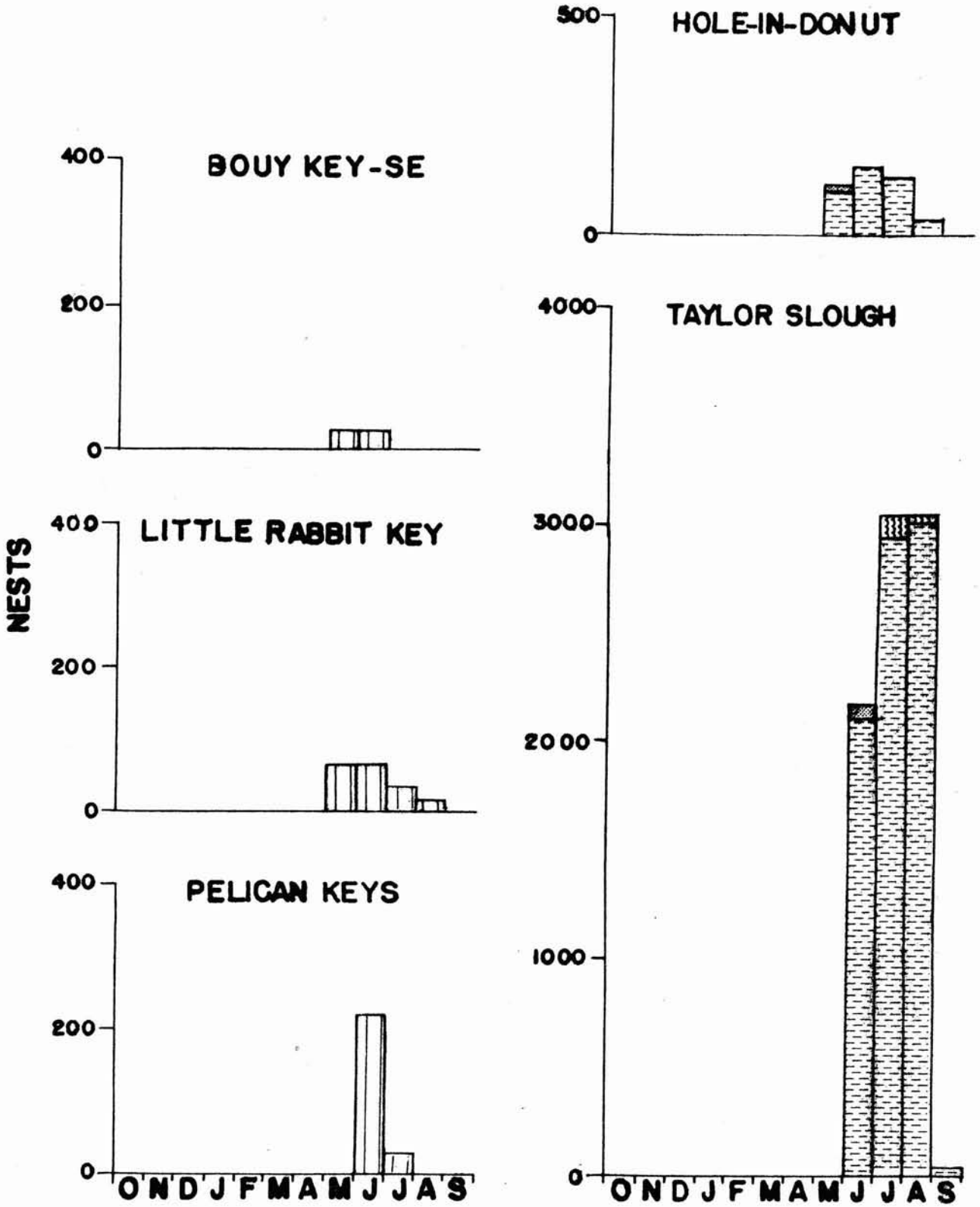
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