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continued on the back inside cover

Cover: *Euphaea pseudodispar* shot at Kalindi River, Thirunelly, Wayanad district, Kerala. © Muneer P.K.



New breeding site record of Oriental White Ibis *Threskiornis melanocephalus* (Aves: Threskiornithidae) at Thirunavaya wetlands, Kerala, India

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The Oriental White Ibis *Threskiornis melanocephalus* (Latham, 1790) is a globally threatened species (Birdlife International 2021), coming under the family Threskiornithidae of the order Pelecaniformes. This wading bird is also called the Indian White Ibis, Black-headed Ibis or Black-necked Ibis. It is a widespread resident species across the Indian subcontinent, known to breed in India, Sri Lanka, Nepal, and Myanmar (Ali & Ripley 1968; Hancock et al. 2001; Grimmet et al. 2011). In the recent past, the population of the species has declined and continues so worldwide due to various anthropogenic reasons. The species is listed in the Near Threatened category of the IUCN Red List (Birdlife International 2021). In Kerala, the bird species was rare until the mid-1990s and now has become a regular in most of the wetlands (Sashikumar et al. 2011). Meanwhile, scientific information on the population and ecology of this near-threatened species is scanty except for a few reports. The present study is the first breeding record reported from the Malappuram district of Kerala state.

In Kerala, the first breeding record of the species was reported from Wayanad district (Balakrishnan & Thomas 2004); the area is well-known as Panamaram heronry. The second breeding report came from Kottayam district

(Kumarakom) (Narayanan et al. 2006), which recorded a good breeding population. A recently small breeding population was noted at Palakkad district (Roshnath et al. 2017), Thiruvananthapuram Zoo (Bindya et al. 2019), and from Mavoor wetland, Kozhikode district (Shifa 2021).

Thirunavaya wetland (11.001N, 75.991E), is situated in the Malappuram district of Kerala state. The wetland is mainly an uncultivated paddy field and it is very close to the northern bank of the Bharathapuzha River, one of the largest rivers in Kerala. It spreads over nearly 150 ha bifurcated into two halves by the railway track. The wetland is also known for the cultivation of lotus flowers. One side of the wetland is modified into human habitation. The wetland is flooded during the south-west monsoon (June–September). During other seasons the wetland is extremely marshy. A small canal flows through the area. The margin of the canal is covered with a large number of screw pines (*Pandanus* sp.) which are also utilized by Openbill Stork for nesting. Being a breeding ground for Oriental White Ibis, Openbill Stork, and the ‘Near Threatened’ Oriental Darter, the wetland also acts as potential foraging habitat for a variety of water birds including Little Cormorant, Little Egret, Intermedi-

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Image 1. Colonial nesting of Oriental White Ibis seen associated with Open-billed Stork at Thirunavaya Wetland.



Image 2. Adult Ibis with a fledgling.

ate Egret, Common Kingfisher, Pied Kingfisher, Purple Heron, Pond Heron, Grey Heron, and other wetland associated avifauna.

Generally, the breeding period of Oriental White Ibis is in the monsoon season from June to September (Arif & Basheer 2012; Shifa 2021); the late breeders extend their breeding period from September to April (Narayanan et al. 2006). The nesting of Oriental White Ibis was noticed in October 2021 during a bird survey in Thirunavaya Wetland. The breeding plumage of the adult ibises and the begging behaviour of fledglings for food are very unique features to detect them as an active breeding colony. At the first observation itself all nestlings grew up into fledglings. Overall, eight nests were observed during the surveys. Out of which four were of Oriental White Ibis, three were of Openbill Stork, and one of Oriental Darter nest. The breeding site

Table 1. Breeding of waterbird species in Thirunavaya heronry during October–December 2021.

Species	Total no. of nests	Total no. of fledglings	Nesting success
Oriental White Ibis	4	9	Success
Oriental Darter	1	2	Success
Openbill stork	3	5	Success

*Nesting success: nest with at least one fledgling (Mayfield 1975).



Image 3. Adult Ibis feeding the fledgling.

was observed weekly for three months from October to December. For observation Nikon binoculars (10 x 40) were used. Photographs were taken by the Nikon P1000 model. The tree species used for colonial nesting is *Barringtonia acutangula*. The height of the nest tree is 4m from the wetland. The water level is < 0.5m and covered by the invasive species *Salvinia molesta*. The GBH of the nest tree is 0.84 m and the width of canopy coverage is 1.69 m. The nests are made up of locally available twigs and grasses. The availability of food and low predation risk, as well as reduced anthropogenic stress, maybe the reasons for the selection of this breeding site.

The average height of the nesting tree species at Kumarakom wetlands, Kottayam district was 02.59 ± 0.66 m from the water level (Narayanan et al. 2006), and in Panamaram, Wayanad district was 7 ± 0.45 m (Balakrishnan & Thomas 2004); in Thiruvananthapuram Zoo the nest height is 6 m from the ground (Bindya et al. 2019), whereas in Palakkad district it is 5 m (Roshnath et al. 2017). The studies in Calicut district (Shifa 2021), did not measure the exact nest height. The present study shows certain deviations from the results of the above records. In Thirunavaya wetlands Oriental White Ibis used an average nest height of 3.18 ± 0.49 m. The wetland heronry is a communal breed site that bears an association of

two species, Openbill Stork and Oriental Darter. Ibises bears a population count of eight adult parents and nine fledglings. Among Openbill Storks six adult parents and five young ones occur, whereas among Oriental Darter two adult parents and two young ones occur.

The Thirunavaya wetland is a feeding and breeding ground for a large number of avifauna including near-threatened species like Oriental White Ibis, Painted Stork, Oriental Darter, and Woolly Necked Stork; moreover, it is an abode for thousands of migratory birds. The spotting of large colonial nesting of Asain Openbill Stork is also witnessed the importance of this fragile ecosystem. Around 120 nests were counted by the survey conducted by Re Echo, an environmental organization in Thirunavaya. The proposed Silverline Railway Project is passing through this wetland, which will probably lead to an ecological disaster for the wetland in the future.

References

- Ali, S. & S.D. Ripley (1968). Hand Book of the Birds of India and Pakistan, Vol. 1. Oxford University Press, London, viii+380 pp.
- Balakrishnan, M. & S.K. Thomas (2004). Conserving the breeding habitat of the Near Threatened Oriental White Ibis (*Threskiornis melanocephalus*). *Current Science* 87(9): 1190–1192.
- Bindya, A., R. Roshnath & J. Alexander (2019). Notes on breeding and management of Black-headed Ibis *Threskiornis melanocephalus* (Aves: Pelecaniformes: Threskiornithidae) at Thiruvananthapuram Zoo, Kerala, India. *Zoo's Print* 34(8): 27–31.
- BirdLife International (2021). Species factsheet: *Threskiornis melanocephalus*. <http://www.birdlife.org> Accessed on 12 June 2021.
- Grimmet, R., C. Inskipp & T. Inskipp (2011). *Birds of the Indian Subcontinent*. Oxford University Press & Christopher Helm., London, 528 pp.
- Hancock, J.A., J.A. Kushlan & M.P. Kahl (2001). *Storks, Ibises and Spoonbills of the World*. Academic Press, Harcourt Brace Jovanovich, 385 pp.
- Mayfield, H. (1975). Suggestions for calculating Nest success. *Wilson bulletin* 87: 456–466.
- Narayanan, S.P., B. Sreekumar & L. Vijayan (2006). Breeding of the Oriental White Ibis (*Threskiornis melanocephalus*) at Kumarakom heronry (Kerala, India). *Indian Birds* 2(6): 150–151.
- Roshnath, R., C. Sashikumar, C.K. Vishnudas, J. Palot, S. Raju, H. Mannar, B. Sreekumar, H. Mavelikara, A.K. Sivakumar & S. Meppayur (2017). Heronries of Kerala, 2015: a summary of the Heronry Census. *Malabar Trogon* 15(3): 35–40.
- Sashikumar, C., J. Praveen, M.J. Palot & P.O. Nameer (2011). *Birds of Kerala- Status & Distribution*. DC Books, Kottayam, 835 pp.
- Shifa, C.T. (2021). Breeding record of Black-headed Ibis *Threskiornis melanocephalus* (Aves: Threskiornithidae) at Mavoor Wetland, Kozhikode District, Kerala, India. *Journal of Threatened Taxa* 13(14): 20299–20301. <https://doi.org/10.11609/jott.7717.13.14.20299-20301>



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Article

Identification of confiscated pangolin for conservation purposes through molecular approach

– Wirdateti, R. Taufiq P. Nugraha, Yulianto & Gono Semiadi, Pp. 21127–21139

Communications

The trade of Saiga Antelope horn for traditional medicine in Thailand

– Lalita Gomez, Penthai Siriawat & Chris R. Shepherd, Pp. 21140–21148

The occurrence of Indochinese Serow *Capricornis sumatraensis* in Virachey National Park, northeastern Cambodia

– Gregory McCann, Keith Pawlowski & Thon Soukhon, Pp. 21149–21154

Attitudes and perceptions of people about the Capped Langur *Trachypithecus pileatus* (Mammalia: Primates: Cercopithecidae): a preliminary study in Barail Wildlife Sanctuary, India

– Rofik Ahmed Barbhuiya, Amir Sohail Choudhury, Nazimur Rahman Talukdar & Parthankar Choudhury, Pp. 21155–21160

Feather characteristics of Common Myna *Acridotheres tristis* (Passeriformes: Sturnidae) from India

– Swapna Devi Ray, Goldin Quadros, Prateek Dey, Padmanabhan Pramod & Ram Pratap Singh, Pp. 21161–21169

Population and distribution of Wattled Crane *Bugenerus carunculatus*, Gmelin, 1989 at lake Tana area, Ethiopia

– Shimelis Aynalem Zelelew & George William Archibald, Pp. 21170–21178

Waterbird assemblage along Punatsangchhu River, Punakha and Wangdue Phodrang, Bhutan

– Nima & Ugyen Dorji, Pp. 21179–21189

Freshwater fishes of the Chimmony Wildlife Sanctuary, Western Ghats, India

– P.S. Eldho & M.K. Sajeevan, Pp. 21190–21198

Butterflies of Eravikulam National Park and its environs in the Western Ghats of Kerala, India

– Kalesh Sadasivan, Toms Augustine, Edayillam Kunhikrishnan & Baiju Kochunarayanan, Pp. 21199–21212

The dragonflies and damselflies (Insecta: Odonata) of Shendurney Wildlife Sanctuary, southern Western Ghats, India

– Kalesh Sadasivan, Vinayan P. Nair & K. Abraham Samuel, Pp. 21213–21226

A pioneering study on the spider fauna (Arachnida: Araneae) of Sagar District, Madhya Pradesh, India

– Tanmaya Rani Sethy & Janak Ahi, Pp. 21227–21238

Taxonomy and threat assessment of *Lagotis kunawurens* Rupr (Plantaginaceae), an endemic medicinal plant species of the Himalaya, India

– Aijaz Hassan Ganie, Tariq Ahmad Butt, Anzar Ahmad Khuroo, Nazima Rasool, Rameez Ahmad, Syed Basharat & Zafar A. Reshi, Pp. 21239–21245

The study of algal diversity from fresh water bodies of Chimmony Wildlife Sanctuary, Kerala, India

– Joel Jose & Jobi Xavier, Pp. 21246–21265

Review

A checklist of herpetofauna of Telangana state, India

– Chelmala Srinivasulu & Gandla Chethan Kumar, Pp. 21266–21281

Viewpoint

Comments on “The Dragonflies and Damselflies (Odonata) of Kerala – Status and Distribution”

– A. Vivek Chandran & K. Muhamed Sherif, Pp. 21282–21284

Short Communications

Landings of IUCN Red Listed finfishes at Chetlat Island of Lakshadweep, southeastern Arabian Sea

– Davood Nihal, N.M. Naseem, N. Abhirami & M.P. Prabhakaran, Pp. 21285–21289

First report of the termite *Glyptotermes ceylonicus* (Blattodea: Isoptera: Kalotermitidae) from India: an example of discontinuous distribution

– Edwin Joseph, Chinnu Ipe, Nisha P. Aravind, Sherin Antony & Jobin Mathew, Pp. 21290–21295

Authentic report of the emesine bug *Gardena melinarthrum* Dohrn, 1860 (Hemiptera: Heteroptera: Reduviidae) from India

– Sangamesh R. Hiremath, Santana Saikia & Hemant V. Ghatge, Pp. 21296–21301

Reappearance of stomatopod *Gonodactylus platysoma* (Wood-Mason, 1895) after an era from the intertidal region of Chota Balu, South Andaman, India

– N. Muthu Mohammed Naha, Limaangnen Pongener & G. Padmavati, Pp. 21302–21306

Range extension of earthworm *Drawida impertusa* Stephenson, 1920 (Clitellata: Moniligastridae) in Karnataka, India

– Vivek Hasyagar, S. Prasanth Narayanan & K.S. Sreepada, Pp. 21307–21310

Pelatantheria insectifera (Rchb.f.) Ridl. (Orchidaceae): a new generic record for Eastern Ghats of Andhra Pradesh, India

– V. Ashok Kumar, P. Janaki Rao, J. Prakasa Rao, S.B. Padal & C. Sudhakar Reddy, Pp. 21311–21314

Notes

New breeding site record of Oriental White Ibis *Threskiornis melanocephalus* (Aves: Threskiornithidae) at Thirunavaya wetlands, Kerala, India

– Binu Chullakattil, Pp. 21315–21317

Rediscovery of *Gardena melinarthrum* Dohrn from Sri Lanka

– Tharindu Ranasinghe & Hemant V. Ghatge, Pp. 21318–21320

A report on the occurrence of the cicada *Callogaeana festiva* (Fabricius, 1803) (Insecta: Cicadidae) from Mizoram, India

– Khawhling Marova, Fanai Malsawmdawngliana, Lal Muansanga & Hmar Tlawmte Lalremsanga, Pp. 21321–21323

New distribution records of two species of metallic ground beetles of the genus *Chlaenius* (Coleoptera: Carabidae: Chlaeniini) from the Western Ghats, India

– Duraikannu Vasanthakumar & Erich Kirschenhofer, Pp. 21324–21326

Report of *Euphaea pseudodispar* Sadasivan & Bhakare, 2021 (Insecta: Odonata) from Kerala, India

– P.K. Muneer, M. Madhavan & A. Vivek Chandran, Pp. 21327–21330

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