

2018

## **Assessing the status and distribution of colonial waterbirds in coastal Virginia: 2018 breeding season (fall interim)**

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## **ASSESSING THE STATUS AND DISTRIBUTION OF COLONIAL WATERBIRDS IN COASTAL VIRGINIA (2018 BREEDING SEASON)**

**Interim Report: Fall 2018**

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### **Recommended Citation:**

**Watts, B. D. and M. U. Watts. 2018. Assessing the status and distribution of nesting herons within urban neighborhoods of lower Tidewater Virginia: 2018 breeding season. Center for Biology Technical Report Series, CCBTR-18-09. College of William and Mary and Virginia Commonwealth University. 4 pp.**

### **Context**

Colonial waterbirds are highly visible components of coastal avifaunas that share the unusual characteristic of nesting in dense assemblages. One consequence of having large portions of populations nesting in few locations is that even restricted disturbance may have profound consequences on a population level. Development of conservation strategies for these sensitive species requires current status and distribution information. In the fall of 1992, a consortium of agencies and individuals agreed that a comprehensive monitoring program for the Virginia colonial waterbird community was needed and that assessments should be made every five years for trend analyses. The 2018 survey will represent the sixth in the time series. All of these surveys have systematically covered all 24 species of colonial waterbirds throughout the Coastal Plain physiographic area of Virginia. The resulting data have been used by the regulatory and conservation community for a wide range of purposes.

### **Objectives**

The overall objective of this effort is to assess the status and distribution of colonial waterbird species nesting in the Coastal Plain of Virginia. Information collected is intended to (1) be integrated into biological databases to be used in the environmental review process and (2) provide information for comparison to past and future surveys for the purpose of assessing long-term population trends. The CZM-funded portion of this effort includes the survey of urban heronries throughout the cities of Newport News, Hampton, Norfolk, Virginia Beach, Portsmouth and Chesapeake.

### **Statement of Project Activities: 2018**

Development of a survey strategy – We amended the template used in past surveys to plan for the 2018 survey (Appendix I). This included breaking up the Coastal Plain into survey units, associating species with those units and assigning survey partners to the species and units as appropriate. The Center for Conservation Biology was responsible for surveying residential neighborhoods and other urban areas for heron colonies.

Survey preparation and coordination – We prepared a revised datasheet to be used during the 2018 survey and an approach to colony coding and data management. We contacted all participating survey partners to discuss roles and efforts and adjusted the survey strategy accordingly. We assisted with an all partners meeting held during the annual VCAP meeting to discuss survey coordination and logistical challenges.

Heron Surveys – Between 10 April and 3 July, 2018 we systematically drove through neighborhoods and other urban areas throughout the cities of lower Tidewater that have been included in past colonial waterbird assessments and surveyed for nesting herons. We located, surveyed and mapped approximately 90 heron colonies that included 13, 555 and 611 pairs of green herons, yellow-crowned night herons and great egrets respectively.

Archived Materials – We have mapped polygons and filled out survey sheets for each urban colony discovered within the urban areas. These materials have been scanned and are archived as pdfs for distribution to interested partners.

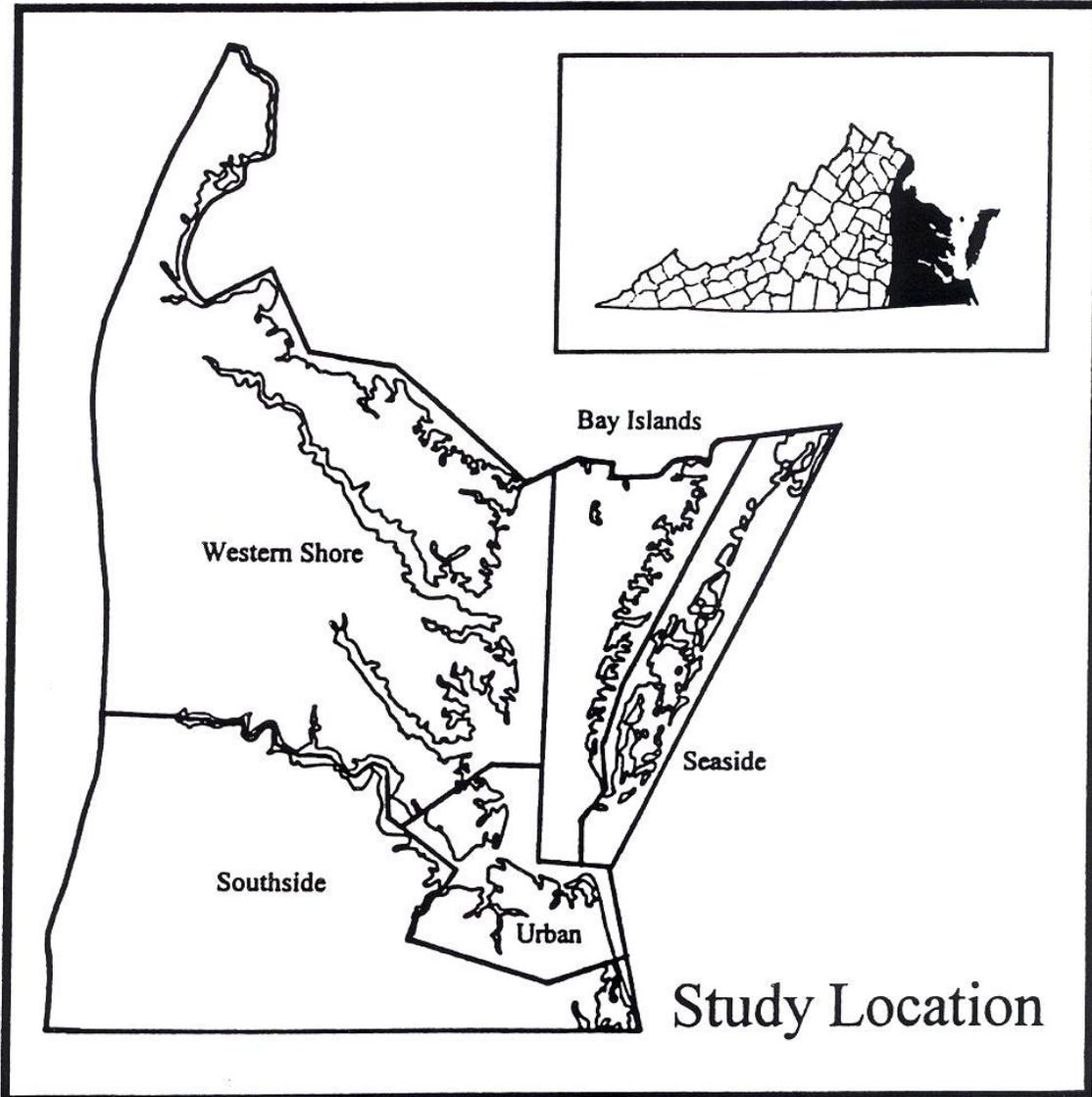
Data Management – We have digitized all colony polygons in Arc and survey data have been entered. Survey data have been merged with the Arc layer to create a digital atlas of urban heron colonies. Metadata has been added to the project.

## **Schedule**

This project is on schedule. All tasks have been completed except for production and submission of the final report.

APPENDIX I:

Virginia Colonial Waterbird Survey (2018)



**Working Area/Tasks/Organizational Involvement**

**Area 1: Hampton Roads Urban Areas** – This area covers Craney Island, the Hampton Roads Tunnel Island, and numerous residential areas/parks of Norfolk, Virginia Beach, Portsmouth, Hampton, and Newport News. A considerable amount of ground work is necessary within this area because the residential colonies cannot be detected from the air.

### Aerial Survey

*Entire area* - CCB will overfly the area.

### Ground Survey

*Urban areas* – CCB will drive and walk many areas to map and inventory existing heronries.

*Roof-top Tern Colonies* – Ruth Boettcher will survey.

*Craney Island* – Bill Williams will survey area.

*Hampton Roads Tunnel Island* – Lee Schuster will survey area.

**Area 2: Western Shore to Fall Line** – This area covers the western shore of the Chesapeake Bay and tributaries to the fall line. Most of the area will be surveyed by air exclusively. Exceptions to this are areas that have the potential to or are known to support mixed heronries or beach/marsh-nesting species.

### Aerial Survey

*Entire Area* – CCB will fly the Bay shoreline and up the tributaries to their end. It is necessary to fly completely up these tributaries because many of the Great Blue colonies form quite far up the drainages.

### Ground Survey

*James River Islands* – CCB will survey by boat.

*York River Islands* – CCB will survey by boat.

*Mobjack Bay* – CCB will survey by boat.

*Newport Comfort Beaches* – CCB will survey by ground.

*Bethel Beach* – CCB will survey by ground.

*Milford Haven Beach* – CCB will survey by boat.

*Fleets Bay* – CCB will survey by boat.

*Hollis Marsh* – CCB will survey by boat.

*Grandview Beach* – Bill Williams will survey by ground.

**Area 3: Southside/Dismal Swamp/Back Bay** – This area covers the southern portion of the state below the James River drainage and Hampton Roads. The largest portion of this is the Chowan River drainage that includes the Meherrin, Nottoway, and Blackwater Rivers. Portions of these rivers support extensive, remote swamps.

### Aerial Survey

*Entire Area* – This area supports great blue heron and great egret colonies and will not be surveyed in 2018.

**Area 4: Chesapeake Bay Islands and bayside Delmarva** – This area covers the bayside tributaries and shoreline of the lower Delmarva and the isolated Chesapeake Bay islands. Considerable groundwork is necessary here to count mixed heronries and marsh-nesting species.

### Aerial Survey

*Entire Area* – CCB will fly bayside tributaries and shoreline, as well as, Chesapeake Bay islands.

### Ground Survey

*Tangier Island north to Smith Island* – CCB will survey colonies along this chain by boat.

*Great Fox Island* – CCB will survey colonies at this site by boat.

*Watts Island* – CCB will survey by boat.

*Near-shore Islands* – VDGIF will survey by boat.

**Area 5: Barrier Islands and seaside of Delmarva** – This area includes the chain of barrier islands, the lagoon system between the islands and the mainland, and the tributaries along the Delmarva seaside.

### Aerial Survey

*Entire Area* – CCB will fly all areas and habitats except the outer barrier beaches.

### Ground Survey

*Barrier Islands* – VDGIF-TNC will survey islands (Metomkin through Smith) throughout the breeding season. FWS will survey Chincoteague, Wallops, Assawoman and Fisherman by ground.

*Chincoteague Refuge* – Refuge staff will survey beach colonies.

*Causeway to Wire Narrows* – Chincoteague staff or volunteers will survey colonies from Chincoteague causeway south to Wire Narrows by ground or boat.

*Chincoteague Bay* – Chincoteague staff or volunteers will survey colonies from Chincoteague causeway south to Wire Narrows by ground or boat.

*Shell piles of Main Channels* – TNC will survey colonies along main boat channels in lagoon system.

*Lagoon Heronries south of Wallops* – CCB will survey all heronries south of Wallops by boat.