

Pennsylvania Game Commission Release #045-02
NATURAL FORCES THREATEN STATE'S LARGEST
HERON/EGRET ROOKERY Wade Island's great egret and
black-crown night heron colonies face mounting problems

HARRISBURG - Nature is cramping the occupants of the state's largest black-crowned night heron and great egret colony, located on the Susquehanna River north and west of the Harrisburg City line. Great egrets are a state-endangered species; black-crowns are an "at-risk species."

Wade Island isn't much to look at. It's not as attractive as nearby McCormick's Island, lacks prominent features, and isn't much more than about three acres in size. Given the choice, most boaters wouldn't land there; they'd go to the more appealing neighboring islands. But every spring, long-legged wading birds converge on Wade to nest. It's unclear what the attraction is. But they've been coming here for decades, and because they do, Wade has become an incredibly important nesting site and a protected propagation area.

The island and its important nesting colonies, however, are being threatened by two pressing problems: an eroding shoreline and a growing nesting population of double-crested cormorants. Neither pose immediate problems to the colonies, but both are legitimate threats that may well jeopardize this nesting colony's future productivity and continued use of the island.

Over the past 15 years, erosion has claimed a considerable chunk of Wade Island's eastern shoreline. A quarter to as much as a third of the island has been consumed by the high flows of the Susquehanna since 1987, according to a comparison made by Pennsylvania Game Commission biologist Cal Butchkoski. During a recent survey of the island's nesting inhabitants, the biologist charted the island's shoreline with "global positioning system" technology and compared it to a 1987 topographic map of the island.

"What we found was eye-opening," Butchkoski said. "We were expecting to find some erosion, that's why we were charting locations with GPS gear. But the erosion losses were more serious than what we anticipated."

The loss of island mass reduces the space available for great egrets and black-crowns. Both birds currently receive special management considerations from the Game Commission, which manages the Commonwealth's wildlife. Great egrets are a state-endangered species primarily because they nest at only one location: Wade Island. Black-crowns are considered an "at-risk" species because of their dependency on wetlands and limited number of nesting colonies statewide.

"GPS technology has provided us a record of what time and high waters have taken away from Wade," noted Jerry Hassinger, Wildlife Diversity supervisor for the Game Commission's Bureau of Wildlife Management. "As managers it's up to us to determine whether we should react to this change or allow nature to continue to take its course."

Great egrets teetered on the brink of extinction in the early 1900s because their nesting colonies were exterminated by plume hunters who supplied millineries. Hundreds of thousands were wiped out, until only a smattering of colonies remained from North Carolina to the Florida Keys. Through wardens hired by the National Association of American Audubon Societies and laws that eliminated the exploitation of these and other wading birds, great egrets were sufficiently protected and began to rebound. The first great egret nest found in Pennsylvania in the past century was in a freshwater tidal marsh of the Delaware River in 1957. By 1990, the birds had three established nesting colonies in the state. However, two nesting sites eventually were abandoned leaving Wade Island as the last remaining nesting colony in the Commonwealth.

Black-crown night herons have seen their population slip considerably in the Commonwealth over the past decade. At Wade Island, for instance, there were 345 black crown nests in 1990. This year, the number of black crown nests was 107. Like great egrets, they continue to demonstrate an affinity to Wade Island, which is their largest nesting colony in the state. But the birds have historically nested throughout the state and continue to do so. Unlike egrets, black-crowns tend to feed more during evening hours and at dusk and dawn.

Since 1985, the annual Wade Island survey conducted by the Game Commission, with assistance from the Department of Conservation and Natural Resources (DCNR) and Pennsylvania Audubon, has charted nesting trends on the island. This year's survey documented 142 great egret nests. Great egrets established their largest nest tally ever on the island in 2001 with a total of 166.

The nests constructed by both great egrets and black crowns seem incapable of holding eggs, let alone providing a soft, but solid foundation that will support the adult bird incubating the eggs. It also seems unlikely that these long-legged birds can get their landing gear out of the way to cover the eggs in downy warmth. But their system works and the egg and young losses aren't excessive.

Wade Island is owned by the Commonwealth of Pennsylvania and has been managed jointly by the Game Commission and DCNR. A management plan

drafted by Dr. Terry Master, a professor of biology at East Stroudsburg University, recommends erosion control work along the island's eastern shore. Harrisburg officials are planning to submit a Growing Greener Grant application to the state Department of Environmental Protection for the purpose of mitigating erosion on the island.

Master also proposed establishment of a no-entry buffer zone, marked with floating signs, surrounding Wade at least 100 meters, and preferably 200 meters, from the island's perimeter. Master, as well as Cindy Dunn, Audubon Pennsylvania executive director, and Game Commission staff, have raised concern about the increasing river boat traffic.

"Wade Island is a remarkable place," Dunn said. "It's isolated, despite being just outside the city limits of Harrisburg, and as the state's largest multi-species wading bird nesting colony, it is an incredible asset to the region. We must safeguard this unique treasure."

In addition to the threat of increasing erosion, as well as the growing boat traffic, another problem is plaguing the birds that nest and summer on Wade Island. It is the double-crested cormorant. Although their populations were once devastated by the deleterious effects of pesticides, cormorants have rebounded surprisingly well since DDT and other harmful pesticides were banned in 1972. With the exception of their DDT-induced population nosedive in the 1960s and '70s, cormorant numbers have been growing steadily in Pennsylvania. Yet, they still nest at only one location in the state. That location is Wade Island.

The problem with cormorants nesting on Wade Island isn't one of compatibility. Rather, it's simply a matter of cormorants taking canopy space that otherwise would be claimed by black-crowns or great egrets. The first double-crested cormorant nested on Wade - and apparently in Pennsylvania - in 1996. In four years, the number of Wade nesting cormorants increased to nine. This year there were 21 cormorant nests on Wade.

Cormorants are stocky, web-footed, goose-sized birds that dive for fish and sun themselves on snags and rocks on the Susquehanna and other large rivers and on large trees along lakes. They also are known by less flattering names such as "crow duck," because of their tenacity to displace other colonial nesters and the growing perception that they are impacting the success of anglers on some waters.

"The cormorants were attracted to Wade Island by the established egret and heron nesting colony," explained Dan Brauning, Game Commission biologist. "Colonial nesters intuitively attract other colonial nesters, because they

recognize there's safety in numbers. But in this case, that's unfortunate, because Wade has limited - in fact, eroding - accommodations. What's more, Pennsylvania, like many other northeastern states, isn't interested in seeing its cormorant population grow substantially."

Once established, cormorants can displace other colonial bird nesting colonies. In the Great Lakes region, the cormorant population numbers about 60,000 nesting pairs in 10 colonies. It increased 22 percent from 1990 to 1997 and is recognized as the fastest-growing population in the United States. Nationally, there are about 400,000 nesting pairs of cormorants. Neighboring New York state has 9,100 pairs at 12 colonies; and Ohio has 1,400 pairs at one colony.

"The cormorants no longer simply have a presence on Wade Island," Brauning said. "They're claiming trees and building a colony of their own. It seems likely that their numbers will continue to grow, which means at some point we'll have to consider intervening. Since cormorants are protected by the U.S. Migratory Bird Treaty Act, the Game Commission would require approval from the [U.S. Fish and Wildlife Service](#) before taking any steps to limit cormorants nesting on Wade."

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Content Last Modified on 12/15/2003 11:44:35 AM