



NON-BREEDING BEHAVIOUR OF THE LESSER ADJUTANT STORK AND ITS NICHE PARTITIONING WITH OTHER SPECIES IN FAMILY CICONIIDAE AROUND MADURU OYA RESERVOIR

De Silva P.C.W.U., Dilrangi K.H. and Mahaulpatha W.A.D.*

Department of Zoology, Faculty of Applied Sciences,
University of Sri Jayewardenepura, Sri Lanka
mahaulpatha@sjp.ac.lk

Abstract

Lesser Adjutant Stork (*Leptoptilos javanicus*) is a large wading bird in Southeast Asia. The study was aimed to identify behavioural patterns of the Lesser Adjutant Stork and to investigate the niche partitioning of Lesser Adjutant Storks with other storks. Behavioural data and niche partitioning data of this species were collected using focal animal sampling from January to December 2019 around Maduru Oya reservoir for three consecutive days in each month between 0600h to 1800h in the morning, afternoon and evening time slots for a total of twelve hours per day. Birds were observed keeping more than a 50m distance without disturbing their natural behaviour. Species of Family Ciconiidae foraging with Lesser Adjutant Storks in a radius of 10 m were considered to share the same foraging niche. Niche breadth and niche overlap were calculated. Time spent on foraging, locomotion, resting, comfort and maintenance differed significantly among the time slots of the day time (One Way ANOVA, $p < 0.05$). In the morning, Lesser Adjutant Storks spent more time for foraging (39.73 ± 15.26 %) and comfort and maintenance (41.14 ± 18.04). In the mid-day more time was spent on locomotion (60.64 ± 37.84 %). In the evening more time was spent on resting (36.62 ± 23.24 %) and foraging (36.33 ± 13.15). No significant differences in behaviour were shown monthly and a high proportion of diurnal activity budget was spent on foraging and resting activities. Lesser Adjutant Stork's participation in mixed species foraging flocks was rare and only formed flocks with Painted Storks. Niche overlap with Painted Stork was at a higher degree but achieved coexistence most preferably due to differences in bill morphology. Present study provides detailed information on the variation of diurnal activity patterns of Lesser Adjutant Storks and its resource partitioning, which is useful in environmental monitoring, evaluation of habitat suitability and population management in order to conserve this Vulnerable species.

Keywords: Behaviour, Non-breeding behaviours, Resource partitioning, Lesser Adjutant Stork, Maduru Oya National Park