

Do Cattle Egrets *Bubulcus ibis* in Sri Lanka migrate to breed?

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Jayaratne, R. L., Perera, I. C., Weerakoon, D. K., & Kotagama, S. W., 2016. Do Cattle Egrets *Bubulcus ibis* in Sri Lanka migrate to breed? *Indian BIRDS* 11 (3): 69–70.

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Manuscript received on 20 January 2016.

The Cattle Egret *Bubulcus ibis* is a common wetland bird in Sri Lanka, and a common member of communal roosting sites of water birds throughout the country. It forages in grasslands, paddy fields, marshes, and garbage dumping sites (Kotagama & Ratnavira 2010). White-coloured Cattle Egrets show a golden buff on their back, neck, and head during the breeding season (Kotagama & Ratnavira 2010).

Past studies have reported that some populations of Cattle Egrets are migratory, while others are dispersive (Telfair 2006). Cattle Egrets, in the southern plains of Australia, fly to winter areas—ranging from short distances, to more than 2000 km to Tasmania, and New Zealand (Maddock & Geering 1994). According to the studies done in India by Seedikkoya *et al.* (2005), and Kushlan & Hafner (2000), its populations in southern India appear to show local migrations in response to the monsoons. They move northward from Kerala, after June. Further, Rasmussen & Anderton (2005) noted that resident populations of the Cattle Egret, in Sri Lanka, were greatly increased by a winter influx.

Being a widespread species in Sri Lanka, Cattle Egrets should be monitored closely, as migratory Cattle Egrets are sometimes attributed in the spreading of ticks, which may cause human, livestock, and wildlife diseases (Corn *et al.* 1993). Hence, this work was specifically carried out, in Sri Lanka, with two objectives: (a) To find out the monthly variation of the Cattle Egret's population; and, (b) To identify its nesting heronries.

Five roosting sites were selected for this purpose, from three different climatic zones: a Colombo site from the wet zone, sites in Kandy from the montane region, and in Anuradhapura from the dry zone (Fig. 1). Population counts, at selected roosting sites, were carried out from January 2013 to July 2015 by scan sampling. The number of individuals arriving at the roosts, between 1700 and 1830 hrs, were counted twice a month.

Thirty-three heronries, comprising mixed-species, were observed during July–September, every year, from 2013 to 2015, throughout the island, to locate nesting Cattle Egrets (Fig. 1). These are the months when they disappear from their roosting sites for breeding.

The maximum population of Cattle Egrets was recorded during the months of January, and February (Fig. 2). In March, Cattle Egrets began moulting into their breeding plumage, which peaked by the end of May—indicating breeding from June onwards. This is contrary to the observations of Harrison (2011), who report their nesting from December to May.

Cattle Egret populations gradually decreased at roosting sites from March to June—no birds were observed in July, August, and September (Fig. 2). However, small groups of four to five birds in non-breeding plumage were observed in paddies and grasslands during these months. We found that though the number of individuals varies from roosting site to roosting site, from one non-breeding period to another, the total population of Cattle Egrets, excluding the Colombo site, remains relatively stable. We believe this indicates an internal movement of the birds from one roosting site to another.

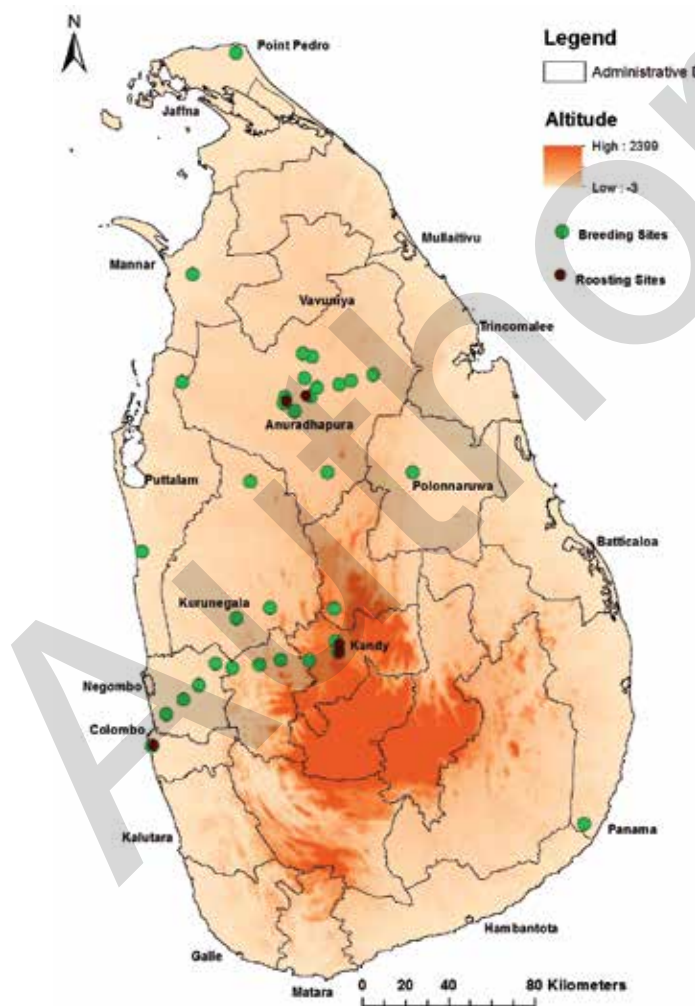


Fig.1. Heronries and roosting sites observed during the study.

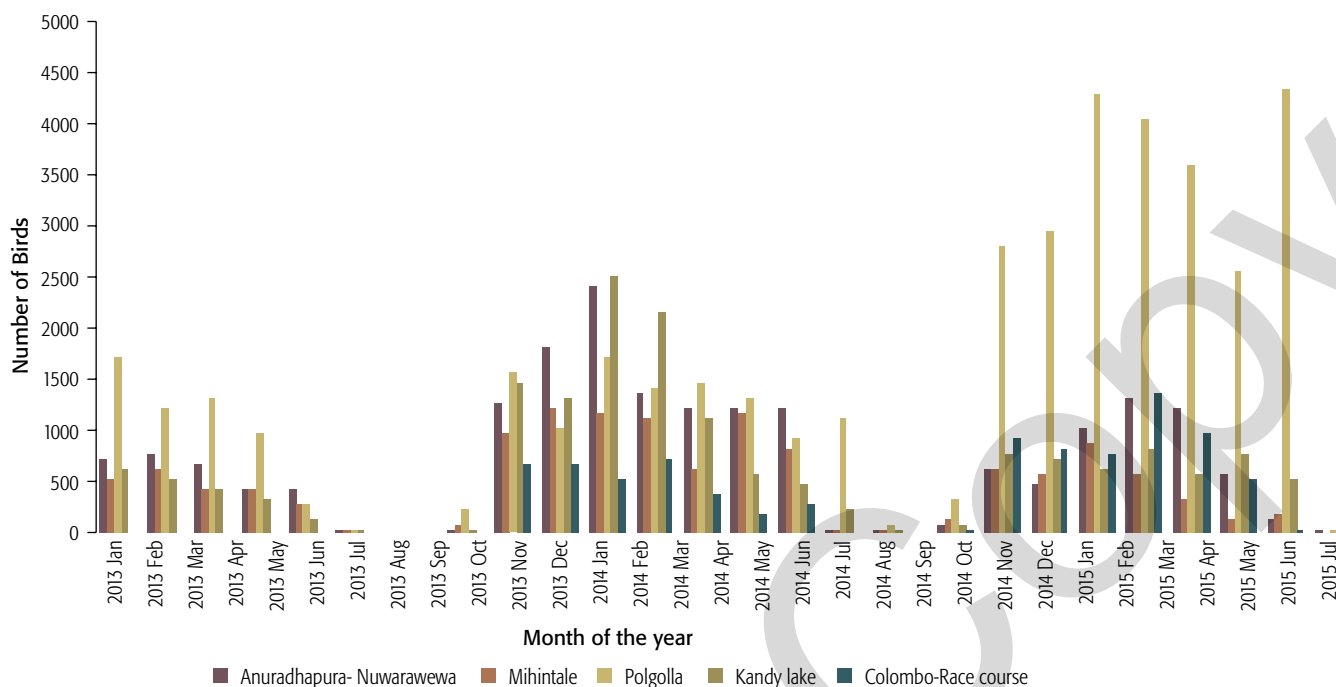


Fig.2. Number of Cattle Egrets recorded from selected roosts between Jan 2013 to July 2015 inbreeding and non-breeding seasons.

Ali & Ripley (1968) in India, and MacCarone and Parsons (1988) in America, have observed that Cattle Egrets nest in mixed colonies along with Cormorants (Phalacrocoracidae), Ibises (Threskiornithidae), and other members of the Ardeidae. However, Arendt & Arendt (1988) in the West Indies, Patankar et al. (2007) in Gujarat, India, Kour & Sahi (2013), in Jammu, India, and Dwevedi et al. (2015) in Uttar Pradesh, India have observed mono specific Cattle Egret heronries.

The thirty-three heronries that we observed during July–September comprised a mix of the following species: Little Egret *Egretta garzetta*, Intermediate Egret *Ardea intermedia*, Great Egret *A. alba*, Night Heron *Nycticorax nycticorax*, Purple Heron *A. purpurea*, Indian Pond Heron *Ardeola grayii*, and Grey Heron *A. cinerea*—but no Cattle Egrets, or their nests, were present in them.

Our results strengthen the argument that Cattle Egrets may migrate beyond the boundaries of Sri Lanka to breed. We recommend an expansion of this study to include satellite tracking of Cattle Egrets, to solve this mystery.

Acknowledgements

We are most grateful for financial support through a HETC grant (HETC/CMB/QIGW3). Also thanks to Department of Wild Life and Conservation, Sri Lanka for giving permission to carry out this study, and our sincere thanks to the head, department of Zoology, Faculty of Science, University of Colombo for giving strong support, and advice during the survey. Our special thanks go to Nilantha Kumudu Kumara, and Ranjan Dissanayake, Faculty of Applied Sciences, Rajarata University, Mihintale, Sri Lanka for supporting this study.

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