SOME OBSERVATIONS ON BEHAVIOUR OF SPOTTED OWLET (*Athene brama*) DURING ITS BREEDING SEASON

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ABSTARACT

Foraging, courtship and mating behavior in a pair of spotted owlet (*Athene brama*) in Punjab, Pakistan was monitored. A total of 360 hours was spent in observing this pair. Observations made from 1700 to 2000 hours Pakistan standard Time (PST) from 15 February to 15 May 2002 revealed that no clear cut sexual dimorphism exists in this species and sexes were judged from the relative position of birds during mating. The owlets are mainly crepuscular. Immediately after emerging from their nest, they stretch their wings and legs (2.52 min ± 65 sec; n = 78), self-preen (2.12 min ± 45 sec; n = 93) and leave for foraging after emitting loud territorial calls. They use "sit and wait" strategy to capture their prey and perch on electric lamp posts 5 - 10 m high from the ground. Two instances of courting and mating were also observed.

Key words: Behaviour; Courtship; Display; Mating; Mobbing

INTRODCUTION

The spotted owlet uses tree cavities, cracks and recesses in building walls, rocks and cliffs as nests (Roberts. 1991; Mahmood-ul-Hassan *et al*., 2007) and is strongly associated with agriculture dominated landscapes like its European counterpart that avoids densely wooded areas (Exo 1992, Manez 1994, Génot *et al*. 1997, Osieck and Shawyer 1997). Although some information is available about its food habits (Akhtar and Beg 1985, Beg *et al*. 1990, Tariq *et al*. 2003), less is known regarding its nesting, roosting, breeding, courtship and mating habits. Whistler (1930), Ali and Ripley (1969), and Roberts (1991) have briefly described the breeding biology of this owlet in Pakistan. Recently, Mahmood-ul-Hassan *et al*., (2007) have provided some baseline information regarding its nesting and breeding habits in Punjab. Ishtiaq and Rehmani (2005) documented vocalization, breeding biology and issues related to the conservation of forest owlet (*Heteroglaux blewitti*) in Maharashtra, India but such reports are lacking from Pakistan. The present study provides some data on foraging, courtship and mating behavior of the spotted owlet from Punjab.

MATERIALS AND METHODS

General activities of the spotted owlet including foraging, courtship and mating were observed at the campus of the University of Agriculture, Faisalabad from 15 February 2002 to 15 May 2002 during peak breeding season of this species in Punjab (Mahmood-ul-Hassan *et al*., 2007). The nest hollow was located in the trunk of *Dalbergia sisso* present in front of Department of Zoology and Fisheries. The hollow was 3.5 m high, 0.05 wide and 0.18 m deep. The opening was circular in shape. The circumference of trunk at breast height was 0. 86 m.

The pair was observed from 1700 to 2000 hours Pakistan Standard Time (PST) daily. Since there is no clear cut sexual dimorphism in the species (Roberts, 1991), the sexes were judged by relative position of birds during mating at the first instance and subsequently by slight difference in color of their plumage. The observations were made from a distance of 10 m from the nest with the help of a binocular (10 x 50). The pair spent much of its time (63%) perching close to its nest on an electric lamp post which made it easier to observe their foraging habits.

REUSLTS AND DISCUSSION

During the 360 hours spent in observing this pair, it was found that pair emerged out of the hollow daily at dusk when other mobbing birds especially the house crow (*Corvus splendens*), the common myna (*Acridotheris tristis*) and the rose-ringed parakeet (*Psittacula karamri*) had settled on their night tree roosts (n = 100). Just after emergence from the hollow, the pair stretched their legs and wings for 2.52 min ± 65 sec (n = 78) and self-preened for another 2.12 min ± 45 sec (n = 93). Afterwards, they fluttered their wings while remaining on the same roost close to their nest hollow. Loud territorial "kuerk-kuerk" and a two noted "Kuer-veek" "kuer-veek" type calls were then uttered rapidly before the pair left the nest for foraging.

The owlets mostly used to perch on a near by lamp post 5 m above ground and bobbed their heads noticing the presence of any intruder. They spent 63% of

their total time perching on electric lamp post (37%), tree branches (21%) and cornice of the roof of Chemistry Department (5%) while remaining in flight for other activities. They usually waited on the perch and dived (n = 100) on the ground when intended prey was in their easy reach. Insects such as hoppers, crickets and roaches were caught both in flight or diving on ground either by using their beaks or with the help of one claw.

Two instances of courting and mating were recorded close to the nest. On 21 February, three owlets were seen in a tree, two of which elicited mating behavior for ten minutes. Three mountings spanning over 3, 5 and 3 seconds, respectively were recorded. During each mounting, the female leaned forward at a 25-30° angle from the horizontal with her wings partially extended laterally and her tail deflected laterally. The male straddled her back with his tarsi in back of and slightly beneath the level of her wings. No vocalizations were heard during coition but a total of seven "chur" calls were recorded during the whole session in which the third owlet continued to disturb them.

On 7th March, the same pair was observed courting again. The session lasted for 27 minutes. The first mounting of six seconds took place at the beginning of the courtship session. The male dismounted and a "chur" call was heard which was probably a begging call elicited by the female. The male moved to a nearby branch of the same tree and started self preening. The male then flew back to the female after five minutes. The female remained sitting motionless on the same branch during the intervening period. The male approached her and sat in close contact with her for two minutes. This was followed by four consecutive sessions of allopreening and bill touching. The duration of these sessions varied from 6 to 26 seconds. During each session the eyes of both the birds were partially closed. The male ended the courtship session and departed first leaving the female behind which followed him to another tree. During the whole period seventeen calls, twelve "chur" and five "chur-chur-chur" were elicited.

Knowledge of a species' reproductive biology is essential to understand its population dynamics and to resolve the related conservation issues (Lewis and Wales, 1993). The spotted owlet uses tree cavities, cracks and recesses in building walls, rocks and cliffs as nests (Roberts, 1991) and is strongly associated agriculture dominated landscapes like its European counterpart that avoids densely wooded areas (Exo, 1992; Manez, 1994; Génot *et al.*, 1997; Osieck and Shawyer, 1997).

As compared to other owl species, nests of the spotted owlet are easier to locate as they roost close to their nests during day and emit loud calls when disturbed (Roberts, 1991; Mahmood-ul-Hassan *et al*., 2007). They usually remain inactive during day unless being disturbed by some intruder and become active at dusk (Roberts, 1991; Mahmood-ul-Hassan *et al*., 2007). Very few reports on the daily rhythms and breeding biology of the owls are available (Jacot, 1930; Haverschmidt, 1946; McQueen, 1972; Martin, 1973, 1974; Forsman and Wight, 1979, Smith *et al*. 1980) but none is about the spotted owlet to compare it with present study. However, the social nibbling found in spotted owlet has been described by Ellis (1979). The observations made during this study on the copulation and allopreening are in line with those made by Haverschmidt (1946), McQueen (1972), Martin (1973) and Smith *et al*. (1980).

No clear cut sexual dimorphism was observed in the Punjab population of spotted owlet (Roberts, 1991). Ishtiaq and Rehmani (2005) also identified male and female forest owlets (*H. blewitti*) from their relative position during copulation. The behavior of owlets was almost the same as described by Ishtiaq and Rehamni (2005) however; male owlet was not seen offering food to female during courtship and display.

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