

LITTLE EGRET (*EGRETTA GARZETTA*) NESTING ON ANTIGUA: A SECOND NESTING SITE IN THE WESTERN HEMISPHERE

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Abstract: Nesting by the Little Egret (*Egretta garzetta*) is documented for the first time on the island of Antigua, West Indies. In March 2008, three nests of this species were found in a mixed-species heron colony located in McKinnon's Salt Pond on Antigua. The population of Little Egrets on the island was at least twelve birds. Little Egrets were found to use at least four feeding sites, all coastal ponds. Prior to the present report, this species was known to nest in the Western Hemisphere only on Barbados. Nesting and feeding sites of the species on Antigua are not secure as they are unprotected, making conservation action difficult.

Key words: Antigua, Ardeidae, biogeography, breeding range, Caribbean, colonization, conservation, dispersal, distribution, *Egretta garzetta*, Little Egret, range expansion

Resumen: GARCETA COMÚN (*EGRETTA GARZETTA*) ANIDANDO EN ANTIGUA: SEGUNDO SITIO DE ANIDACIÓN EN EL HEMISFERIO OCCIDENTAL. La anidación de la Garceta Común (*Egretta garzetta*) se documenta por primera vez en la isla de Antigua, Indias Occidentales. En marzo de 2008, tres nidos de esta especie fueron encontrados en una colonia mixta de garzas situada en McKinnon Salt Pond en Antigua. La población de garcetas en la isla era, por lo menos, de doce aves. La Garceta Común se encontró utilizando al menos cuatro sitios de alimentación, todos costeros. Antes del presente informe, de esta especie se sabía que anidaba en el hemisferio occidental, sólo en Barbados. Los sitios de anidación y alimentación de la especie en Antigua no son seguros, ya que no están protegidos, haciendo difíciles las acciones de conservación.

Palabras clave: Antigua, Ardeidae, biogeografía, Caribe, colonización, conservación, dispersión, distribución, *Egretta garzetta*, Garceta común, expansión del rango, rango de cría

Résumé : L'AIGRETTE GARZETTE (*EGRETTA GARZETTA*) NICHEUSE À ANTIGUA : UN DEUXIÈME SITE DE NIDIFICATION DANS L'HÉMISPHERE OUEST. La nidification de l'Aigrette garzette (*Egretta garzetta*) sur l'île d'Antigua aux Antilles est documentée pour la première fois. En mars 2008, trois nids de cette espèce ont été trouvés dans une colonie mixte d'ardéidés des salines McKinnon à Antigua. La population d'Aigrette garzette sur l'île était d'au moins douze individus. L'espèce utilise au moins quatre sites d'alimentation, tous étant des mares côtières. Jusqu'à présent, la nidification de cette espèce dans l'hémisphère ouest n'était connue qu'à la Barbade. Les sites de nidification et d'alimentation de l'espèce sur Antigua ne sont pas sûrs pour l'espèce car ils ne sont pas protégés, ce qui rend difficile les actions de conservation.

Mots clés : Aigrette Garzette, aire de reproduction, Antigua, Ardeidae, biogéographie, Caraïbes, colonisation, conservation, dispersion, distribution, *Egretta garzetta*, expansion de l'aire de répartition

The European population of the Little Egret (*Egretta garzetta*) has expanded its range in recent decades, northward in Europe and westward into the Americas (Kushlan and Hancock 2005). In the Western Hemisphere, it is known to nest only in Barbados, West Indies (Massiah and Frost 1998, Kushlan *et al.* 2007). But it has also been reported, increasingly, from elsewhere in the Western Hemisphere (Murphy 1992, Mlodinow *et al.* 2004).

It is difficult but by no means impossible to distinguish the Little Egret from the very similar Snowy Egret (*Egretta thula*) in the field (Massiah 1996, Mlodinow *et al.* 2004). The two species typically differ in behavior, size, and other details of appearance (Massiah 1996, Mlodinow *et al.* 2004,

Kushlan 2007). Considering the entire list of distinguishing characters usually results in an assured identification. However, there remains confusion among observers as to the possibility that some birds are hybrids. Hybridization so far has not yet been proven; and in the zone of breeding overlap in Barbados, there is no evidence for successful interbreeding between the two species, although interspecific copulation has been reported (Southeastern Caribbean Bird Alert 1999-15).

The conservation situation on Barbados is not encouraging, as the sole nesting site for Little Egrets is tiny and at risk over the long term without continued protection and intensive management (Kushlan *et al.* 2007). Clearly it is of importance to document

the pattern of colonization of the hemisphere by the species. The purpose of the present study was to document the status of the Little Egret on the island of Antigua.

STUDY AREA AND METHODS

The Little Egret has been reported on Antigua for several years (L. Manfredi and A. Jaramillo pers. comm.). The present study was conducted 17-25 March 2008. Observations were concentrated at McKinnon's Salt Pond, on the north western coast of the island (61°50.91' W, 17°8.61' N). An active heron colony there was inventoried for evidence of nesting by Little Egrets. The colony is located on a small peninsula supporting a mixed stand of mangrove and dune vegetation. In addition, wetlands throughout Antigua were surveyed for Little Egrets and other waterbirds. Little Egret and Snowy Egret were identified following Massiah (1996), using head feathers, body size, leg dimensions, posture, feeding behavior, and soft part color.

RESULTS

Little Egrets were found at four sites on Antigua: McKinnon's Salt Pond, Yeptons Swamp, Valley Church Bay, and Ffryes Point Swamp. In a single-day census of these known-occupied sites, the population on the island was determined to be at least 12 birds. Eight Little Egrets were repeatedly counted at McKinnon's Salt Pond, either at the colony site or feeding.

Identification of most birds to species was clear. Some of these birds were immature, as they lacked long plumes and breeding color, but could otherwise be readily identified. However, there also were birds for which identification was problematic. These typically had long plumes but also a shaggy head crest and seemed smaller than Little Egrets. In these birds, without observing the fully raised crest, it was somewhat difficult to determine the species. Given the shaggy full head crest of these birds, indicative of Snowy Egrets, we took a conservative course to not count them as Little Egrets.

Little Egrets fed in ponds and swamps that occur just inland of ocean beaches. These ponds along with freshwater reservoirs constitute the 36 wetlands that remain in Antigua. The beach ponds used by Little Egrets were similar in being shallow, with unvegetated centers, and lined with mangroves or upland vegetation. Most ponds on Antigua are heavily impacted by human use such as clearing of shoreline vegetation, diking, and drainage inflows. McKinnon's Salt Pond has a history of alteration

because it is behind a well-used beach, surrounded by communities and hotels, and used for receiving drainage. Nonetheless, these ponds were productive feeding sites for herons, as well as other waterbirds.

We identified three Little Egret nests at the McKinnon's Salt Pond colony. All nests contained eggs. The nests were identified in each case after carefully studying incubating birds while watching from hidden positions within the colony in the early morning. The birds' behavior assisted this effort. Incubating Little Egrets appeared more timid than either Snowy or Cattle egrets, leaving the nest immediately upon detecting disturbance nearby. They climbed to perches somewhat away from but in sight of their nests and were also slower than other species to return to their nests after being disturbed. This made identification of the incubating bird possible, as they were relatively well exposed. Identification of these breeding Little Egrets, as contrasted with nearby Snowy Egrets, was clear at such close range. Two of the three Little Egret nests were within 3 m of each other, the other nest was about 10 m from the others.

The McKinnon's Salt Pond colony supported nesting Great Egrets (*Ardea alba*), Cattle Egrets (*Bubulcus ibis*), Little Blue Herons (*Egretta caerulea*), and Snowy Egrets, in addition to the Little Egrets. We counted five Great Egret nests (all with young), 180 Cattle Egret nests (with young or eggs), three Little Blue Heron nests (all with eggs), and 38 Snowy Egret nests (all with eggs). Except for Great Egrets, some individuals were also still involved in courtship, indicating the colony was continuing to build. At night, 350 herons (80% Cattle Egrets, 15% Snowy Egrets) were counted arriving to roost at the colony site.

DISCUSSION

The discovery of the Little Egret nesting on Antigua is the second documentation of nesting in the Western Hemisphere. The species was first documented to breed in the hemisphere in 1994 on Barbados (Massiah 1996, Massiah and Frost 1998). The population on Barbados has remained stable at about 20 birds during most of the time since its discovery (Kushlan 2007). The species has been reported elsewhere in the West Indies over many years, including Trinidad and Tobago (Hayes and White 2001, French and Kenefick 2003), Suriname (Haverschmidt 1983), Brazil (Bencke *et al.* 2005), Guyana (Ryan 1997), and Aruba (Mlodinow 2004). On Antigua, Little Egrets were observed at McKinnon's Salt Pond separately by Jaramillo and

Manfredi (pers. comm.) in 2005. Jaramillo (pers. comm.) observed them at McKinnon's Salt Pond again in 2006, when he found at least seven birds including one perched at what would become the colony site. In 2008, he reported the same number (eight) at McKinnon's Salt Pond as we found in our study. With a present population of at least 12 birds island-wide, including some apparently immature birds, it seems likely that the Little Egret may have nested undetected on Antigua for some unknown number of years before our report.

The presence of the Little Egret in South America and the Caribbean is part of a pattern of increasing observations of Palearctic herons in the region (Kenefick and Hayes 2006), such as the Grey Heron (*Ardea cinerea*; Kushlan and Hancock 2005) and Western Reef Heron (*Egretta gularis*; Murphy and Nanan 1987, Mlodinow *et al.* 2004). Dispersal of the Little Egret has been a matter of particular interest because it has begun nesting and also because of the complexity of documentation due to similarity in appearance to the Snowy Egret (McLaren 1989, Murphy 1992, Mlodinow *et al.* 2004, Kushlan 2007). With practice, distinguishing typical examples of the two species in the field, especially where they are together, is straight-forward (Massiah 1998). However, as noted above, there are individuals that are not so clearly distinguishable. Further study will be needed to determine if such birds are Snowy Egrets, Little Egrets, or hybrids. As a word of caution, though, until such study, there would be no justification for assuming problematic birds to be hybrids.

The Little Egret population on Antigua is small, but it is not insignificant. It is about half the size of the Barbados population, and it accounts for a third of the Little Egrets presently known to be nesting in the Caribbean. As only the second nesting site known for the Western Hemisphere and with at least six nesting birds and eight birds overall, McKinnon's Salt Pond would qualify as a regionally important bird area.

The conservation future of McKinnon's Salt Pond and other beach ponds in Antigua are not secure. The beach ponds are privately owned and can be altered by their owners. The colony itself is on a peninsula made of fill material and attached to a paved roadbed. People use the site (e.g., collecting soil from under the nests) as do dogs and mongooses. For conservation purposes, the colony site could be easily made into an island, thereby offering the birds better protection from people, mongooses, and

domestic animals. The pond is fertile, perhaps as a result of the runoff it receives. During the spring study period, the pond supported many small fish and a variety of waterbirds including the Little Egrets that fed along its edges. Water is not allowed to flow between the pond and the sea, despite the presence of a connecting pipe placed under the road, due to its potential contamination of the adjacent ocean beach. Thus, its water levels and quality are not being managed. McKinnon's Salt Pond is adjacent to a well used and relatively undeveloped beach; the pond, the colony site, and the beach together could be managed to good effect as a combined nature reserve and active park, should authorities and land owners be so inclined, thereby offering increased protection to this nationally and regionally important natural resource site.

Despite potential difficulties in the conservation of its colony site and other waterbird feeding areas on Antigua, the colonization of a second location in the West Indies by the Little Egret is encouraging in that it demonstrates the egret's ability to disperse from its beachhead on Barbados and expand its geographic breeding range in the Western Hemisphere. Likely it will soon be found to be, or have been, nesting on other islands, such as Trinidad and Aruba, and perhaps on the mainland, such as in Surinam and Brazil. Upon such discoveries in the future, it is hoped that these will be fully documented in the literature and that local authorities will, in each case, consider undertaking appropriate conservation action.

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