

Mapping Review on Paradise-Flycatchers: Expedition, Breeding Plumage, and Natural Threats

Ashraful Kabir

Department of Biology, Saidpur Cantonment Public College, Saidpur Cantonment—5311, Nilphamari, Bangladesh

***Corresponding Author:** Ashraful Kabir, Department of Biology, Saidpur Cantonment Public College, Saidpur Cantonment—5311, Nilphamari, Bangladesh

Abstract

In the order Passeriformes, the paradise-flycatchers (*Terpsiphone* sp.) have an impact to study on their behaviour and colour morphs. It is an uncommon and summer migratory bird. Many articles were available on the internet on this significant bird. A well-established research methodology could help to understand its breeding activities. Based on many results, in all paradise-flycatchers, males exhibited two colour morphs—rufous and white (Plates 1-3). Due to sympatric speciation, males can be focused themselves with rufous or white morph.

Keywords: Paradise-flycatcher, behaviour, colour morphs, breeding, predators

1. INTRODUCTION

Monarchidae is a family of insectivorous songbirds include shrike bills, magpie-larks, and paradise-flycatchers. It is uncommon passerine bird and a summer visitor of Bangladesh found in thick forests (Bhuiyan, 2009). The total length of the male bird is 50 cm with 30 cm tail streamer, and female is 20 cm. This is a least concerned (LC) bird in global and national status (IUCN Bangladesh, 2015). It is native to the Indian Subcontinent, central Asia, and Myanmar (Bird Life International, 2019). In a broad sense, this bird is available in China, Japan, Afghanistan, Myanmar, Thailand, Malaysia, and Indonesia. Also, this a group of noisy bird and has sharp skreek call (Bhuiyan, 2009). This bird is the state bird of Madhya Pradesh (Kushwah, 2001). In Bangladesh, the noted paradise-flycatcher is Indian paradise-flycatcher, *Terpsiphone paradisi paradisi* (Ali and Ripley, 2001). Out of 16 subspecies, *T. p. paradisi*, *T. p. leucogaster*, and *T. p. saturator* occur in Bangladesh (Haque and Chakma, 2008). The objective of this study is to understand especially the male plumages on the basis of their natural breeding. The intent of this write-up, is to clarify the colour morphs of paradise-flycatchers in both sexes.

2. CLASSIFICATION

Phylum: Chordata

Class: Aves

Order: Passeriformes

Family: Monarchidae

Genus: *Terpsiphone*

Species: *paradisi*

Scientific name: *Terpsiphone paradisi* (L. 1758)

3. BEHAVIOURS

Occasionally, this bird seen in pairs but unevenly distributed. Flight is swift-like and undulating. Its migratory movements not observed well. Northern birds are probably more migratory, and southern birds prone to erratic winter movements (Ali and Ripley, 2001). This bird is resident in some localities but migratory in others (Ali, 2002). On the other hand, this is widespread resident and like forest and well-wooded areas (Grimmett *et al.*, 2007). It is migratory bird and spends the winter season in tropical Asia (Owen, 1963).

4. COLOUR MORPHS

The first-year bird has ashy breast until second autumn moult comes. Intermediate individuals are most white in plumage or white with rusty traces. Male has two colour morphs: rufous morph with white underparts and white with black primaries. Female is similar to rufous male but with much shorter graduated tail (Khan, 2008) (Plates 1-3). Male requires long tail within 2-3 years. Males maybe polymorphic

for rufous and white plumage colour; rufous birds' may be the sub-adults, and their two sympatric species distinguishable only in the male (Owen, 1963). Juveniles are rufous, and after second-year they turn into white morphs. Many males remain a rufous morph for their entire lives (Plate 2). The rufous morph is more common than the white morph. Rufous birds are rare in the extreme southeastern part. The white morph is more common in the southern areas of

their range than in the north (Deeds, 2020) (Plate 3). Some rufous-coloured males do not have long central feathers (Ali and Ripley, 1972; Lekagul and Round, 1991). Three types of males, rufous-coloured with short tail, rufous-coloured with long tail, and white-coloured with long tail, can exist in the same population. Females and rufous (Plate 1) and short-tailed males resemble each other in plumage colouration (Mizuta and Yamagishi, 1998).



Plate 1. Rufous female



Plate 2. Rufous male



Plate 3. White male

5. BREEDING BIOLOGY

In general, most of the studies showed lower breeding success in tree cavities compared to nest boxes (van Balen *et al.*, 1982; Nilsson, 1986; East and Perrins, 1988; Alatalo *et al.*, 1990; Lundberg and Alatalo, 1992). Contrary of these studies, Mitrus (2003) and Czeszczewik (2004) reported higher breeding success in tree cavities than in nest boxes. Reproductive success was 100% as we could observe the juveniles grow up to their adulthood, though finding was not carried out sufficiently. In the case of monogamous species, the long tail in males is not mandatory because male can require only one female (Mizuta and Yamagishi, 1998). The function of long tail of male assumed to be related to sexual selection (Bhuiyan, 2009). The breeding season is from March to August, chiefly May and June. Nest is cup-like and 15 metres from the ground. Eggs are generally 4, often 3, pink to nearly white. Incubation period are 15-16 days, and fledging 12 days. A study suggested 44.4% young can survived in this bird (Ngoenjun and Sitasuwan, 2009). Interspecific feeding noted with paradise-flycatcher chicks fed by oriental white-eye (Tehsin and Tehsin, 1998).

6. NATURAL PREDATORS

Treepies and drongos are the major threats to the chicks of paradise-flycatchers (Nolan, 1963; Ricklefs, 1969).

7. CONCLUSION

The Genus *Terpsiphone* has two colour morphs—rufous and white but mostly they

found rufous. The sexual selection allows their morphs when same types of males are around them. This selection depends on the struggle between males to access females (Brennan, 2010). Sometimes, the colour morphs focused with difficulties for understanding other species or subspecies of the same genus. Year-wise seasonal data on their breeding activities could solve such queries.

REFERENCES

- [1] Quiñónez-Guzmán, JM, Mejía-Quintanilla, DJ, Ramírez, H and Sagastume, D (2018) Avifauna del Parque Internacional La Amistad (sector Isla) y los territorios indígenas Bribri y Cabécar, Costa Rica. *Cotinga* 41: 29-40.
- [2] Alatalo, R.V., Glynn, C., Lundberg, A. 1990. Singing rate and female attraction in the pied flycatcher: an experiment. *Animal Behaviour* 39 (3): 601-603.
- [3] Ali, S. 2002. *The Book of Indian Birds*. Bombay Natural History Society, 326 pp.
- [4] Ali, S. and Ripley, S.D. 1972. *Handbook of the Birds of India and Pakistan* (Vol. 7). Oxford University Press, Bombay, pp. 218-220.
- [5] Ali, S. and Ripley, S.D. 2001. *Handbook of the Birds of India and Pakistan* (Vol. 7). Oxford University Press, New Delhi, 236 pp.
- [6] Bhuiyan, A.H. 2009. Asian paradise-flycatcher, most beautiful bird of Bangladesh. <https://ahbphotography.wordpress.com/2009/05/31/asian-paradise-flycatcher-most-beautiful-bird-of-bangladesh/>.
- [7] BirdLife International. 2019. *Terpsiphone paradisi*: IUCN Red List of Threatened Species. Doi:10.2305/IUCN.UK-2017-3.RLTF. T103715992A155628184.en

- [8] Brennan, P. 2010. Sexual selection. *Nature Education Knowledge* 3(10): 79. <https://www.nature.com/scitable/knowledge/library/sexual-selection-13255240/>.
- [9] Czeszczewik, D. 2004. Breeding success and timing of the pied flycatcher *Ficedula hypoleuca* nesting in natural holes and nest-boxes in the Bialowieza Forest, Poland. *Acta Ornithologica* 39(1): 15-20.
- [10] Deeds, T. 2020. *Terpsiphone paradisi* Asian paradise-flycatcher. https://animaldiversity.org/accounts/Terpsiphone_paradisi/.
- [11] East, M.L. and Perrins, C.M. 1988. The effect of nest boxes on breeding populations of birds in broadleaved temperate woodlands. *Ibis* 130(4): 393-401.
- [12] Grimmett, R., Inskipp, C., Inskipp, T. 2007. *Oxford Pocket Guide to the Birds of the Indian Subcontinent*. Oxford University Press, New Delhi, 384 pp.
- [13] Haque, E.U. and Chakma, S. 2008. *Terpsiphone paradisi* (L. 1758). In: *Encyclopedia of Flora and Fauna of Bangladesh*, Vol. 26: Birds. Asiatic Society of Bangladesh, Dhaka, pp. 346-347.
- [14] Indian paradise-flycatcher (female). 2023. <https://www.flickr.com/photos/atony/52070031715>.
- [15] Indian paradise-flycatcher (rufous male). 2023. <https://ebird.org/species/aspfly1>.
- [16] Indian paradise-flycatcher (white male). 2023. <https://macaulaylibrary.org/asset/120761561>.
- [17] IUCN Bangladesh. 2015. *Red List of Bangladesh Volume 3: Birds*. IUCN, International Union for Conservation of Nature, Bangladesh Country Office, Dhaka, Bangladesh, 694 pp.
- [18] Khan, M.M.H. 2008. *Protected Areas of Bangladesh—A Guide to Wildlife*. Nishorgo Program, Bangladesh Forest Department, Dhaka, Bangladesh, 304 pp.
- [19] Kushwah, R.B.S. 2001. *Economics of Protected Areas and its Effect on Biodiversity*. APH Publishing, India, 645 pp. https://books.google.com.bd/books/about/Economics_of_Protected_Areas_and_Its_Eff.html?id=PDIMEvaBeoAC&redir_esc=y.
- [20] Lekagul, B. and Round, P.D. 1991. *A Guide to the Birds of Thailand*. Saha Karn Bhaet Co., Ltd., Bangkok, 364 pp.
- [21] Lundberg, A. and Alatalo, R.V. 1992. *The Pied Flycatcher*. T & AD, Poyser, London, 267 pp.
- [22] Mitrus, C. 2003. A comparison of the breeding ecology of collared flycatcher nesting in boxes and natural cavities. *Journal of Field Ornithology* 74(3): 293-299.
- [23] Mizuta, T. and Yamagishi, S. 1998. Breeding biology of monogamous Asian paradise flycatcher *Terpsiphone paradisi* (Aves: Monarchinae): a special reference to colour dimorphism and exaggerated long tails in male. *The Raffles Bulletin of Zoology* 46(1): 101-112.
- [24] Ngoenjan, P. and Sitasuwan, N. 2009. Post-hatching growth and development of the Asian paradise flycatcher (*Terpsiphone paradisi*). *Research Journal of Biological Sciences* 4 (12): 1244-1249.
- [25] Nilsson, S.G. 1986. Evolution of hole-nesting in birds: on balancing selection pressures. *The Auk* 103 (2): 432-435.
- [26] Nolan, V. Jr. 1963. Reproductive success of birds in a deciduous scrub habitat. *Ecology* 44 (2): 305-313.
- [27] Owen, D.F. 1963. The rufous and white forms of an Asiatic paradise flycatcher, *Terpsiphone paradisi*. *Ardea* 51:230-236.
- [28] Ricklefs, R.E. 1969. An analysis of nesting mortality in birds. *Smithsonian Contributions to Zoology*, 1-48.
- [29] Tehsin, R.H.K. and Tehsin, H. 1998. White-eye (*Zosterops palpebrosa*) feeding the chicks of paradise flycatcher (*Terpsiphone paradisi*). *Journal of Bombay Natural History Society* 95 (2): 348.
- [30] van Balen, J.H., Booy, C.J.H., van Franeker, J.A., Osieck, E.R. 1982. Studies on hole-nesting birds in natural nest sites. *Ardea* 55(1-2): 1-24.

Citation: Ashraful Kabir. *Mapping Review on Paradise-Flycatchers: Expedition, Breeding Plumage, and Natural Threats*. *International Journal of Research Studies in Zoology*. 2024; 8(2):1-3. DOI: <http://dx.doi.org/10.20431/2454-941X.0802001>.

Copyright: © 2024 Authors. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.