

than others, and for first time breeders it is, by definition, always a new decision. It is important to understand that there is no single perfect solution for the colonizers. Some nest sites solve certain problems but leave others unsolved; there is an ongoing trade-off for the birds. For example, studies of nest-site characteristics of Yellow-crowned Night-Herons in coastal areas suggest that the birds choose nests that minimize their vulnerability to predation and high temperatures such as positions low in the tree canopy (Burger 1978). But Yellow-crowned Night-herons in Missouri placed their nests away from the center of the tree and in the upper reaches of the canopy (Laubhan and Reid 1991). While this activity might expose the herons to avian predation, it reduces the likelihood of non-avian predation, such as rats and raccoons. Yellow-crowned Night-Herons also use different kinds of trees to accomplish different purposes. Some nest in pines, which reduces the loss of their young to crows, while others use hardwoods, which reduce heat (Laubhan and Reid 1991).

A study of Great Blue Herons asked whether the birds saved energy by choosing colonial nesting sites located near foraging areas as opposed to nesting solitarily and therefore scattered more uniformly around foraging areas. Data showed that nesting colonies were located close to high-quality local foraging habitats so that travel time to regional feeding areas was minimized (Gibbs 1991). Thus there was a positive correlation between the number of nests per colony and the amount of nearby foraging area and a negative correlation between the number of nests in a colony and the distance a bird had to fly to get to a wetland to forage (Gibbs 1991).

Burger (1978) has suggested that the competition for space is most noticed in mixed species colonies. In a study conducted between 1972 and

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The Status of Heron Colonies in Illinois

by William Moskoff

Today, a number of the *Ciconiiformes* (herons and their allies) which nest in Illinois are endangered. These include the Great Egret, Snowy Egret, Little Blue Heron, Black-crowned Night-Heron, Least Bittern, and American Bittern.

Systematic knowledge of heron colonies in Illinois did not exist before a study done by Richard and Jean Graber, covering the five year period of 1973-1977, was published in *Illinois Birds* in 1978. Concerned about the substantial decrease in the numbers of certain species, the Natural Heritage Division of the Illinois Department of Conservation, now the Illinois Department of Natural Resources, began an annual monitoring of the state's nesting heron population. Since then, and annually since 1983, observations of heronries in Illinois have been carried on by the same department, largely under the supervision of Vernon Kleen. This brief overview of the status of heronries in the state is gleaned from the work of these three people.

The earliest work by the Grabers revealed disturbing declines in numbers for several species. Their estimates of Great Blue Heron nests for the four years of 1973-1976 showed a drop of 12-18 percent each year, from 1,435 nests in 1973 to only 865 in 1976. There were 26 or 27 Great Blue Heron colonies they surveyed in the state during that four year period, virtually all of them along the state's major rivers. These birds had been victimized in part by natural calamities



such as floods, but mostly they were threatened by man-made influences such as deforestation, the draining of foraging areas, and boating.

Much the same is true of the Great Egret. The species' numbers seemed to fluctuate in Illinois in ways that mirrored its numerical status in the U.S. Some evidence suggested that Great Egrets were negatively affected by hydrocarbon pollution, accounting in part for the decline in Illinois nests from 423 in 1973 to only 101 in 1976 (Graber 1978).

The number of Great Blue Herons and colonies has increased since the Grabers' study of the 1970s. In part this is due to the fact that inland colonies have been censused and in part because the birds are doing much better in the state, for reasons that are not obvious. They seem to have adapted to the conditions they confront in the state. The same is true of the Great Egret.

In the 1993 Heron Colony Survey Report, there were 52 Great Blue Heron colonies and 26 Great Egret