

Cape Lookout National Seashore Colonial Waterbird 2013 Summary



Royal and sandwich tern chicks corralled for banding on Morgan Island.

NPS Photo.

National Park Service
Cape Lookout National Seashore
131 Charles Street
Harkers Island, NC 28531

Introduction

The inlet spits, sandflats, inshore islands, and point of Cape Lookout National Seashore provide nesting habitat for several species of Colonial Waterbirds (CWB). The least tern (*Sternula antillarum*), common tern (*Sterna hirundo*), gull-billed tern (*Gelochelidon nilotica*), black skimmer (*Rynchops niger*), sandwich terns (*Thalasseus elegans*) and royal tern (*Thalasseus maxima*) nest here in single species and mixed species colonies.

Methods

Nesting habitat is posted in the spring by April 1st. Reoccurring nesting sites include Power Squadron Spit, Cape Point, Ophelia Inlet, New Drum Inlet Flats, Old Drum Inlet Flats, Kathryn-Jane Flats, Portsmouth Flats, and Ocracoke Inlet tip. Potential nesting habitat is monitored and posted as the birds colonize a site. Posted closures typically include the upper beach, interior, and/or soundside to provide a 150 foot buffer. If chicks were present on the lower ocean beach vehicles are restricted and/or detoured to avoid flightless chicks.

The annual least tern window census occurs from June 5th-20th. Breeding pairs were counted by either a perimeter count of incubating pairs or a total number adult count. Total adult counts were then divided by two to ascertain the number of breeding pairs. No correction factor was employed in the results. The assumption being that all birds present within the breeding colony site are there as breeders. Counts were conducted by staff biologist and biological technicians. A GPS point was recorded at the center of the colony. Monitoring throughout the summer included weekly counts of adults, incubating nest/pairs, ground nest counts, number of chicks and fledglings, and buffer distance checks. Closures were posted, expanded, reduced, and removed as needed. Fledge success was observationally rated as high, medium, low, none or unknown.

Results

There were 19 CWB nesting sites monitored in the seashore (Figure 1). Nine colonies were on North Core Banks (NCB) and nine colonies were on South Core Banks (SCB). There were no nesting terns or skimmers on Shackleford Banks (SB). One colony was located on Morgan Island. Twelve single species colonies were occupied by least terns, while seven colonies were of mixed species. The largest colonies were at Old Drum Inlet spit, Power Squadron Spit and Cape Point during the June 5th-20th peak counts. There were 64 least terns (LETE) pairs counted at Old Drum Inlet (Appendix 1). There were 32 LETE and one gull-billed tern (GBTE) pairs counted at Power Squadron Spit. At Cape Point there were 89 LETE, 21 black skimmer (BLSK) and 26 common tern (COTE) pairs counted. The least tern window census counted 322 total breeding pairs throughout the seashore on Core Banks (Appendix 2). Morgan Island was colonized by 846 royal tern (ROYT) pairs and 7 sandwich tern (SATE) pairs.

Discussion

The Old Drum Inlet spit on NCB appeared to be the most productive LETE site this year with a success rating of medium. There were 64 LETE pairs and 8 chicks counted on June 14th. Fledglings were recorded throughout the summer and 20 were observed in the colony on August 26th.

The Cape Point colony started on May 5th when nest scrapes were first observed. By May 17th multiple species were confirmed nesting including 61 LETE, 18 COTE, 51 BLSK, and 1 GBTE pairs. Tropical Storm Andrea in early June and flooding on June 28th and July 25th prevented any nesting success for the colony in 2013. Although nests and chicks triggered ocean beach closure areas the colony was ultimately unsuccessful due to flooding. The nesting closure and any ocean beach closures were removed early in 2013, by August 5th. Royal terns did not nest at the point as they had in the previous three years.

The royal terns did use nearby Morgan Island as a nesting site in 2013. The last time royal terns nested on this dredge spoil island was in 1977. Although it is now heavily vegetated more than 1140 ROYT nests and 10 SATE nests were discovered on a small sandy beach. A permitted research project banded 836 ROYT and SATE chicks on 7/18.

The least tern window census in 2013 recorded 322 breeding pairs, a decrease from last year (Chart 1.). The 2012, 2011, 2010, 2009, 2008, 2007 and 2006 counts recorded 577, 608, 789, 288, 502, 285 and 310 breeding pairs, respectively. Least terns were widely scattered in multiple small nesting groups as in past years, but the number of colonies did decrease from 22 in 2012 down to 19 in 2013.

Chart 1. Least Tern window census, June 5th-20th, counts from 2006 to 2013.

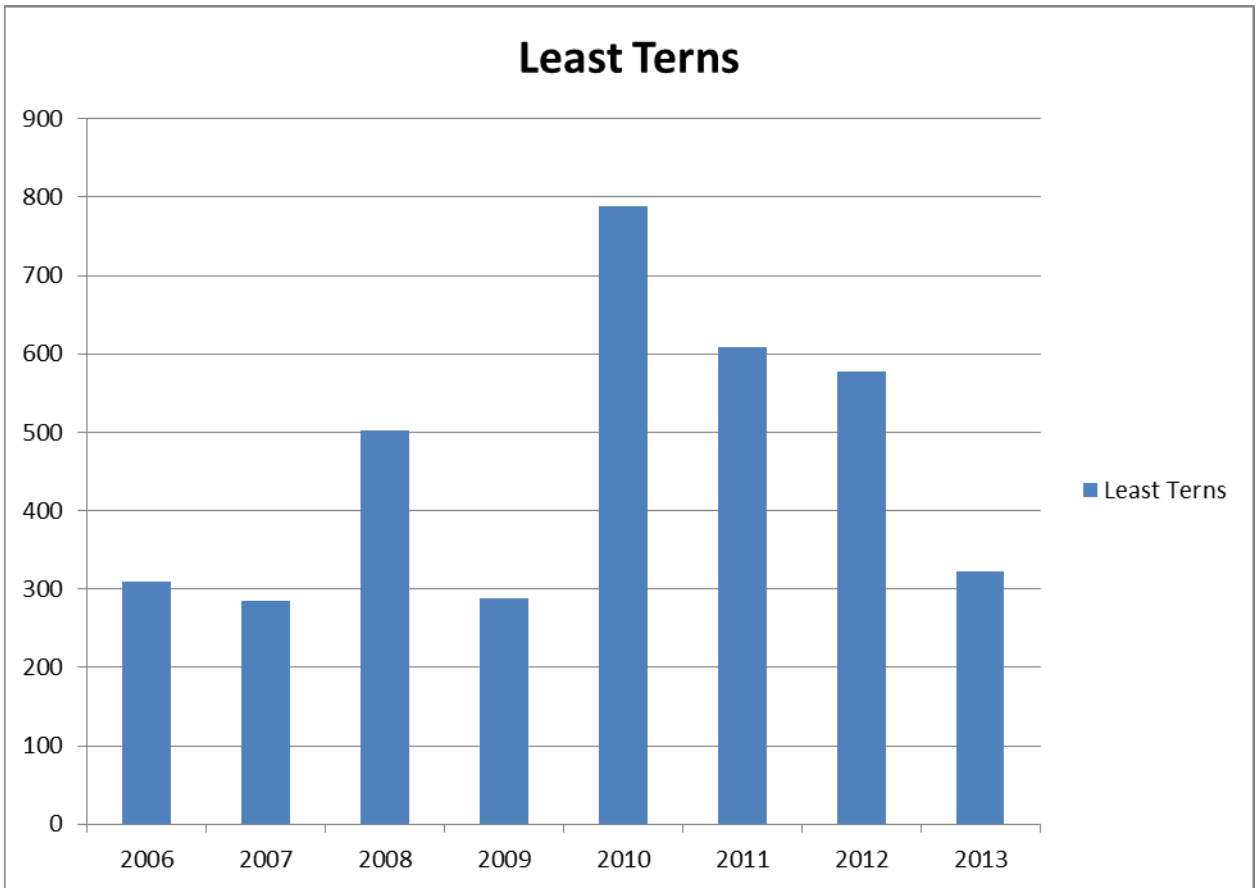
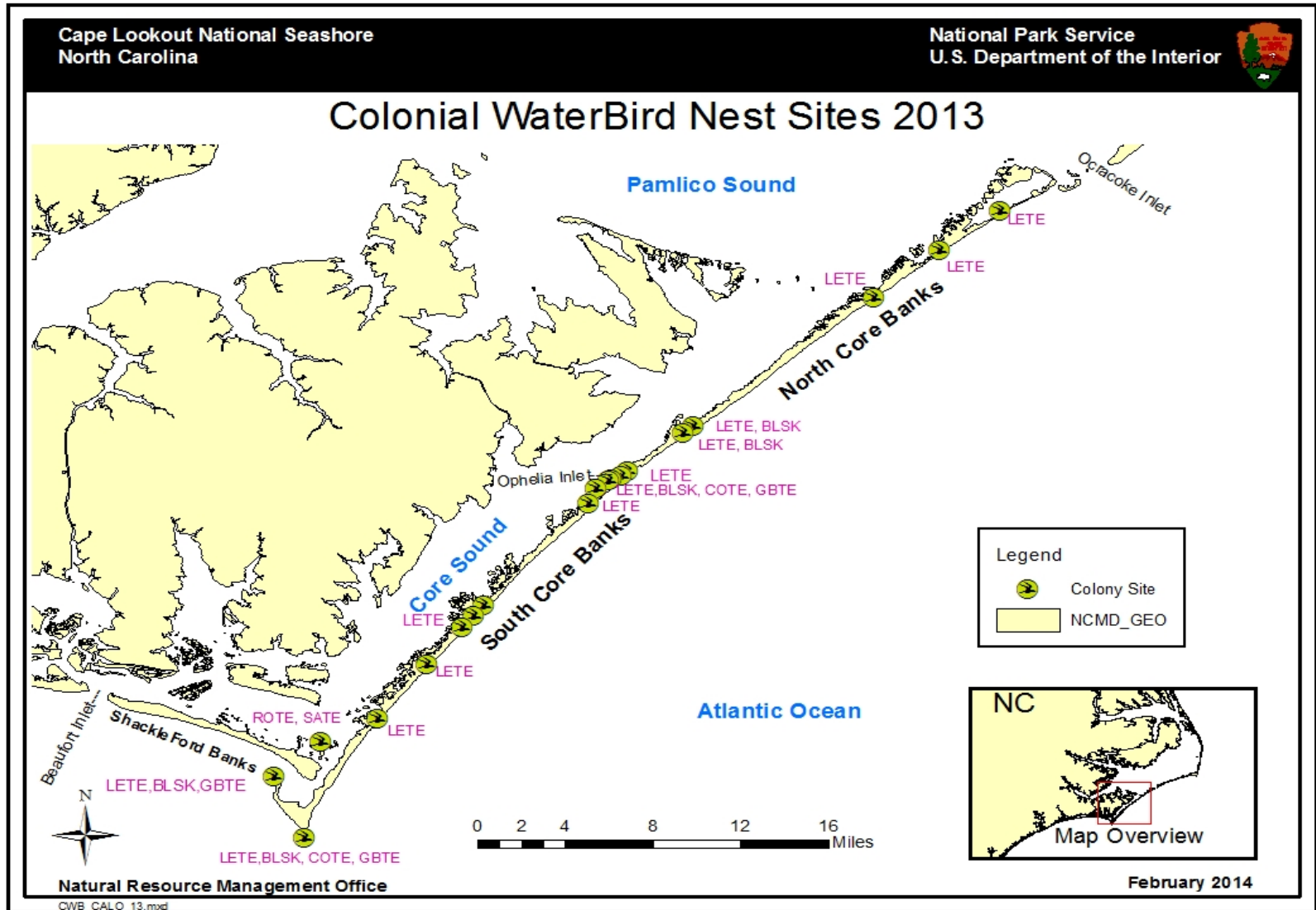


Figure 1



Appendix 1. 2013 Colonial Waterbird Data

ID	Island	Mile	Site Description	Latitude	Longitude	Dates Active	Count date
1	NCB	2.76	Portsmouth Flats	35.0398	-76.07398	27-May to 10-Aug	16-Jun
2	NCB	5.82	High Hills and Katherine Jane	35.01089	-76.11435	16-May to 10-Aug	10-Jun
3	NCB	9.2	shelly area in front of dunes	34.97721	-76.15746	10-Jun to 18-Aug	10-Jun
4	NCB	18.52	Old Drum Inlet spit	34.88426	-76.27689	23-May to 2-Sept	14-Jun
5	NCB	19	Old Drum Flats- south	34.87936	-76.28376	9-May to 12-Aug	12-Jun
6	NCB	21.84	New Drum Flat-north	34.85165	-76.31997	19-May to 2-Aug	16-Jun
7	NCB	22.24	New Drum Inlet-south	34.84882	-76.32478	18-May to 4-Aug	15-Jun
8	NCB	22.57	Ophelia Island	34.84616	-76.33092	18-May to 4-Aug	15-Jun
9	NCB	22.73	Ophelia Inlet spit	34.8455	-76.33285	9-May to 4-Aug	15-Jun
10	SCB	23	North Tip open flat	34.83941	-76.34113	27-Jun to 7-Aug	na
11	SCB	24	Plover Inlet	34.82851	-76.34583	6-Jun to 2-Sept	11-Jun
12	SCB	30	Ramp 30	34.75542	-76.41518	1-Jun to 19-Aug	10-Jun
13	SCB	31	Mile 31 shell flat	34.74779	-76.42207	29-May to 24-Aug	10-Jun
14	SCB	31	Ramp 31	34.7394	-76.42973	14-Jun to 4-Aug	14-Jun
15	SCB	34	Ramp 34	34.71231	-76.4533	11-May to 2-Aug	5-Jun
16	SCB	38	Ramp 38	34.67381	-76.4858	13-Jul to 19-Aug	na
17	SCB	43.9	Cape Point	34.58799	-76.53387	5-May to 4-Aug	19-Jun
18	SCB	47	Power Squadron Spit	34.63153	-76.55386	16-May to 23-Aug	10-Jun
19	MI		Morgan Island	34.65698	-76.52271		10-Jun

ID	Peak Counts	Count Type	Count 1	Count 2	Success
1	20 LETE	pair	26 LETE pairs, 4 chicks, 2 nests on 7/8	25 LETE pair and 1 chick on 7/30	low
2	2 LETE	pair	7 LETE pairs, 1 fledgling on 7/2	4 LETE pairs and 1 fledgling on 7/21	low
3	7 LETE	pair	35 LETE total, 3 fledglings on 7/2	1 LETE pair with 2 chicks/fledges on 8/18	low
4	64 LETE , 8 chicks	pair	106 LETE total (44 nests), 3 BLSK on 6/10	32 LETE total, 20 fledglings on 8/26	medium
5	13 LETE	pair	28 LETE, 4 BLSK, 1 COTE on 7/14	49 LETE total, 1 fledgling, 1 nest on 7/22	low
6	11 LETE, 2 chicks	pair	35 LETE total, 8 fledge, 4 chicks on 7/3	2 LETE with territorial behavior on 8/2	low
7	4 LETE	pair	15 LETE total, 2 fledge on 7/3		low
8	7 LETE, 2 chicks	pair	12 LETE total, 1 fledge on 6/23	16 LETE total, 2 chicks, 1 fledge on 7/3	low
9	18 LETE, 1 COTE, 8 BLSK	pair	120 LETE pairs, 1 chick on 6/1	54 LETE total, 2 chicks, 10 fledge on 7/3	low
10			153 LETE pairs, 48 BLSK pairs, 2 COTE, 1 GBTE on 7/5	9 LETE chicks, 6 COTE chicks, 30 BLSK adults on 7/27	low
11	11 LETE	pair	7 LETE pairs, 3 chicks on 7/6	6 to 7 LETE pairs, 7 chicks near fledge on 7/20	low
12	20 LETE	pair	2 LETE chicks on oceanside beach on 7/27	2 LETE chicks near signs, closure expanded on 8/4	low
13	8 LETE	pair	2 LETE chicks on 7/5	1 LETE pair with a one egg nest on 8/4	low
14	10 LETE	pair	32 LETE adults, 6 chicks on 7/6		low
15	6 LETE	pair	1 LETE chick on 6/25		none
16			4 LETE adults, 1 nest on 7/13	1 LETE chick and 1 egg in nest on 8/8, 0 birds on 8/19	none
17	89 LETE, 26 COTE, 21 BLSK	incubating adult	61 LETE, 18 COTE, 1 GBTE, 58 BLSK pairs on 5/17	1 COTE chick outside closure on 6/27	none
18	32 LETE, 1 GBTE	incubating adult	146 LETE adults, 3 chicks, 12 BLSK, 3 GBTE on 6/23	3 LETE fledge on 7/6	low
19	700 ROYT	nests	>1140 ROYT nests and 10 SATE on 5/28	836 ROYT chicks, 7 SATE chicks on 7/18	High

ID	Comments
1	
2	birds shifted from mile 5.82 down to mile 6.6
3	no birds on 8/26 and 9/2, closure removed
4	closure removed on 9/9
5	closure removed on 8/12
6	closure removed on 8/9
7	closure removed on 8/9
8	closure removed on 8/9
9	closure removed on 8/9, raccoon predation on 6/15 check
10	sand flat emerged out of washover/tidal flat in mid-summer
11	closure removed by 9/2
12	chick in ramp 30 caused ramp closure on 6/1.
13	closure removed on 8/24
14	closure removed on 8/8
15	closure removed on 8/2
16	closure removed on 8/24
17	TS Andrea flooded site on 6/10, point flooded on 6/28 and 7/25, closure removed on 8/5
18	PSS heavily flooded on 7/26, closure removed on 8/23
19	Banded 836 ROYT chicks and 7 SATE chicks on 7/18

NCB= North Core Banks
SCB= South Core Banks

LETE= least tern
GBTE= gull-billed tern

COTE= common tern
BLSK= black skimmer

ROYT= royal tern
SATE= sandwich tern

Appendix 2.

2013 Least Tern Window Census
June 5-20

North Core Banks: 146 breeding pairs

South Core Banks: 176 breeding pairs

Shackleford Banks: No breeding pairs

CALO Total= 322 breeding pairs