

# FIELD NOTES

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## The Bird that Came in from the Cold

*John Adams*

In a screened porch at our home, we have a hot tub, which lets us enjoy the porch all year long. There is a gap between the roof and the wall in one corner, but it presented no problem, so I did nothing about it.

In the spring of 2001 I noticed a small pile of sticks and grass on a metal shelf hanging on the wall. I was puzzled, but moments later I saw a small, brown bird fly onto the shelf. It was carrying pine needles, which it inserted purposefully into the pile, then it flew to the top of the wall, ducked under the roof, and disappeared through the gap. Moments later, it entered again and added more material. This time I got a clear view of a Carolina Wren. In the next few days I often went to watch as one, and sometimes two birds continued construction, but then all activity stopped. I was disappointed and thought perhaps my presence had driven them away.

In March of 2002 the process started again, with the nest growing every day, wedged between two dried starfish and behind a drinking glass. It was a fascinating process, as one bird made its contribution, and the other (presumably the female) tossed it on the floor and fussily rearranged the nest to her satisfaction. Twice the male picked up a small starfish and attempted to insert it in the nest, but both times the female tossed it out. By March 21 the nest was complete — an impressive domed structure with an entry hole on the side.


For a couple of weeks I rarely saw the birds, but at the end of April, the activity suddenly increased, with the male regularly delivering food to the female inside the nest. Soon the young stuck scrawny necks outside the nest to beg for the next delivery.

They gave every evidence of not only recognizing me, but accepting me as a safe presence. When I entered the room or sat in the hot tub, they continued normal activity, but if a stranger entered, they would stop feeding, and in one case they attacked a group of neighborhood children trying to enter the tub. If I was not in the room, and they perceived danger, as in the case of a red squirrel making its way into the porch, I would hear the bird giving its *zweep* danger call. When I went to look, it would be pecking on the window, giving the distinct impression that it was summoning me for assistance. Whether or not this was the bird's intention, it worked. I would remove the perceived danger, and the bird would appear to relax.

The young fledged on May 9, and it was not long before the pair started a second brood, and I was able to enjoy the experience all over again. In mid-July I could hear activity in the yard that suggested the young had fledged, and I went onto the porch to look. A single fledgling was left behind, perching on the nest. I walked over to the shelf to see if it was all right, and it jumped onto my head. Startled, I straightened up,

but the young bird stayed, so I walked outside to where I could hear the others. My passenger jumped off my head to join its family.

In most cases of nest watching I suppose the story would stop here with the successful raising of two broods, but this one doesn't. Late one afternoon in December 2002, I was in the hot tub, and a wren entered the porch, perched on the wall by its entry, then flew to a hanging fern, scuttled under the foliage, and disappeared. When I got out of the hot tub, I peered into the fern, and the wren was snuggled in, feathers fluffed out. It continued to use the fern for a few nights, but eventually switched to the old nest to sleep. I took temperatures morning and evening from the porch and an outside location, and they averaged a difference of 6°C (11°F), a significant difference for a southern bird trying to survive a New England winter. As during the breeding season, this bird tolerated my presence, but fled from or attacked others who entered the porch.

The double-duty nest seems to be a remarkable adaptation by the wren. In breeding season it is protected from predators and cowbird parasitism. In the winter it provides both protection and a warm location for sleeping. The wren often visits during the day as well, but ignores food and water I have put out for it. It is undoubtedly simply coming in from the cold. 

## Sunbathing and Thermal Stress in an Immature Great Blue Heron

*Jerome A. Jackson and William E. Davis, Jr.*

In a previous article (Davis and Jackson 2000) we described sunbathing by a Great White Heron, generally considered a white morph of the Great Blue Heron (*Ardea herodias*), and discussed the functions of sunbathing in birds. Probable functions include: (1) gaining heat, (2) losing heat, (3) drying of plumage, (4) ectoparasite reduction, and (5) mediation of vitamin D production through exposure to UV light. On March 10, 2001, we observed an immature Great Blue Heron sunbathing on Cross Dike Trail at the J.N. "Ding" Darling National Wildlife Refuge on Sanibel Island, Florida. These observations provide some additional insight.

At 10:50 a.m. we noticed a Great Blue Heron standing on dry land amid grasses in front of red mangroves at the edge of an approximately 10-meter-wide watercourse that runs the length of the trail. The heron had a solid gray crown (Figure 1) and was probably about a year old (*fide* characteristics described in Butler 1992). The heron was in a characteristic, hunched posture, its neck withdrawn and its head facing forward, partially in shadows, but partially in the sun. Gradually the shadows changed such that the heron was in full sun. At that point, the heron lowered its head, turned its neck, and tucked its head out of sight between its neck and body, completely obscuring its eyes. It remained in this posture about another two minutes. Then the

heron stretched its neck upward to its full extent, such that its head was once again in the shade of the mangroves. Within another two minutes, the heron lowered its right wing into a half delta-wing sunning position. About three minutes later, it drooped its left wing to complete the classic delta-wing posture (Figure 1). It continued directly facing the sun for another minute, then opened its bill and began gular fluttering. It continued gular fluttering, holding its wings in the delta-wing posture for another four minutes. Gular fluttering, like the panting behavior of dogs, provides for evaporative cooling from the mouth and reduces heat stress.

Why was this heron sunning? It was a warm day, and the tucking of its head behind its neck may have been a result of incipient heat stress or annoyance at the light intensity of the morning sun. The subsequent extension of the neck, positioning of its head in the shade, and gular fluttering suggest

that the heron was experiencing heat stress and needed to lose heat. While in the delta-wing posture, the underwing secondary coverts were elevated (see shadow of coverts in Figure 1), suggesting exposure of wing tissue to circulating air. This too could have been a cooling mechanism and suggests a heat loss function for the delta-wing posture.

However, if the bird were severely heat stressed, it needed only to move into the water or into the shade of the mangroves, either one only a meter away. We thus suggest that these observations of the use of delta-wing sunning posture support either the feather maintenance hypothesis (that exposing feathers to ultraviolet radiation might kill eggs of ectoparasites such as lice and mites) or the vitamin D synthesis hypothesis. We further suggest that heat stress caused by this feather maintenance activity resulted in gular fluttering and shaded head behavior. We acknowledge that the delta-wing posture would aid in radiating excess body heat but think that this thermoregulatory function was only incidental to the feather maintenance or vitamin D synthesis function. 🦶

## References

Butler, R. W. 1992. Great Blue Heron. In *Birds of North America*, No. 339. A. Poole and F. Gill, eds. Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.



**Figure 1:** Great Blue Heron by Jerome Jackson

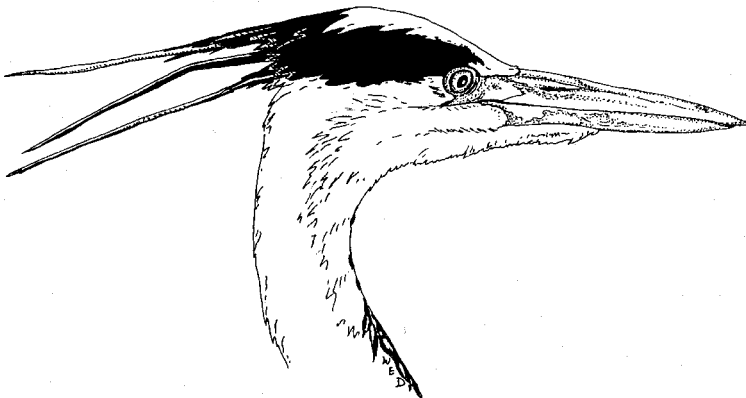
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**William E. Davis, Jr.**, is a member of the *Bird Observer* editorial board and a professor at Boston University. **Jerome A. Jackson** is Whitaker Eminent Scholar in Science and Program Director of the Whitaker Center for Science, Mathematics, and Technology Education at Florida Gulf Coast University.

Contribution No. 6 from the Whitaker Center for Science, Mathematics, and Technology Education at Florida Gulf Coast University.



TED DAVIS (LEFT) AND JERRY JACKSON ENGAGED IN SCIENTIFIC DISCUSSION IN FRONT OF A STRANGLER FIG. PHOTOGRAPH BY BETTE JACKSON.



GREAT BLUE HERON BY WILLIAM E. DAVIS, JR.