

THE BREEDING CHRONOLOGY OF THE WHITE-BREASTED WATERHEN *AMAURORNIS PHOENICURUS* IN KHERALU, NORTH GUJARAT, INDIA

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Abstract: The White-breasted waterhen *Amaurornis phoenicurus* are recovering in the River Rupen in Kheralu, during the present study. The attempt was made to locate the White-breasted waterhen nests, eggs, chicks, found and monitored and direct counts breeding and hatching species results Nesting season is defined as the period during which the birds are occupied in nesting activities, Nesting sites and Nest position and Nest materials, Eggs, Egg laying, Nestling period, Chicks, Complete nesting cycle .

Introduction: The White-breasted waterhen *Amaurornis phoenicurus* are the most common of the Raillidae families in North Gujarat in India (Acharya 2003). This bird is similar like Common Moorhen but Common moorhen has a white tail, while and red bill with yellow tip and red frontal shield. The Whit-

breasted waterhen's cinnamon, bill and legs are greenish or yellowish, with swollen reddish base to upper mandible. The White-breasted waterhen *Amaurornis phoenicurus* are widespread resident bird in Western India (Ali & Ripley 2007)



Plate Fig. 1.1(A) White-breasted waterhen *A. phoenicurus* in the river Rupen.

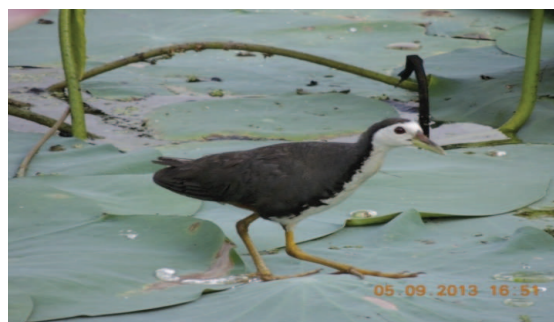
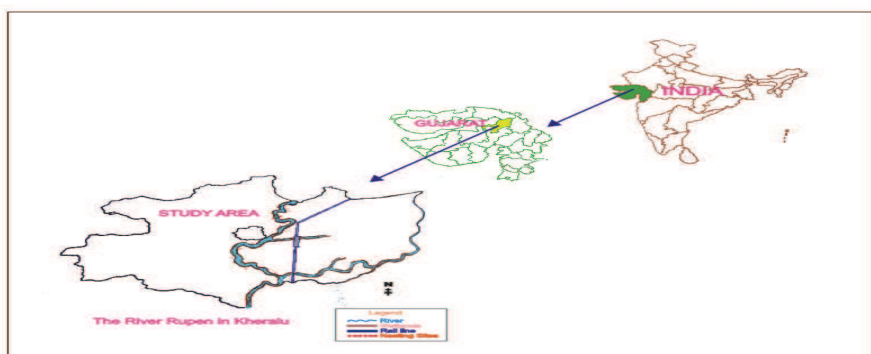


Plate Fig. 1.1(B) White-breasted waterhen *A. phoenicurus* in the river Rupen.

Study area: The study on breeding chronology of the White-breasted waterhen *Amaurornis phoenicurus* was conducted at the River Rupen at Kheralu and surrounded rural area (23.88°N Latitude. And 72.62°E Longitude, about 149 metres (488 feet) in Gujarat state, Western India. Kheralu is one of the taluka places of the Mehsana district, is situated 45 km east of Mehsana and 112 km from Ahmedabad (Plate fig. 1.2). The River Rupen of Kheralu is located in the centre part of Kheralu town. The area of site is

about 10000 hectares. The edges (banks) of the River Rupen are on West and East. There is a railway station, bus station and municipal garden on the bank of the river. Water flowed throughout the year. The river is surrounded by farms. The main source of water is rainfall. Tube well is also a source of water for irrigation. Water level of river remains 1-6 meters, but during heavy rainfall it remains 8-10 meters. It is comparatively less disturbed by human activities.



* Not to scale

Plate Fig. 1.2 The map of study area showing the location sites of nesting (red dot) of White-breasted waterhen

A. phoenicurus in the river Rupen in Kheralu. (North.Guj).India.

Methodology: To count this species, a river transect of selected sites, Month wise survey was conducted from July 2012 to June 2014 to record the number of active nest and total observations nests were constantly monitored 2-4 consecutive days in week

I have seen and recorded live breeding and hatching species by used 10 x 42 Nikon cameras, binoculars (8 x 35), telescope (20 x). I have taken measurements of the nests, eggs and chicks with the help of Vernier Scale and observed breeding activities from seasons of 2012 to 2014.

Results and discussion: To study breeding chronology we observed nesting sites, nest position, nest materials, eggs, chicks and nest cycle of the bird in the selected study area, which are, (A) West edges (bank) and (B) East edges (bank) of the River Rupen , Kheralu.

Selection of nesting site is considered to be the most important factor in reproductive success in many bird species (Coulson 1968; Rendell and Robertson 1989). White-breasted waterhen builds nest amongst reeds, tall grass, wherever water is surrounding by thick vegetative cover, skulking along the edges of rivers, or dense undergrowth in both wet and dry habitats. *A.*

phoenicurus breed throughout the year. In the River Rupen edges at Kheralu, nest building period is in May- Jun and January (4-6-days).The nest is a shallow cup-shaped pad made of sedges, Eichhornia, Plstia, Nymphaca, Vallisneria, Hydrilla, Lotus, bamboo leaves, reeds and twinges thinly covered with dry grass, placed in dry location amidst clumps of tall reeds and grasses or Shrubs up to five feet above the ground, or up bushes, bamboo clumps. It is always on near wetland and near water. The eggs are dull brownish white-grey with reddish brown spots marks (Plate fig.1.4). The eggs are about 37.8 x 29.7mm in size. The eggs incubation period is 18-days. Parents incubated 4-8 eggs together. Eggs have been found in June and July and February and chicks during August, September and April. Its clutch size range is from 2 to 5 (Wang &Hails 2007). The chicks are black and downy and leave the nest soon after being hatched in 23-days. Parents care for them and they may be seen running alongside the parents (Plate fig. 1.3). Complete nesting cycle long-lasts 42-47 days (Table 1.1). I have known that chicks are very active. (Plate fig. 1.3)



Plate Fig. 1.3 White-breasted waterhen *A. phoenicurus* Parents care chicks.



Plate Fig. 1.4 White-breasted waterhen the eggs, Clutch size.

Conclusion: Studying at two different sites for two years, it is found that the bird nests, roosts, breeds and rests at the west and east edges of the river Rupen. It puts and incubates eggs and chicks are born successfully.

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Table 1.1: Breeding schedule in White-breasted waterhen *A. phoenicurus* in breeding season (Ranges in days)

Species	Nest Building period Mean \pm SD	Egg Laying period Mean \pm SD	Incubation period Mean \pm SD	Nestling period Mean \pm SD	Complete nesting cycle Mean \pm SD
White-breasted waterhen	4.95 \pm 1.43 (04-6)	5.29 \pm 1.76 (05-09)	17.86 \pm 1.31 (16-18)	39.90 \pm 0.77 (32-40)	46.24 \pm 6.77 (42-47)

* Value in parenthesis shows range * Period is in days

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