

1985

## Great Blue Heron Management Recommendations

M. A. Byrd  
*The Center for Conservation Biology*

R A. Beck

Follow this and additional works at: [https://scholarworks.wm.edu/ccb\\_reports](https://scholarworks.wm.edu/ccb_reports)

---

### Recommended Citation

Byrd, M. A. and R. A. Beck. 1985. Great Blue Heron Management Recommendations. CCBTR-85-04. Department of Biology, College of William and Mary, Williamsburg, VA. 7 pp.

This Report is brought to you for free and open access by the Center for Conservation Biology (CCB) at W&M ScholarWorks. It has been accepted for inclusion in CCB Technical Reports by an authorized administrator of W&M ScholarWorks. For more information, please contact [scholarworks@wm.edu](mailto:scholarworks@wm.edu).

THE COLLEGE OF WILLIAM AND MARY  
WILLIAMSBURG, VIRGINIA 23185



DEPARTMENT OF BIOLOGY  
(804) 253-4240

December 16, 1985

Mr. James Willis  
Manager of Technical and Land Services  
Chesapeake Corporation  
West Point, Virginia 23181

Dear Jim:

Please find attached a summary of our observations of and recommendations on the great blue heron colony in Northumberland County. We apologize for the delay in forwarding you this following our site visit.

If Chesapeake Corporation and the other landowners involved agree to these recommendations, they may be implemented in a number of ways. We recommend an agreement with the Virginia Commission of Game and Inland Fisheries. It is my understanding that such an agreement would be written in a language acceptable to all parties.

If you wish to pursue this, you might contact John P. Randolph, Assistant Executive Director, Virginia Commission of Game and Inland Fisheries, P. O. Box 11104, Richmond, Virginia 23230-1104 (Phone: (804) 257-1000)

If we can be of any assistance on problems dealing with great blue herons or other sensitive species, please call upon us. The Game Commission has recently brought to the Richmond office one of its biologists, Karen Terwilliger, who will be responsible for the non-game wildlife program. She also can be a source of assistance on these matters.

Sincerely yours,

Mitchell A. Byrd  
Professor of Biology

Ruth A. Beck  
Assistant Professor of Biology

MAB:cas

Enclosure

cc: John P. Randolph  
J. W. Raybourne  
R. W. Duncan  
Karen Terwilliger  
H. W. Bashore

## GREAT BLUE HERON MANAGEMENT RECOMMENDATIONS

### INTRODUCTION

The general impacts of human activities on wildlife have become apparent as human-wildlife interactions have increased. Colonial breeding birds, because of their nesting habits, are particularly vulnerable to human interference. Great Blue Herons are large and conspicuous colonial nesters, preferring remote areas, usually well separated from urban areas.

The wariness of the Great Blue Herons has been observed and documented specifically through ground visits to each of the known colonies in Virginia. The nesting success of Great Blue Herons is dependent on a number of factors, including food supply, weather, and lack of human disturbance. The influence of the food availability and weather are unpredictable and cannot be controlled. The human disturbance factor in nesting areas has become a serious problem, and can be detrimental to the breeding

success of the Great Blue Heron. This type of disturbance can be limited and controlled.

Any type of harrassment that causes the adult herons to leave their nests could result in: 1) increased mortality of young due to predation by other avian species or exposure to the elements, 2) nest desertion, 3) complete abandonment of a colony. It has been calculated by Henny (1972) that a production of 1.91 young/breeding pairs is essential in order to maintain a stable population.

Great Blue Herons begin to appear in Virginia in and around the colony site in mid-February and begin to perch in the herony during the first week of March. Copulation of this species usually occurs during the second week of March. Nest building and egg production follows, and by late March adults have eggs and are incubating. Many colonies have young by the last week in April after a 28-30 day incubation period. Young fledge within 70-90 days after hatching.

In 1985 seventy-seven percent of the Great Blue Herons observed in Virginia nested in bottomland hardwood. The Tom Brook #2 tract of land in Northumberland County, owned by Chesapeake Corporation, contains a typical Great Blue Heron colony. The colony is located along a ravine comprised predominately of bottomland hardwood. The Great Blue Herons in this area have used mostly Sycamore (Platanus occidentalis) for the last 5 years. In an agreement in 1980, this area was established as a "protected area" to be maintained in its natural state to provide adequate nesting habitat for the herons. The landowners involved are Chesapeake Corporation; Meade M. Hinton; Luthen E. Headley and Dr. W. J. Ball.

In view of the land use objectives and related economic considerations of the area, including logging and clearing, it is essential to establish some management recommendations for this particular site which will be consistent with the

goals of the individual landowners and the specific requirements of the birds.

Implementation of these recommendations by Chesapeake Corporation and adjacent landowners could be done in a number of ways. We suggest that a cooperative agreement be drawn between the involved landowners and the Virginia Commission of Game and Inland Fisheries.

Implementation of these recommendations will preserve habitat which has been demonstrated to be suitable for great blue herons nesting. It also may serve to perpetuate the colony which presently exists.

#### HISTORY OF THE COLONY

Very limited information has been published on the specific habitat requirements of the Great Blue Herons. We have monitored Great Blue Heron colonies for the past four years as part of the Virginia Commission of Game and Inland Fisheries Non-Game Wildlife Program. Our observations

generally have shown a shifting of nesting activity away from areas of disturbance. The population history of this and a nearby colony for the past four years is shown in Table 1.

Table 1. Breeding pairs of great blue herons, 1982-1985 for the Tom Brooks #2 Tract (1) and the Bush Mill Stream Tract (2)

---

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
1.	132	108	136	52
2.	560	600	520	620

---

There have been some population changes within the colony on the Tom Brooks No. 2 tract and the nearby Bush Mill Stream Colony. It appears that some of the Tom Brooks 2 tract colony may have moved to the larger nearby colony.

Shifting in the other direction is equally likely given suitability of the habitat.

#### MANAGEMENT RECOMMENDATIONS

We propose the following recommendations to provide appropriate habitat for this Great Blue Heron colony.

1) Establish a buffer zone around the colony. At this site, we recommend at least 30 acres bordering the area to the north - northeast. (owned by Chesapeake Corporation)

2) Establish equivalent buffer zones (about 30 acres) bordering the remainder of the colony with the other landowners involved.

3) Confine any human disturbance such as logging, clearing, road building to a specific time frame from August 1 - January 31. The herons usually arrive by the 1st of February and have established their territories by mid-February.

4) Post specific signs around the peripheral boundary of the colony preserve, indicating the sensitivity of the



area, and the requirements of the colonial nesters, thereby requesting no access to the area.

Our observations have shown a shifting of nesting activity away from the area of disturbance. It is hoped that through this type of cooperative agreement and the implementation of these recommendations that the habitat may be preserved to maintain the present Great Blue Heron Colony and to ensure habitat for future colonies.

#### Literature Cited

Henry, C. J. 1972. An Analysis of the population dynamics of selected avian species, with special reference to changes during the modern pesticide era. U. S. Fish and Wildlife Service Research Report 1, 99 pp.

Mitchell A. Byrd  
Ruth A. Beck  
Department of Biology  
College of William & Mary  
Williamsburg, VA 23185

December 5, 1985