



**BREEDING BIOLOGY OF ASIAN PARADISE FLYCATCHER,
TERPSIPHONE PARADISI, AT S.D.S.M COLLEGE, PALGHAR,
MAHARASTRA.**

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ABSTRACT

Breeding behaviour and reproductive success of Asian Paradise flycatcher were observed during the breeding season in 2015 at R.D. centre of S.D.S.M. College, Palghar. The College is situated about 3 Km away from Palghar railway station. It was observed that both (male and female) were participating in nest building, incubation, parental care sincerely. In this paper authors intent to elaborate chronology of breeding cycle which lasted around one month.

Key Words: Breeding behavior, Asian Paradise flycatcher

1. Introduction

The Asian Paradise Flycatcher *Terpsiphone paradisi* is a common but unevenly distributed. It is rare and very sporadic in the Deccan (Ali & Ripley, 2007). It is forest-living bird species that is widely distributed in Asia. Asian Paradise Flycatchers have twelve tail feathers of which the two central feathers of adult males are greatly elongated and form streamers. There are two colour types in males, rufous and white (Owen, 1963). Males are distinguished by their conspicuously broad blue eye-rings and greatly elongated central pair of tail feathers extending up to 25 cm beyond the rest of tail. Females have only one morph, dull rufous-brown with grey eye-

ringed and short tail.(Owen, 1963; Ali & Ripley, 1972; Sibley and Monroe,1990; Lekagul & Round, 1991; King *et all.*, 1995; Mizuta, 1998; Mizuta and Yamagishi,1998; Khobkhet, 2004; Robson, 2004).

Studies on behavioural ecology of birds provide essential information in the field of evolutionary biology. Ornithology can develop and mature mainly by the collection and proper interpretation of real data collected in the field on different aspects of birds' life (Nolan, 1978). The Asian Paradise Flycatcher, *Terpsiphone paradisi*, is monogamous and breeds mostly in broken foot hills and peninsular hills of the country. Affects well watered and shady forest bamboo clad nullah, plantation and village groves spreading in winter to gardens and scrub. Both male and female take part in nest-building, incubation, brooding and feeding of the nestlings (Khobkhet, 2004). The nest site selection in birds can be an important determinant of reproductive success by affecting losses caused by predators and weather the two most important causes of nest failure (Nolan, 1963; Ricklefs, 1969 a). Singh et.al ., 2017; also studied the nesting site activities in breeding time of Asian Paradise flycatcher.

In this paper authors studied the breeding behaviour and reproductive success of Asian Paradise flycatcher in the S. D. S.M. college, Palghar, during the year 2015.

2. Study Area

This study was conducted at Rural Development (R.D.) centre of S.D.S.M. College, Palghar. The College is situated between Geographic coordinates of Latitude: 19°71'10" N Longitude: 72°75'94" E. It is a developing and capital Town of newly carved Palghar district of Maharashtra and located about 90 kilometers north of Mumbai. Palghar lies on the Western Line of the Mumbai Suburban Railway on the busy Mumbai-Ahmadabad rail corridor. The college is situated about 3 km distance from Palghar railway station.

R.D. centre of S.D.S.M. College is cultivable garden and mostly contains trees of chiku, mango with mix type natural vegetation. It is an isolated area of the collage with least minimum disturbance of human activities. Due to this birds are attracted in this area for nesting/ breeding / foraging.

3. Material and Method

The entire observations were recorded from a selected confined place in the R.D. centre without disturbing the birds. The observations were recorded by using Nikon Action 10x50 binocular and relevant photographs were taken from Canon 700 D. Birds were identified with the help of standard methods given by Ali and Ripley (1969,1995,1996) and Ali (2002) .

4. Result and Discussion

The breeding behavior of Asian Paradise Flycatcher was observed during June 2015 to July 2015 which is breeding period in Palghar. The first sight of the nest was on 30/06/2015. The nest was empty without any egg. The presence of first egg was observed on 04/07/2015. In all we found 3 eggs in the nest which were light pink in colour on 07/07/2015. We took the measurement of egg such as length (21.6 mm) and breadth (15.2 mm) which are nearer to the average of size of 100 eggs, (20.2 mm x 15.1 mm) (Ali & Ripley, 2007). Singh et.al, 2017; also studied Chronology of breeding cycle of Magpie robin in Tarapur Palghar.

The incubation period lasted about 14-16 days and the nestling period 9-12 days. (Santoshi Yamagishi, 1998). Ali & Ripley (2007) has recorded the incubation period as 15-16 days while in Palghar the incubation period was lasted 19 -20 days . The breeding season was March to August, chiefly May to July (Ali & Ripley, 2007). In Palghar breeding season was found from June to July. We found an 23rd July only one nestling was present. Ali & Ripley (2007) observed that no second brood if first is successful and young leaves the nest about 12 days after hatching. But in the present study we could observe the nestling on 23rd July and nothing on 25th July.

Table 1: Chronology of breeding cycle of Asian Paradise Flycatcher at S.D.S.M. College, Palghar.

Sr.No.	Date	Observation at nest site
1	25/6/2015	5 -6 Asian Paradise Flycatcher seen at College campus.
2	30/6/2015	Nest found.
3	4/7/2015	1 egg was seen in the nest having light pink colour.
4	6/7/2015	2 eggs were seen in the nest.
5	7/7/2015	3 eggs were seen in the nest.

6	9/7/2015	All eggs were positioned close to each other
7	10/7/2015	All pointed end of the eggs were towards the centre.
8	13/7/2015	Birds changed the position of the eggs from inside to outside and vice versa.
9	18/7/2015	Female and male both incubate eggs.
10	20/7/2015	Heavy rain started and both protected their nest and eggs.
11	22/7/2015	Birds spread their wings to protect the eggs from heavy rain.
12	23/7/2015	1 chick was seen in the nest.
13	25/7/2015	Chick and eggs both were missing. Nest was empty.

Fig. 1-6. The development of the Asian Paradise Flycatcher.

Fig.1



Fig.2



Fig.3



Fig.4



Fig.5



Fig.6



In general, most of the studies showed lower breeding success in tree cavities compared to nest boxes (Nilsson, 1975, 1986), Balen *et al.* (1982), East and Perrins (1988), Alatalo *et al.* (1990), Lundberg and Alatalo (1992), Purcell *et al.* (1997). Contrary to these studies Ritter *et al.* (1978), Mitrus, (2003) and Czeszczewik (2004) reported higher breeding success in tree cavities than nest boxes. While other studies have not reported any effect of nest box on nesting success Johnson and Kermott (1994), Miller (2002). In our studies reproductive success was zero % as we could get neither egg nor nestling on 25/07/2015. This is the cause of great concern. In the present study failure of reproductive success can be attributed to tress passers (workers, student, Predation and whether. Therefore further study is required on the different factors on reproductive success.

5. Conclusion

In the present study we observed the breeding behavior of Asian Paradise Flycatcher which lasted between June and July in this area. The incubation period lasted 19-20 days. It was found during this study that there was only one nestling out of three eggs on 23rd July but to our surprise we could get neither eggs nor nestlings on 25th July. We don't know whether the nestling died or parents manipulated the nestling. Therefore further intensive study is requiring to understand the proper breeding biology/ reproductive success of Asian Paradise Flycatcher.

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