

Great Blue Heron

(*Ardea herodias*)

The great blue heron (*Ardea herodias*) is the largest, most widely distributed and probably best known of all heron species.

It is distributed across most of North America, breeding coast to coast from Southern Mexico to as far north as the Alaskan panhandle on the west coast, and as far north as Nova Scotia and New Brunswick on the east coast. Its winter range extends across the United States south to the northern coast of South America.

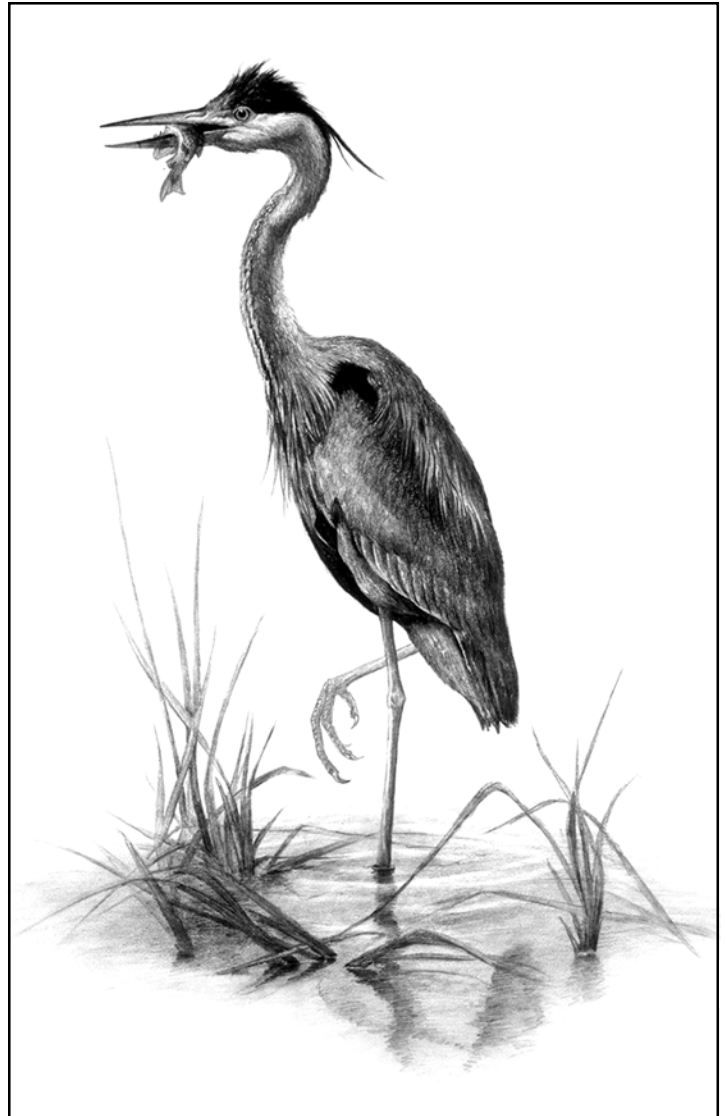
In Utah, great blue herons are listed as a common summer breeding resident, nesting in scattered colonies, or heronries, in lowland wetland areas and along streams throughout the state. In areas where there is open water, a few remain throughout the winter.

Description

Great blue herons belong to the order *Ciconiiformes*, wading birds with long legs, long necks and straight, pointed bills. These magnificent, stately birds stand about four feet tall, with a wingspan of up to seven feet. They are readily identified by the slate-blue feathers which cover most of their body. The feathers of the head are white with a black stripe on each side that extends back from above its bright yellow eyes to form slender black plumes called "aigrettes." The breast is covered with long grayish-white, rusty-brown and black streaked feathers that taper into plumes. Some feathers of the back and sides form long slender plumes as well. The feathers of the thighs are chestnut colored and the bill is a dusky yellow.

Great blue herons have been described as graceful flyers with slow, steady, dignified wingbeats. During flight, they fold their long necks back in the shape of an "S," with their head resting against their shoulders. Their long thin legs trail behind. Cranes, which are sometimes confused with herons, fly with their necks out-stretched.

There is virtually no sexual dimorphism, and sexes can be distinguished only during mating. Young herons in their first year have gray-colored crowns and grey wings flecked with brown.



Distribution

The first written references to great blue herons in Utah are found in the writings of Captain Howard Stansbury. His 1852 report tells of several trips in the late spring of 1850 where "blue herons" were among a variety of "wild waterfowl" found nesting in large mixed waterbird colonies on several small islets of the Great Salt Lake. Today these islands are known as Egg, White Rock, Gunnison and Hat Islands. Active heronries are still found on Egg and Hat Islands.

Subsequent to that, great blue heron breeding colonies have been documented in a variety of other Utah locations including the marshes bordering Utah Lake, Fish Springs National Wildlife Refuge in the West Desert along the old Pony Express route, the Bear River Migratory Bird Refuge in Box Elder County, marshes of the Great Salt Lake such as Ogden Bay, Cutler Marsh on the Bear River west of Logan, and along major rivers such as the Green and Colorado Rivers in southeastern Utah.

Historical accounts describe some very large heron breeding colonies with thousands of nesting pairs, however no real scientific documentation exists as verification. In Utah, great blue heron breeding colony survey information has been sparse and no records of changes in heronry locations or numbers of nesting pairs within heronries have been kept. Colony locations are relatively permanent over time, but numbers of nesting pairs can vary considerably from year to year.

Habitat

In Utah, habitat for great blue herons includes secluded rivers, lake edges and marshes in both fresh and salt water environments. For breeding, they most typically occupy colonies in wooded areas near water, constructing nests within the uppermost portions of the trees. In areas lacking trees, great blue herons will nest on rocks, in bushes such as greasewood and sagebrush, among sturdy reeds or rushes along the edges of wetlands, upon cliff ledges and even



occasionally on the ground. They prefer isolated spots, inaccessible to humans and land predators, where they can see well in all directions.

Feeding

Great blue herons usually forage along streams and within ponds and lakes, where they stand motionless in shallow water waiting for prey to come within striking distance. They feed primarily on fish, insects, small mammals, reptiles and amphibians. When a potential meal comes close enough, the heron slowly folds back its neck and moves one leg in the direction of the prey. Then suddenly, with lightning speed, the heron lunges its sharp-pointed bill forward to grasp its prey. Afterwards, it gently tosses the prey into the air to position the meal for easy swallowing. Occasionally, they have been observed dropping momentarily onto deep water to strike at prey. They also forage on dry land from time to time.

Nest Building and Courtship

Great blue herons construct their nests atop bushes or among the limbs of trees, usually at branching points or between forks in branches. Dry twigs, sticks and branches about a foot long and one-half inch in diameter are collected and woven into a crudely constructed interlacing mesh to form a platform structure. Usually nests are about three to four feet in diameter, but have only a slight depression in the center. New nests are small and relatively flimsy compared to nests that remain from previous years. When nests from previous years are occupied, the herons will add new twigs to refurbish the nest.

In Utah, early March is the time of year that great blue herons, which lead a relatively solitary existence during much of the year, return to their breeding colonies. Males arrive first and claim a nest which they defend with vehemence, rushing forward with opened bills and flared wings towards all intruders, while emitting a loud, guttural “squawk.” As females arrive, the attention of the males shifts towards announcing their status as potential mates and pairs begin to form.

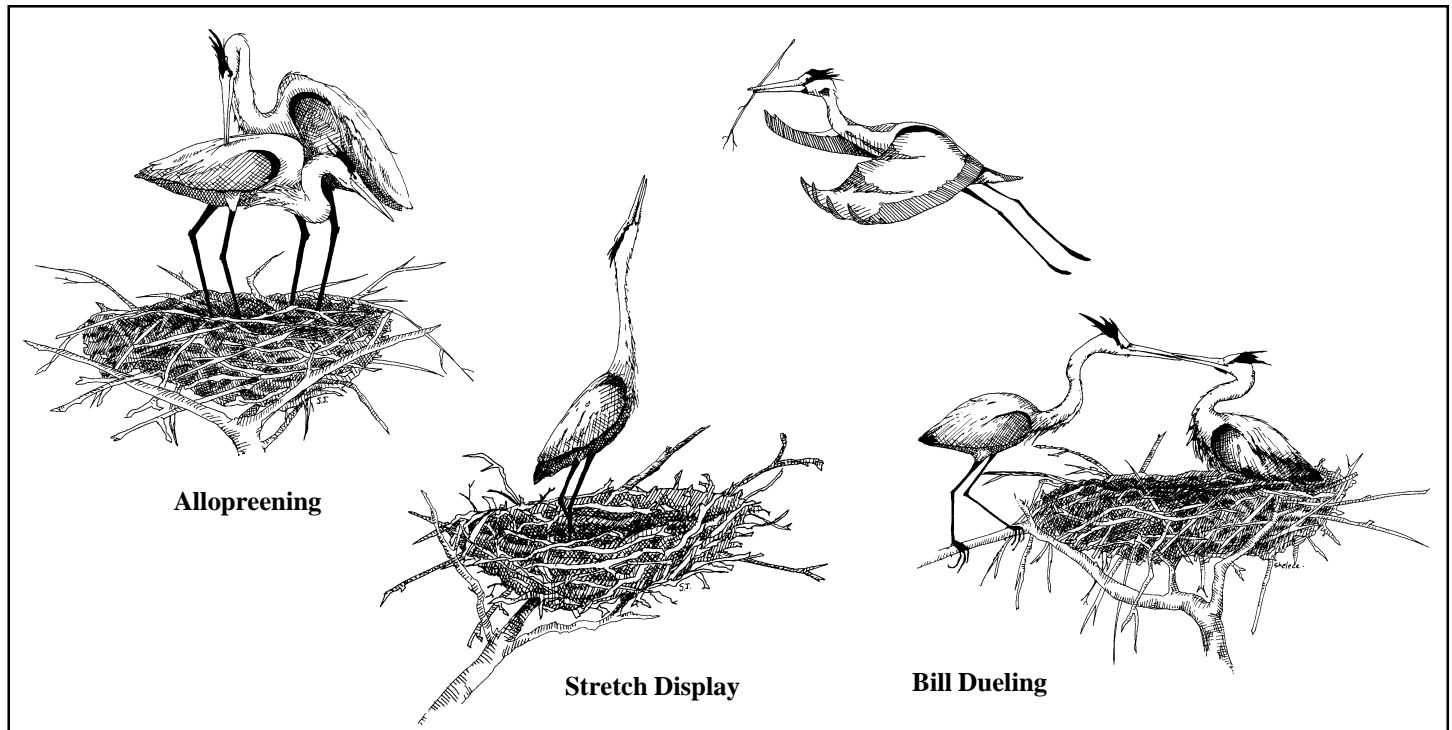
During courtship a variety of behaviors can be observed. Male herons fly repeatedly to the ground to gather twigs for reinforcing the nest. As a male heron with a twig returns to the nest, he is greeted by his mate with a “stretch” display. In this display a heron stretches its neck outward and points its bill upwards in an arc while lowering its body by flexing its legs. An “aarroo” vocalization accompanies the display. During the stretch display, the neck feathers are fluffed and back and chest plumes are raised. The stretch display is one of the most common and easily recognized displays given by great blue herons.

The arriving male usually has his crest and back plumes raised and emits a series of low pitched croaking noises. The twig is then transferred to the female and worked into the nest. Another display that can be seen is the “bill duel” where pairs attempt to clasp the bills of one another and move their heads back and forth in a seesaw fashion. During “allopeening,” another behavior, one heron preens the feathers of its mate. This behavior is one of several thought to help maintain the pair bond.

The large, pale greenish-blue eggs are laid over a period of several days. Three to five eggs are laid per clutch at intervals of at least two days. Incubation, which lasts about 28 days, begins sometime before the last egg is laid and results in asynchronous hatching of the young. Usually only one parent incubates the eggs at any one time, often remaining on the nest for more than six hours before being relieved by the mate.

After hatching, the gray, down-covered nestlings are brooded almost continuously for about a week. By two to three weeks of age, they are left unattended in the nest most of the day while both parents forage for food to feed their rapidly growing young. When a parent returns to the nest, the young, gawky herons chatter excitedly, uttering a loud “kak-kak-kak” sound and jumping up and down in the nest. They aggressively peck and jab at the parent’s bill to encourage feeding. Food is then either regurgitated directly into the bills of the young or onto the bottom of the nest. As nestlings grow older, they begin to venture out onto the edge of the nest and flap their wings to exercise their wing

Various great blue heron courtship displays.



muscles. By the time they are about two months old, they fledge and begin making short flights to the ground. They continue to return to the nest, however to be fed for another two to three weeks. At about 10 weeks of age, the young herons leave the nest for good.

Current Status and Management

Adult great blue herons have few natural enemies and can live as long as 17 years. They do not exhibit any anti-predatory behaviors such as mobbing, but in contrast, are more likely to flee at the appearance of a potential predator.

Although protected today by the Migratory Bird Treaty Act, numerous great blue herons and other “fish-eating” birds, thought by settlers to compete for food, were slaughtered in the late 1800s for a bounty of five cents a head. Currently, herons that cause depredation problems can be taken. A special permit is required in such cases.

Currently, the major threat to great blue herons in Utah appears to be loss of suitable breeding habitat. Great blue herons are especially wary birds and will take flight at even the slightest disturbance, making eggs and young vulnerable to predation and overheating. In some cases, total abandonment of heronries has been attributed to high levels of human disturbance involving shooting, nest robbing, tree-clearing and development of real estate.

Efforts to protect and prevent loss of wetlands and riparian areas, and keeping breeding colonies free from human disturbance will help to ensure the continued presence of great blue herons in Utah.

What You Can Do

- ♦ Visit areas such as Bear River Migratory Bird Refuge or Fish Springs National Wildlife Refuge during the spring to observe nesting great blue herons. Maps and directions to these and other viewing areas can be found in the Utah Wildlife Viewing Guide available at Division of Wildlife Resources offices. Remember to view from a safe distance to avoid disturbing the breeding herons.
- ♦ Become involved in wetland and bird conservation efforts by contacting your local Audubon chapter or other conservation group.
- ♦ Purchase a Wildlife Heritage Certificate from your local Division of Wildlife Resources office. Funds generated help to preserve habitat for wildlife.

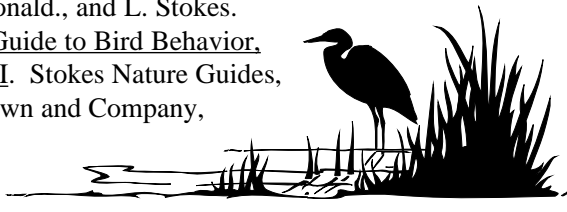
Additional Reading

Butler, Robert. 1997. The Great Blue Heron. UBC Press, Vancouver.

Cottrille, W., and B. D. Cottrille. 1958. Great Blue Heron: Behavior at the Nest. University of Michigan, Miscellaneous Publication #102.

Hancock, J., and J.A. Kushlan. 1984. The Herons Handbook. Harper and Row, New York.

Stokes, Donald., and L. Stokes. 1989. A Guide to Bird Behavior, Volume III. Stokes Nature Guides, Little, Brown and Company, Boston.



Wildlife Notebook Series No. 14

Produced by: Project WILD

Written by: Diana Vos, Project WILD Assistant Coordinator

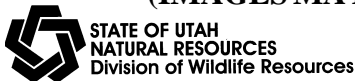
Reviewed by: Frank Howe, Avian Coordinator

Don Paul, GSL Wildlife Biologist

Edited by: Vicki Unander

Illustrated by: Clark Bronson and Shelece Jorgensen

(IMAGES MAY NOT BE REPRODUCED)



The Utah Department of Natural Resources receives federal aid and prohibits discrimination on the basis of race, color, sex, national origin, or disability. For more information or complaints regarding discrimination, contact Executive Director, Utah Department of Natural Resources, P.O. Box 145610, Salt Lake City, UT 84116-5610 or Office of Equal Opportunity, U.S. Department of Interior, Washington, D.C. 20240. The Division of Wildlife Resources is funded by the sale of hunting and fishing licenses and through federal aid made possible by an excise tax on the sale of firearms and other hunting and fishing-related equipment.

February, 1999

Other Utah Heron Species

Snowy Egret (*Casmerodius thula*)

Snowy egrets stand about half as tall as great blue herons (20 to 24 inches) and are covered entirely with snowy white feathers and lacy plumes. They have black bills and glossy black legs with bright yellow feet. It was their long beautiful plumes that almost led to their demise near the beginning of the twentieth century when egrets were slaughtered by the thousands to supply the fashion industry with women's hat ornaments. Strong conservation laws saved the species, which is now repopulating its former range. Today they can be observed nesting alongside great blue herons within some breeding colonies. In Utah, a good number nest at Fish Springs National Wildlife Refuge.

Black-crowned Night Heron (*Nycticorax nycticorax*)

Black-crowned night herons can often be found nesting in association with great blue herons, but tend to occupy nests built lower in the tree canopy. They are stocky-bodied, short-billed and short-legged herons about 20 inches in length. Their plumage consists of a black-feathered cap, white neck and breast feathers, gray sides, and a black back. Breeding adults have two long white head plumes. Their eyes are red, their bills are black, and they have short yellowish-orange legs. As their name implies, they hunt primarily at night, feeding on small fish, insects, crayfish, worms and small rodents.

American Bittern (*Botaurus lentiginosus*)

The American bittern is a small, 23 to 24 inch tall, inconspicuous heron that inhabits the tall vegetation at the edges of marshes. The plumage of the bittern is a dappled light and dark brown color on the back, with a brownish-streaked breast. They also sport a black streak on each side of the upper neck, and have yellow legs. This shy, elusive heron is most active at dusk and at night. It hides by freezing with its bill pointed up towards the sky, body swaying slightly back and forth with the wind to make itself indistinguishable from the surrounding vegetation. Solitary nesters, bitterns build small, 10 to 16 inch in diameter nest platforms of dried cattails, reeds or grasses on dry ground among the tall vegetation.