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A PRELIMINARY SURVEY ON LESSER ADJUTANT (*Leptoptilos javanicus*) IN KUMANA NATIONAL PARK, EASTERN PROVINCE SRI LANKA

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ABSTRACT

Globally threatened *Leptoptilos javanicus* (Lesser adjutant) is the largest bird recorded in Sri Lanka. It is found associated with wetlands in the dry zone of the island. These birds are threatened mainly due to loss of habitat which includes loss of feeding and nesting sites. Therefore, it is useful to identify major sites to observe these birds frequently. Main objective of this study was to identify the major sites in Kumana wetland cluster in the Eastern Province where Lesser adjutant can be observed since it provides suitable habitats to these birds and attracts a large number of visitors. This study was carried out in September 2013 in Kumana National Park. Sites occupied by Lesser adjutant were recorded by moving along a trail in a vehicle in Kumana National Park from the main entrance. According to the observations Thummulla wewa (003-06-609E, 001-53-719N), Yakala lagoon (003-04-029E, 001-49-795N) and Aliya wala (003-07-796E, 001-57-449N) are the three best sites to observe Lesser adjutant. A total number of 16 individuals were observed with a sighting of 10 at Thummulla wewa. Ground and tree crowns should be scanned for Lesser adjutants since they tend to rest on upper branches of relatively tall trees associated with water bodies. Alteration of habitats and increasing number of visitors at their natural sites will disturb the birds easily. Therefore, continuous monitoring of their population size and structure and improving the awareness of general public are vital to protect these birds which will attract both local and foreign tourists, especially in eco-tourism.

KEY WORDS: Habitat, Wetland, Birds, Population size

INTRODUCTION

The Lesser adjutant stork (*Leptoptilos javanicus*),a wading bird belonging to the family Ciconiidae, is the largest bird recorded in Sri Lanka. It is mainly distributed in the dry zone. They are found associated with water bodies such as inland tanks, ponds and coastal habitats such as lagoons and mangroves. Lesser adjutant is a globally threatened (vulnerable) (IUCN, 2012) bird since it has a declining population across its range. Although it is found in South Asia to South-East Asia, it has not been studied in most parts of its range. There is paucity in the knowledge on the population size, population structure, ecology and threats to Lesser adjutant. There are no major studies carried out on Lesser adjutant in Sri Lanka. Since this bird species is under the threat of population decline it is vital to identify different sites that facilitate these birds and to measure their population sizes. It is also important to determine the threats they face. Lack of research hinders appropriate conservation methods that should be brought in for the conservation of Lesser adjutant.

Eastern province of Sri Lanka possesses inland and coastal habitats suited for Lesser adjutant. It includes the Kumana National Park (6° 30'- 6° 42'N, 81° 04'- 81°15'E) which is located in Ampara District (Dewasundara *et al.*, 2013). Kumana National Park is approximately 19,000 hectares in area. It is a Ramsar wetland inhabited by a range of threatened and near threatened bird species. Kumana wetland receives rain

from the north-east monsoon that prevails from November to mid January (Dewasundara *et al*., 2013).

METERIALS AND METHODS

This study was carried out in September 2013 in Kumana National Park (Fig. 1) to identify the sites which are occupied by Lesser adjutant and to measure their population size. Birds were observed using binoculars while moving along the dirt road from the main entrance in a vehicle. Both ground and tree crowns were scanned on either sides of the dirt road. Interviews were carried out with general public to identify the threats to this species.

Figure 1. Map of the study site (Kumana National Park). (Source : Google Earth).

RESULTS AND DISCUSSION

Different types of habitats such as tanks, pools, streams, lagoons, marshes, scrub lands, forest patches were observed in the park. Lesser adjutant is found close to water bodies. Foraging individuals were observed on the banks of the water bodies while resting individuals were observed on top of huge trees at close proximity to their foraging sites (Fig. A & B).

According to the observations Thummulla wewa (003-06-609E, 001-53-719N), Yakala lagoon (003-04-029E, 001-49-795N) and Aliya wala (003-07-796E, 001-57-449N) are the three best sites to observe Lesser adjutant in Kumana National Park. Kumana villu and Kotalinda wewa are two other sites that can support Lesser adjutant. A total of 16 individuals (per day) were observed with 10 individuals at

Thummulla wewa. There are some other sites in Eastern province where Lesser adjutant has been recorded (Table 01).

Table 1. Sites in Eastern Province where Lesser adjutant can be observed.

Location	District
Pankulam	Trincomalee
Lahugala lake	Ampara
Sengamuwa	Ampara
Yalpotha	Ampara
Panama wetland	Ampara
Okanda lake	Ampara
Lagoons areas of Batticaloa	Batticaloa
Kumana national park	Ampara

In contrast to other sites highest number of Lesser adjutant individuals were found in Kumana National Park.

A B

Figure 2. Lesser adjutant foraging near a water body (A) and roosting on top of a branch on a tall tree (B).

Lesser adjutant is distributed in both protected and unprotected areas in the Eastern Province of Sri Lanka. Kumana National Park provides a variety of habitats for Lesser adjutant, therefore comparatively a large population can be observed inside the park within a small area. These habitats are both natural and manmade. Water bodies associated with small patches of forests/ huge trees well support Lesser adjutant. It can be the reason for sighting the highest number of Lesser adjutant individuals at Thummulla wewa since it is a medium sized tank with an adjacent patch of large tree species. Large groups can be found in such sites in contrast to water bodies which are found in vast open habitats without huge trees to roost. Flat land bordering water sources are foraging sites while large trees are used as resting sites. Open habitats may be important for landing and takeoff since they are large birds with a wide wing span. These birds share their habitat with conspecifics and other stork species. Absence of nesting sites may have been because the study was carried out in the dry season of Eastern province.

Lesser adjutant is highly vulnerable to anthropogenic threats in unprotected areas. These threats include alteration of natural habitats due to increasing number of human settlements. Poaching and collection of eggs are minor threats but still can affect the stability of Lesser adjutant populations. However Lesser adjutant is facing a new threat in protected areas such as Kumana National Park. It is the increasing number of visitors. The wetland is now accessible to general public and researchers with the end of 30 years of conflict. Since Lesser adjutant is a shy bird it can be disturbed even from a slight change in the surrounding. Therefore, increased visitor pressure at Kumana National Park will be a threat and it can be suggested that such conditions will lead these birds to leave their habitat. It is important to manage the inflow of visitors to reduce the crowding and unwanted stress in the park.

CONCLUSIONS

Despite its small size compared to the whole area of the island, Kumana National Park can support the survival of a relatively large population of Lesser adjutant. Nevertheless, there is a great potential in this charismatic bird to be used in both eco-tourism and mass tourism. Thus, it is vital to conserve the current population. Protection of existing natural habitats with small patches of huge trees adjacent to water bodies is crucial in order to facilitate large groups. Increased awareness of the general public is important in terms of conservation of this species since the public has no clear idea about the ecological and economic value of Lesser adjutant.

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