

Tricolored Herons and Great Egrets Use Double-crested Cormorants as Beaters While Foraging

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Many animals follow other animals described as beaters, and capture prey disturbed by them. Various species of herons have been observed using beaters, including Eastern Reef Herons using predatory fish (Recher and Recher 1969), Snowy Egrets using grebes (Leck 1971), Snowy and Great egrets using mergansers and cormorants (Christman 1957), White-faced Herons using Australian White Ibises (Davis 1985), and, of course, Cattle Egrets using cattle, tractors, elephants, hippopotamuses, and rhinoceroses (Telfair 1994). The only reference to Tricolored Herons using beaters was Parks and Bressler (1963), who reported Snowy Egrets and a Tricolored Heron using Hooded Mergansers as beaters. Furthermore, the definitive account of Tricolored Herons (Frederick 1997) states "...not reported to benefit greatly from piracy, beating, or other social interactions." Hence, my observations of Tricolored Herons using Double-crested Cormorants as beaters may be of some interest.

On March 11, 1999, I was watching a Tricolored Heron walking along the edge of a ten-meter-wide water impoundment along Cross Dike Trail at J.N. 'Ding' Darling National Wildlife Refuge on Sanibel Island, Florida. The bird suddenly stopped and flew to the other side of the impoundment to the shoreline of dense mangroves. It landed at the water's edge, near an actively foraging Double-crested Cormorant. The cormorant was swimming along the shoreline, partially submerged, and as it moved along the shore, the heron followed it by walking rapidly. When the heron fell behind, it made short flights to catch up. The heron occasionally attacked prey, presumably stirred up by the foraging cormorant. My impression was that the heron was using the cormorant as a "beater" for scaring up prey. This idea became more plausible when the cormorant reversed its direction, and the heron immediately followed. After swimming about three meters, the cormorant again reversed its direction, and again the heron followed. This zigzag pattern was repeated a second time during the approximately 1.5 minutes that the heron followed the cormorant. During this time the heron had made three flights of up to three meters to keep up with the cormorant, and made at least seven prey capture attempts. The heron was typically no more than a meter from the cormorant, which stayed close to the mangrove shoreline. The session ended when the cormorant left the water and perched on a mangrove root. The heron then moved away, still foraging.

Approximately twenty minutes later, on the water impoundment on the other side of the dike, two cormorants foraged in shallow water. A Tricolored Heron (perhaps the same bird) and a Great Egret attempted to follow the two rapidly moving cormorants. The heron apparently gave up the chase, but the Great Egret was more persistent, and made at least three short flights, including one across the approximately ten-meter-wide water body, to keep up with the cormorants. The Great

Egret stopped foraging when the cormorants moved into the deeper water away from the mangroves, but it again became very active, making several strikes at prey, when the cormorants came within a meter. This behavior pattern suggests that the Great Egret was also using the cormorants as beaters.

A year later, on March 3, 2000, I was on the same trail, and at 10:08 I encountered a Tricolored Heron (possibly the same individual) using a foraging Double-crested Cormorant as a beater. The location was identical to the previous year's encounter, with the cormorant in shallow water and the Tricolored Heron within three feet of it. The cormorant was swimming and diving, causing the water to



Figure 1. Photographs by the author


swirl around it, and was constantly reversing directions. The heron shuffled back and forth, following the cormorant's movements. The cormorant then proceeded to swim along the dike toward the road, and the heron followed. After about seven meters the cormorant swam across to the near shore, and the heron flew across the eight-meter-wide channel to join it. The cormorant then swam rapidly along the shore, and the heron followed, making long strides to

keep up with the cormorant. The cormorant reached a bend in the channel and began coursing back and forth in approximately eight-foot lines. The heron followed, and each time the cormorant turned, the heron followed (Figure 1). This activity went on for about thirty seconds before the cormorant again swam rapidly along the bank toward the road, the heron following, until they encountered a two-meter-diameter island of mangroves. The cormorant went on one side of the mangroves, the heron the other. The heron waited and looked in the direction of the cormorant, which had reversed its direction and reappeared heading back up the channel. The heron followed (Figure 2). The cormorant again reversed direction and disappeared behind the mangrove while the heron again went to the opposite side of the mangrove, and the peekaboo was repeated, except that the cormorant reappeared this time swimming toward the road. The heron at this point had been following the cormorant for a distance of 140 meters from the area of my initial observation. The heron followed the cormorant for another eighty meters to the place where the channel went under the road through a large culvert. The cormorant swam to the far side of the fifteen-meter channel, and the heron followed it, and then came back across the channel when the cormorant swam back to



the near shore. At 10:19 the heron flew off and landed beside another foraging cormorant.

At this point I ended my observations. During the sequence the heron made at least six prey capture attempts, one of which was within 0.3 meters of the cormorant. My view was partially obscured by mangroves on several occasions as I followed the birds along the shore, and I was occupied taking photographs (Figures 1 and 2) for about a minute. Hence I do not have a complete account of the number of prey strikes the heron made, or the number of successful prey captures.

Using beaters is a rare foraging behavior for Tricolored Herons. This suggests to me that either the observations I made of this behavior in successive years were of the same bird, or that herons learn the foraging technique from the occasional heron that practices it. 

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