

Cape Lookout National Seashore Colonial Waterbird 2008 Summary

Introduction

The inlet spits, sandflats, and point of Cape Lookout National Seashore provide nesting habitat for several species of Colonial Waterbirds (CWB). The least tern (*Sterna antillarum*), common tern (*Sterna hirundo*), gull-billed tern (*Sterna nilotica*), and black skimmer (*Rynchops niger*) 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, Plover Inlet, Ophelia Island, New Drum Inlet Spit, Old Drum Inlet, 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. In 2008 counts were conducted by staff biologist and biological technicians. A GPS point is recorded at the center of the colony. Monitoring throughout the summer included counts of incubating pairs, 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 on the Core Banks (Figure 1). No CWB sites were recorded for Shackleford Banks. 16 single species colonies were occupied by least terns, 3 colonies were mixed species. The largest and most productive mixed species colony was at Old Drum Inlet Spit. There were 296 least tern, 30 black skimmer, 1 common tern, and 3 gull-billed tern breeding pairs counted (Appendix 1). Fledgling success appeared high here with 264 least tern chicks and 33 black skimmer chicks counted on 7/8. Black skimmer chicks and fledglings were recorded into mid-September. A mixed species colony at the traditional New Drum Inlet site initially appeared promising, but repeated predation by raccoons decimated the colony and little fledgling success occurred (a few least terns fledged). The least terns did establish a separate successful colony further out on the sand spit closer to New Drum Inlet where success was high. Two other least tern colonies where success was rated as medium include smaller colonies at

Ocracoke Inlet on North Core and Plover Inlet on South Core. At Cape Point and Power Squadron spit there was little fledgling success. The other sites had low, unknown or no success (Appendix 1). The least tern window census counted 502 breeding pairs throughout the seashore on Core Banks (Appendix 2).

Discussion

The site at Old Drum Inlet Spit on North Core was the most productive CWB colony in the seashore. The colony was active from April 18 to mid-September. It contained the highest density of nesting least terns and black skimmers. In fact this was the only site that produced black skimmer chicks and fledglings. This site contained the only site with successful hatching of at least two common tern chicks and one gull-billed chick. The nesting habitat is a large shell/sand flat with open mudflat on the soundside shore. Chicks largely remained to the soundside of the spit, except after a storm where some black skimmer chicks went to the oceanside. Soundside driving is prohibited in this area and additional soundside shoreline was posted since the spit has elongated. Chicks did use this additional posted shoreline. The spit was closed to driving on the oceanside beach on July 1st due to piping plover chicks at this site. This provided additional protection from human disturbance such as illegal fireworks, illegal soundside driving, and illegal entry into nesting habitat that has occurred on busy weekends in past years. Chicks were observed near the posted signs on the oceanside and this may have warranted an ORV closure if not for the preexisting piping plover closure. As a result there was little recreational disturbance and there were only minor signs of raccoon predation. These factors contributed to a good success this year at this site and the nearby small least tern colony.

On Middle Core Banks the New Drum Inlet sites produced mixed results. The traditional site that hosted large numbers of mixed species in the past several years fared poorly in 2008. In late May and early June least terns, common terns, and black skimmers had arrived and began to nest. Yet raccoon predation by 6/11 results in abandonment of the site by black skimmers and common terns. The least terns stayed on to re-nest in small numbers or moved further out on the spit. Gull-Billed terns were present in early June but didn't appear to nest here this year. The nearby least tern colony (0.3 mile southwest) out near the tip of the spit did well with high success. This high shelly plateau site was posted and survived minor flooding events throughout the summer. Least terns also nested successfully scattered about the large sand spit. Although some of these nests were not within the posted areas, they fared well due to the low visitation by boaters, pedestrians, and the prohibition of ORV use from April 1 to August 31st on Middle Core Banks. Three other small unposted least tern colonies were recorded from Old Drum Inlet at mile 19.14, mile 19.41, and 19.54. The site at mile 19.14 did experience some human disturbance from campers and dogs off leash. The success of these colonies is unknown due to lack of monitoring capabilities on Middle Core Banks.

Colonies at sites such as Cape Point, Portsmouth Flats, and Power Squadron Spit that have done well in the past had little to no success this year. Predation, flooding, and human disturbance were noted as problems.

The least tern window census in 2008 recorded 502 breeding pairs, an increase from the 2007 and 2006 counts of 285 and 310 breeding pairs, respectively.

Prepared by:

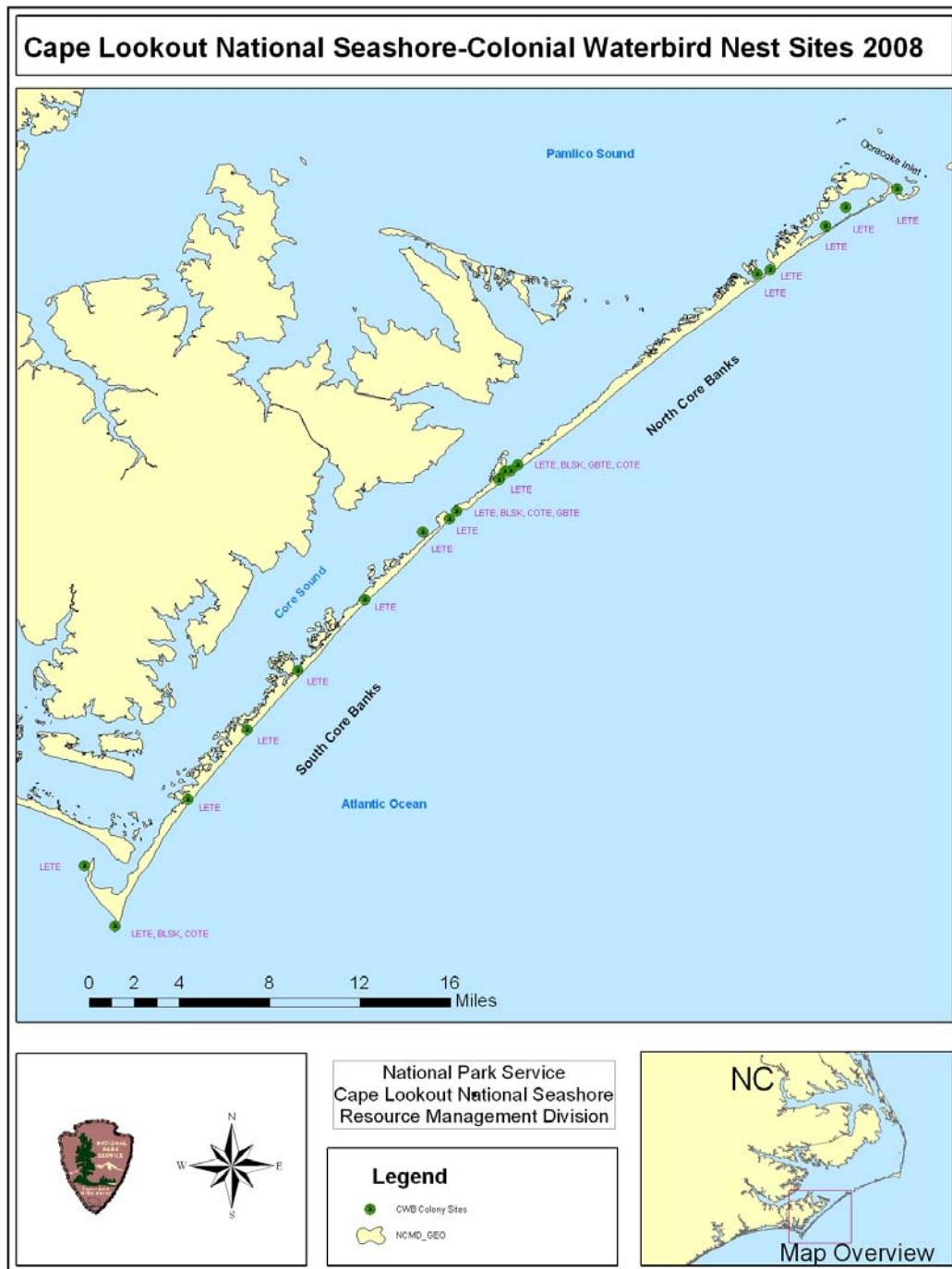
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National Park Service

Figure 1.



Appendix 1. 2008 Colonial Waterbird Data

ID	Island	Mile	Site Description	Latitude	Longitude	Dates Active	Count date
1	NCB	0.13	Ocracoke Inlet, north tip	35.06061	-76.03506	23 May to 7 Aug	17-Jun
2	NCB	2.19	Portsmouth Flats	35.04906	-76.06831	11 June to 8 July	11-Jun
3	NCB	3.2	Portsmouth Flats	35.037	-76.08114	19 May to 23 July	11-Jun
4	NCB	5.98	High Hills	35.00897	-76.11632	27 May to 27 June	12-Jun
5	NCB	6.48	Kathryn Jane Flats	35.00602	-76.12481	20 May to 12 June	12-Jun
6	NCB	18.5	Old Drum Inlet spit	34.88419	-76.27799	18-April to 15 Sept	10-Jun
7	NCB	18.7	Old Drum Inlet spit	34.88029	-76.28264	6 May to 4 June	10-Jun
8	MCB	19.14	Old Drum Inlet, MCB	34.87991	-76.28633	2-Jun to ?	9-Jun
9	MCB	19.41	shell flat behind dune	34.8753	-76.28957	2-Jun to ?	2-Jun
10	MCB	19.54	shell flat behind dune	34.8745	-76.29013	2-Jun to ?	2-Jun
11	MCB	21.6	New Drum Inlet spit	34.85426	-76.31712	21 May to 5 July	11-Jun
12	MCB	21.9	New Drum Inlet spit	34.84963	-76.32168	21 May to 29 July	11-Jun
13	SCB	23.1	Plover Inlet flat	34.84102	-76.33873	7 May to 14 July	16-Jun
14	SCB	26.7	beach and shell flat in dunes	34.7979	-76.37569	4 May to 20 June	6-Jun
15	SCB	30.7	beach and shell flat in dunes	34.75225	-76.41869	23 May to 25 July	6-Jun
16	SCB	33.94	upper beach	34.71462	-76.45138	11 May to 15 May	na
17	SCB	37.64	upper beach	34.67009	-76.48914	10 May to 26 June	14-Jun
18	SCB	43.8	Cape Point sand flat	34.58862	-76.53594	10 May to 25 July	7-Jun
19	SCB	47.13	Power Squadron Spit	34.62759	-76.55523	20 May to 5 July	15-Jun

ID	Peak Counts	Count Type	Count 1	Count 2	Success
1	26 LETE	incubation			medium
2	12 LETE	adult			none
3	40 LETE	adult			low
4	5 LETE	adult			none
5	2 LETE	adult			none
6	592 LETE, 60 BLSK, 4 GBTE	adult	76 LETE chicks- 6/17	6 GBTE adults, 2 COTE with 2 chicks - 6/24	high
7	15 LETE	incubation			medium
8	10 LETE	incubation			unknown
9	20 LETE	adult			unknown
10	12 LETE	adult			unknown
11	20 LETE	adult	60 BLSK-6/5		low
12	128 LETE	adult	49 LETE chicks-6/25		high
13	26 LETE	adult			medium
14	12 LETE	adult			none
15	20 LETE	adult			low
16	na				none
17	2 LETE	adult			none
18	2 LETE, 2 COTE	adult	16 LETE, 4 COTE, 6 BLSK-5/19		low
19	10 LETE (with 5 chicks)	adult			low

ID	Comments
1	Colony on small tip surrounded by water on 3 sides
2	Colony behind south pond
3	raccoon predation on 5/29 diminished colony
4	raccoon activity recorded in colony
5	raccoon activity recorded in colony, on backside flat
6	very active colony with BLSK chicks through mid-September; 264 LETE chicks, 33 BLSK chicks, and 2 COTE chicks on 7/8
7	small separate colony on higher ground of spit tip
8	colony not posted, subject to human disturbance several times-pedestrians, dogs off leash, and kayak tours camping near colony
9	colony not posted, no records of human disturbance
10	colony not posted, no records of human disturbance
11	raccoon predation by 6/11 caused abandonment of BLSK, GBTE, and COTE
12	smaller separate posted colony on higher ground of sand spit tip, nest scattered outside posted area as well.
13	12 LETE fledglings counted on 7/14
14	unknown egg predation noted on 5/29 and tidal flooding on 5/15 in front of dune
15	1 chick fledged
16	Storm tide washed out area on 5/15, 5 nest were reported on 5/11
17	Colony started at 37.3 and moved to 37.64 by 6/14 with one nest left at the peak count date
18	1 chick fledged, raccoon tracks in area in spring and summer
19	2 chicks fledged

NCB= North Core Banks
 MCB= Middle Core Banks
 SCB= South Core Banks

LETE= least tern
 BLSK= black skimmer
 COTE= common tern
 GBTE= gull-billed tern

Appendix 2.

2008 Least Tern Window Census June 5-20

North Core Banks: 366 breeding pairs

Middle Core Banks: 100 breeding pairs*

Ophelia Island: No breeding pairs

South Core Banks: 36 breeding pairs

Shackleford Banks: No breeding pairs

CALO Total= 502 breeding pairs

* two colonies were surveyed on 2-June