

ABSTRACT

The behavioural ecology of the cattle egret (Bubulcus ibis) in Barbados was investigated. Cattle egrets colonised Barbados in the late 1950's, and four roosting colonies were present at the time of the study. Three of these were also used for nesting. The colonies were positioned on the south, north, east and west coasts, suggesting that birds have attempted to maximize inter-roost distances. The population size of egrets in Barbados was estimated at 8000 birds. Cattle egrets foraged more commonly in agricultural than residential zones, but twice as many egrets foraged without grazers as with grazers. Mean group size of associated egrets (those with grazers) was smaller than that of non-associated egrets (those without grazers). Group sizes for associated and non-associated birds were higher in wet than dry months, and the percentage of egrets associated with grazers was higher in dry months.

Foraging rates of associated egrets at group sizes >3 were lower than at smaller group sizes, and lower than the foraging rates of non-associated birds over all group sizes. Foraging rates of non-associated egrets increased with increasing group size, and were higher in wet months. For associated birds, inter-individual distance decreased and aggression per bird increased

with increasing group size. Aggression was higher and inter-individual distances lower for associated than non-associated egrets at comparable group sizes. In both associated and non-associated birds, vigilance per bird decreased with increasing group size. It was higher at a given group size for associated than non-associated birds.

Cattle egrets have two reproductive periods per year in Barbados. For both periods of reproductive activity, young are leaving nests to begin foraging during the wet months of the year. Nests were distributed from 2 to 12 m above ground level. Nest density increased with increasing height off the ground, but declined at the tops of trees. The distribution of breeding success of egret pairs was similar to the distribution of nest density within the colony.