

(ID 297)

Breeding Success of a Small Flock of Greater Flamingos (*Phoenicopterus roseus*) Harbored in Captivity in an Ex-Situ Conservation Center in Hambantota, Sri Lanka

Nisandara, A.W.S.^{1*}, Senanayake, G.G.P.², Adikari, A.S.¹, Dayawansa, N.¹

¹ *Department of Zoology and Environment Sciences, University of Colombo, Colombo 03, Sri Lanka*

² *Birds Research Centre and Birds Park, Hambantota, Sri Lanka*

**siluninisandara@gmail.com*

Abstract

The Greater Flamingo (*Phoenicopterus roseus*) is the largest flamingo species in the world widely distributed in many geographical areas. It is a migratory species of bird in Sri Lanka. Although false nesting behaviour has been recorded in Sri Lanka, breeding has never been recorded in the wild. This study examined the breeding behaviour pattern of Greater Flamingos in a captive environment at Birds' Research Centre and Birds' Park, Hambantota, Sri Lanka. Observations were conducted on a flock of eight flamingos during daytime, from June to August 2022. Sexual dimorphism was present, and a balanced sex ratio was evident. Greater Flamingos naturally breed in saline environments; however, the study conducted in the Birds' Park revealed that breeding can happen at low salinity levels. The artificial mud nest mounds established in the flamingo enclosure of the bird park resulted in successful breeding. Three focal pairs laid eggs in mound nests and the clutch size were one. Females contributed over 50% of incubation time during the day. Aggressive encounters between focal pairs were evident (16.39%±0.16%) as the nest spacing was inadequate compared to natural nest spacing. Role reversals, changing incubation partners, and false incubation behaviours were noted, possibly influenced by nesting stress. The hatching success rate was 33% as only one pair which showed strong pair bonding was successful in rearing a chick. Parental care was given by both focal animals. Both male and female of the successful focal pair secreted crop milk to feed the chick during the early weeks of development. The focal male produced more crop milk to feed the chick more frequently (69.36%) than the female (30.64%). Also, the male fed the chick indirectly by secreting crop milk onto the female's head, and crop milk would flow into the chick's throat through its bill kept in contact with the female's bill. In contrast, the female fed directly into the chick's bill. Feeding intervals extended as the chick matured, showcasing adaptability in parenting. It engaged in self-maintenance activities such as preening and feeding, with parental intervention during threats. This study recorded the first instance of successful breeding in Greater Flamingos in an ex-situ conservation centre in Sri Lanka. The breeding success of this small flock is contradicting the established beliefs of non-breeding of smaller flocks. Breeding period at Hambantota extended from June to August was distinct from the natural breeding period observed in the Indian subcontinent.

Keywords: Captive breeding, Captive environment, Crop milk, False Incubation, Incubation dynamics