

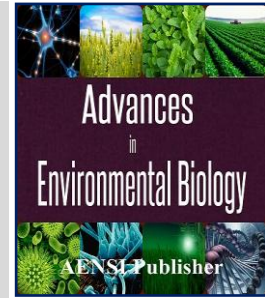


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Nesting, Hatchling Breeding and Feeding of Osprey *Pandion haliaetus* in Um El Sheikh Island, Dongonab Bay, Sudan

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ABSTRACT

Um El Sheikh Island is an island which located at Dongonab Bay. This island is suitable place for nesting to some seabirds. Osprey *Pandion haliaetus* was found to nest and breeding its hatchling during winter time at Um El Sheikh Island. More than three months were needed from laying the eggs up to flight for the hatchling. The hatchling differed in size and its weights ranged from 550g to 900g.

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INTRODUCTION

The Osprey (*Pandion haliaetus*) is a widely distributed Pandionidae of the order Accipitriformes [10]. It is a diurnal, fish-eating bird with reversible outer toe to allow them to grasp their slippery prey fish with two toes in front and two behind [12]. It tolerates a wide variety of habitats, nesting in any location near a body of water providing an adequate food supply [3].

Adequate description of Osprey was given by Forsman, (2008); Lees and Christie, (2001) and Terres, (1980). The sexes appear fairly similar, but the adult male can be distinguished from the female by its slimmer body and narrower wings [3].

This study aimed to identify the nesting time of *P. haliaetus*, feeding and breeding for the hatchling of *P. haliaetus*, and record of some measurements for the hatchling.

MATERIALS AND METHODS

Study area and nests description:

In Um El Sheikh Island (1km², N 20 ° 04' 900", E 37 ° 08' 850'') two Osprey nests were found, examined and measured using a tape. An active nest on a manmade platform (195 cm over a grave on the western side of the island, Fig. 1). This nest measures 190x190 cm with a thickness of 33 cm and a shallow median depression of 5 cm. An inactive ground nest was found in the eastern side of the island (Fig. 2). It is of irregular shape with maximum dimensions of 155x175 cm and a thickness of 35 cm. This irregularity is probably due to utilization of its material in construction the active nest. Both nests were made from dry branches of *Saueida monica* dominating the island, drifted wood, cystoseira, coralline algae, seaweeds, elephant ear sponges.

Observation and measurements:

Three Adult of *P. haliaetus* were observed since they had been laid their eggs. Then their three hatchling were observed up to be able to flight and depending on themselves for feeding. Some measurements were done on the hatchling e.g.: weight (gm), total length, peak length, head width, leg length and wing span (cm).

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Fig. 1: An active Osprey nest utilized by a pair and a solitary individual. The nest is on a man made platform.



Fig. 2: The ground nest.

RESULTS AND DISCUSSION

Three eggs probably 2 to 3 days old, were first seen in the nest on 6th of December 2013. Osprey is known as a monogamous bird incubating 2-3 eggs for 32 – 42 days and the hatchlings stay in the nest for an additional 50-60 days during which time both parents feed them [1]. The eggs hatched about six weeks after spotted in the nest (Fig. 3). Dennis (2007) who studied Osprey Kangaroo Island, South Australia, reported that the average time taken between hatchling and fledgling is 69 days.

During this study three adults were observed several times resting on the nest (Fig. 1) with a pair feeding the two large hatchlings and the third bird feeds the smallest hatchling only after the pair leaves the nest indicating that the nest is used by two broods at the same time. This mode of feeding is probably a synchrony in departure as suggested by Hagan and Walters (1990). The measurements of hatchlings were given in Table 1. The differences in size probably indicated a competitive advantage of the first hatched egg as suggested by Ehrlich *et al.*, (1988) and Snyder and Snyder (1991). The involvement of the mother whose chick died in feeding the non genetic fledgling is likely to be a foster feeding behaviour. Similar observation was reported by Poole (1982). It worth mentioning that over than 20 hours of observations, no agonistic behaviours were recorded.

Table 1: Measured data of three hatchling *Pandion haliaetus* (measurements were taken on 8/2/2014).

Parameter	Chick No. 1	Chick No. 2	Chick No. 3
Weight (gm)	900	800	550
Total length from the tip of beak to end of the tail in (cm)	30	31	28
Peak length (cm)	3	3	2.5
Head width (cm)	1	1	1
Leg length (cm)	15	15	12
Wing span (cm)	57	52	45

Examination of both nests confirmed the reports of Poole (1989) and Poole *et al.*, (2002) that Ospreys is entirely piscivorous. The remains of fish mostly fish heads belongs to *Scarus gibbus*, *Scarus sp.* and *Siganus stellatus*. This is in agreement with Evans (1982) who stated that fish constituted 99% of the Osprey's diet.

Chicks with full feather were seen 24th February, 2014 and first flight attempts were tried on 10th March 2014. The three adults and the three young started to move from the platform nest and ground nest and the young usually flight with adults during hunting of fish but stay in the air and no fishing trials were made by them. On the 15th march the youngest chick died in the platform nest. The three adults continued feeding the remaining two fishes mostly on the ground nest till the young's started to fish by themselves.



Fig. 3: Three Osprey chicks. The one indicated by an arrow died on the 15th March 2014.

Conclusion:

The results showed that *P. haliaetus* has been nested in the Sudanese Red Sea Coast in winter season. The breeding and feeding of the parents to their hatchling were continued up to the time which can depend on themselves.

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