

## Cape Lookout National Seashore Colonial Waterbird 2010 Summary



*Black Skimmers with two chicks at Cape Point.* NPS Photo.

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## *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 (*Sternula antillarum*), common tern (*Sterna hirundo*), gull-billed tern (*Gelochelidon 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 1<sup>st</sup>. 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 5<sup>th</sup>-20<sup>th</sup>. 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 2010, counts were conducted by staff biologist and biological technicians on South Core Banks. On North Core Banks counts were conducted by Virginia Tech research staff as part of a military overflight disturbance study. A GPS point was recorded at the center of the colony. Monitoring throughout the summer included 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 11 CWB nesting sites in the seashore (Figure 1). Six colonies were on North Core Banks (NCB) and five colonies were on South Core Banks (SCB). There were no nesting terns or skimmers on Shackleford Banks (SB). Seven single species colonies were occupied by least terns, while four colonies were mixed species. The largest colonies were at Old Drum Inlet Flats, Ophelia Inlet spit (SCB) and Cape Point during the June 5<sup>th</sup>-20<sup>th</sup> Peak counts. There were 461-501 least terns (LETE), 6-7 black skimmers (BLSK), and 2 common terns (COTE) incubating adults counted at Old Drum Inlet Flats, reflects high and low range from double blind count with two observers (Appendix 1). At Ophelia Inlet 267 BLSK, 80 LETE, 25 COTE, and 21 gull-billed terns (GBTE) adults were counted. At Cape Point there were 419 LETE, 140 BLSK, 4 COTE, and 2 GBTE adults counted. The least tern window census counted 789 breeding pairs throughout the seashore on Core Banks (Appendix 2).

## *Discussion*

The section of beaches from mile 18 to mile 23 on North Core Banks and South Core Banks continue to provide high quality habitat for nesting terns and skimmers. Old Drum Inlet and New Drum Inlet closed naturally in March 2009. Through the inlet migration and filling process large sand flats have been created. The sand flats at Old Drum, New Drum and Ophelia Inlet hosted large mixed species colonies in 2010. These sand flats have open mudflat on the soundside shore. The four colonies in this area were active from late April to early-August. A flooding event in late May destroyed nests at these sites and the birds had to re-nest and appeared to switch sites. Least terns, black skimmers, common terns, and gull-billed terns nested here. In addition Ophelia Inlet spit suffered disturbance from a private low flying helicopter that may have landed on the spit and disturbance related to visitor use on the fourth of July weekend. Mink also preyed on nests at this site. The reproductive success at these sites was low (Ophelia Inlet, New Drum, shell beds) to medium (Old Drum) with majority least tern fledglings and 2 COTE and 2 BLSK fledglings. The Old Drum peak count on 6/13 had 461-501 LETE, 6-7 BLSK, and 2 COTE incubating birds.

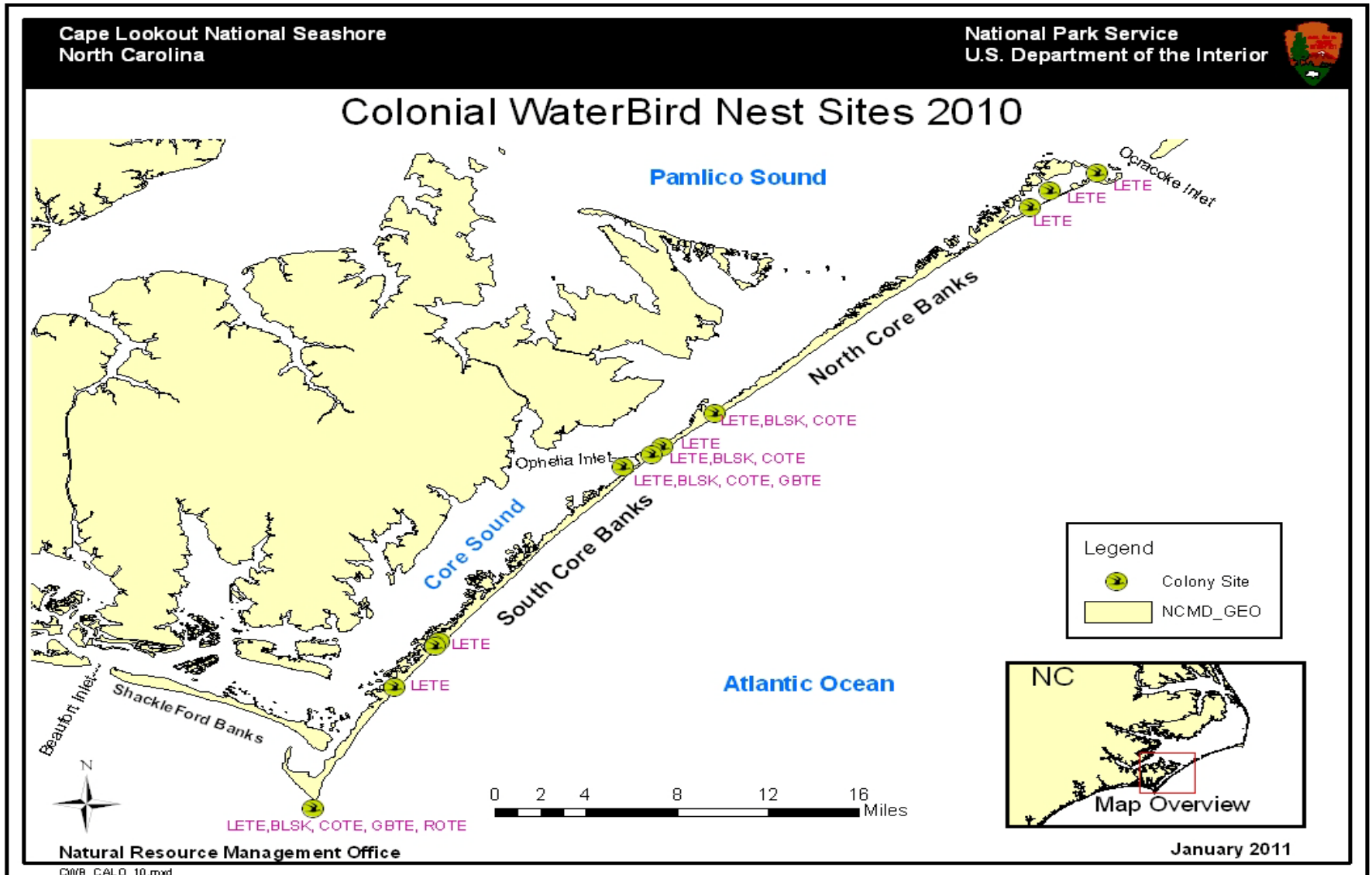
The Cape Point colony started off slow in May with 60 LETE adults, 2 COTE adults, and 40 BLSK adults counted on 5/5. After the colony was partially flooded on 5/26 the colony continued to grow and expand. The peak count on 6/14 documented 419 LETE adults, 4 COTE adults, 140 BLSK adults, 2 GBTE adults, and 4 ROTE with one nest. On 7/18 there were 43 LETE chicks, 6 COTE chicks, and 4 GBTE chicks counted. On 8/27 42 BLSK chicks and 14 fledglings and 6 COTE chicks were counted. While the chicks initially used the upper beach and the closed western shoreline, BLSK and LETE chicks did move out towards the point and east side on 7/10 and the point was closed to motor vehicles. The point was reopened to motor vehicles on 9/8 after the chicks had fledged. This colony was very active and had nests, chicks, and fledglings at the same time in late July as different species nested and re-nested. The fate of the ROTE chicks is unknown. The nesting habitat was very good this year as the point has elongated and made a high sand flat away from the dunes. There was no recorded raccoon predation.

Colonies at sites such as Ocracoke Inlet, 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.

In 2010 Virginia Tech research staff began a military overflight disturbance study in cooperation with Cherry Point Marine Corp Air Station. In addition to audio and video monitoring, research staff counted nesting birds and recorded colony activity. Count data on NCB in this report is from the Virginia Tech counts. This study will continue in 2011.

The least tern window census in 2010 recorded 789 breeding pairs, an increase from recent years. The 2009, 2008, 2007 and 2006 counts recorded 288, 502, 285 and 310 breeding pairs, respectively.

Figure 1



Appendix 1. 2010 Colonial Waterbird Data

<b>ID</b>	<b>Island</b>	<b>Mile</b>	<b>Site Description</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Dates Active</b>	<b>Count date</b>
1	NCB	0	Ocracoke Inlet, North tip	35.06217	-76.03665	13-Jul to 7-Aug	n/a
2	NCB	2	Portsmouth Flats North	35.04852	-76.06655	2-Jun to 8-Jul	13-14-Jun
3	NCB	3	Portsmouth Flats South	35.03632	-76.07909	6-May to 29-Jul	13-14-Jun
4	NCB	19	Old Drum Inlet	34.88189	-76.2795	28-Apr to 2-Aug	13-14-Jun
5	NCB	21.3	Dune Shell Beds	34.85681	-76.31271	27-Apr to 17-Jul	13-14-Jun
6	NCB	21.8	New Drum Inlet	34.85127	-76.3192	28-Apr to 27-Jul	13-14-Jun
7	SCB	23	Ophelia Inlet spit	34.84169	-76.33767	5-May to 6-Aug	16-Jun
8	SCB	34	Ramp 34, behind dune	34.71128	-76.45484	26-Jun to 16-Jul	n/a
9	SCB	34.47	Toe of dune	34.70811	-76.45717	26-Jun to 16-Jul	n/a
10	SCB	37.07	North of ramp 37a	34.677	-76.483	9-May to 21-May	n/a
11	SCB	44	Cape Point	34.586	-76.53501	3-May to 8-Sep	14-Jun

<b>ID</b>	<b>Peak Counts</b>	<b>Count Type</b>	<b>Count 1</b>	<b>Count 2</b>	<b>Success</b>
1	n/a	adult	2 LETE 8/2/2011		none
2	4 LETE	incubating bird		3 LETE on 6/30-7/01	none
3	8-17 LETE	incubating bird	3-8 LETE on 5/29-5/30	42-61 LETE on 6/30-7/01	low
4	461-501 LETE, 6-7 BLSK, 2 COTE	incubating bird	48-70 LETE, 1-3 BLSK, 0-2 COTE on 5/29-5/30	157-203 LETE, 17-24 BLSK, on 6/30-7/01	medium
5	14-20 LETE	incubating bird	3-5 LETE on 5/29-5/30	1 LETE on 6/30-7-01	low
6	22-29 LETE, 0-1 COTE	incubating bird	4-6 LETE, 0-2 BLSK, 2 COTE on 5/29-5/30	10-15 LETE on 6/30-7/01	low
7	267 BLSK, 80 LETE, 25 COTE, 21 GBTE	adult	180 BLSK, 65 LETE, 25 GBTE, 6 COTE on 6/30	47 BLSK, 16 LETE, 7 GBTE, 5 COTE on 7/8	low
8	n/a	adult	4 adult LETE and one chick on 6/26		none
9	n/a	adult	10 adult LETE on 6/26	1 LETE nest on 7/9	none
10	n/a	n/a			none
11	140 BLSK, 419 LETE, 4 COTE, 2 GBTE, 4 ROTE ( 1 nest)	adult	215 BLSK, 236 LETE (43 chicks), 18 COTE (6 chicks), 12 GBTE (4 chicks) on 7/18	286 BLSK (14 Fledglings, 42 chicks), 14 COTE (6 chicks), 2 ROTE nests, 24 GBTE on 8/27	high

ID	Comments
1	nest lost due to Tropical Storm Colin flooding
2	
3	flooding losses in May
4	expanded signs on oceanside as tern chicks moved around, flooding nest losses in May
5	
6	108 -134 LETE on 5/15-5/16, flooding losses in late May
7	report of helicopter flying low and landing on spit, human disturbance on 4th of July weekend, and Mink tracks in colony, Only LETE chicks seen.
8	
9	
10	unknown number of LETE with nest/eggs on 5/9
11	one known ROTE nest, possible more, 2-8 possible ROTE chicks, closed both sides to ORV on 7/10, chicks of all species moved to west and tip of point, reopened to ORV on 9/8

NCB= North Core Banks

SCB= South Core Banks

LETE= least tern

BLSK= black skimmer

COTE= common tern

GBTE= gull-billed tern

ROTE= royal tern

Appendix 2.

2010 Least Tern Window Census  
June 5-20

North Core Banks: 540 breeding pairs

South Core Banks: 249 breeding pairs

Shackleford Banks: No breeding pairs

CALO Total= 789 breeding pairs