

New breeding record of Great Crested Grebe (*Podiceps cristatus*) at Srikakulam District, Andhra Pradesh, India

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ABSTRACT

Great Crested Grebe *Podiceps cristatus*, a resident species of Europe and central Asia, known for migrating to the southern parts of Asia, Africa and Australia. Breeding of this species was reported from southern Australia and New Zealand. This species was recorded to breed between April and September in Europe and from November to March in Australia and irregular throughout the year in Africa (Bird life international). Species occurrence and distribution was reported from Northern regions of Indian sub-continent ever since first reported by Butler (1876) from Gujarat of India and was also known to breed occasionally in Gujarat. In the present paper for the first time reported the occurrence of Great crested grebe breeding in the North coastal zone of Andhra Pradesh.

Keywords:

Conservation, Great crested grebe, breeding ground, Wetland, Srikakulam.

Introduction

Great crested grebe a regular winter migrant to the Indian sub-continent arrives in the early winter is known to migrate and distribute from North to the central India from Gujarat (Dharmakumarsinhji, 1948; Briggs, 1934; Himmatsinhji, 1966; Butler, 1877; Baskaran, 1997; Jhala, 2005; Chaoji, 2010), Rajasthan (Butler, 1876;) to Assam (Choudhury, 1991; Choudhury, 2003), Uttar Pradesh (Kalam, 2005), Himachal Pradesh (Besten, 2004), Nagaland (Baker, 1903, 1901&1935; Choudhury, 2003;) and from Maharashtra (Beattie, 1995;) to Madhya Pradesh (Kanoje, 1997) and Odisha provinces (Abdulali, 1984; Alexander, 1949; Banerjee, 2002; Basu, 2005; Behera, 2010; Dasgupta & Chowdhury, 1977) apart from these there are also reports from Pakistan (Ali & Akhtar 2005), Nepal (Biswas, 1960; Baral, 2008), Bhutan (Bishop, 1999) Burma (Carey, 1900;) and also from eastern side of the country. Many researchers and people of interest in bird watching in India had also reported the species occurrence at Chillka lake of Odisha province. Anjaneyulu (1991) reported sighting of the species at Kolleru lake. Palot (1999) also had listed out this species occurrence at Kondakarla ava (ava = water body), Vishakapatnam district and Pittie (2002) reports the species occurrence from Thattipudi reservoir on Gosthani River of Vizianagaram district of Andhra Pradesh. The available literature reveals about the visiting of Great crested grebe and its distribution at many places of the Indian sub-continent known since 1876, by Butler from Gujarat and Rajasthan. This species is known to breed in the European west to central & South Asian countries (Bird life international) and very sporadic breeding occurs in Gujarat of India (Himmatsinhji et al., 1992; Grimett, 1998; Jhala Rajdeep, 2005; Chaoji Anirudh, 2010). Bukley in 1891 was first to reveal breeding of Great crested grebe from Kharaghoda area of Surendranagar district of Gujarat during wintering migration period. The present study area Srikakulam district with

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well flourished water reserves on the North east coast of Andhra Pradesh, India being in the tropical region hosts many winter migratory birds with its splendid food resources. The present paper highlights the occurrence, distribution and utilization of these wetland habitats as breeding ground by Great crested grebe at Srikakulam District (18° 20' N and 19° 10' N to 83° 25' E and 84° 50' E), Andhra Pradesh.

Materials and methods:

Study area:

Dhalicheruvu of village Vishwanathapuram, is a non-perennial water body lying with coordinates 18.593565°N 84.258332°E occur nearby 2 Km on north west to Telineelapuram village (nesting site of Grey Pelican and Painted storks) of Tekkali Mandal (Plate.1). The lake hosts many wintering birds of Anseriformes, Charadriiformes and Pelicaniformes with food and as roosting place to various other species spread out with in an area of 193 Acres. River Vamshadhara's right canal is the source of water.

Temburu reservoir of village Temburu, Saravakota Mandal lying with coordinates 18.6278°N 84.119349°E is a non-perennial open water body with an area of 341 acres, though non-perennial the water is enough for summer sustenance. No aquatic weeds occur in the surroundings of the water body surrounded by hill edges of Eastern Ghats on the North and west directions and the runoff water are the source for the water body. Comparatively less no. of individuals of other species were recorded.

Peddacheruvu, Nandigam of Nandigam mandal head quarters is a non-perennial water body spread out at an area of 146 acres, lying at the coordinates 18.662848°N 84.295370°E is an open water body with large shallow areas host few species of Charadriiformes, Anseriformes and Gruiformes. The lake is covered with aquatic weeds sparingly in the shallow areas and with thick algae.

Sagaram (Sea of water) of village Sagarampeta, Nandigam mandal is a non-perennial water body with coordinates 18.704977°N 84.276500°E, accumulates runoff water from the hills surrounding and is also fed from Vamshadhara canal and is in 110 acres of area. During summer peak as the water level decreases, host many waders and Pelicaniformes.

Ooracheruvu of village Pentavooru, Nandigam Mandal is a non-perennial open water body with coordinate 18.656247°N 84.321050°E, with no aquatic weed plants and hosts very less number of avifauna spread out at an area of 23 acres. River Vamshadhara's right canal is the source of water.

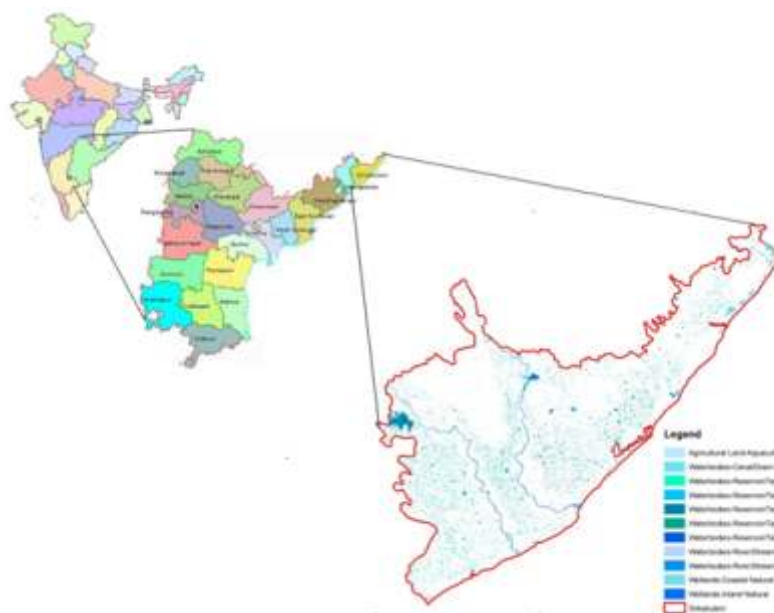
All these water bodies are the source of irrigation, inland fish rearing and serve residents for their domestic needs.

Methods

The bird population at all the water bodies were surveyed monthly every year following imaginary grid method (Gaston, 1973, Stewart and Kantrud, 1972) to find out the general distribution of the species in various locations of aquatic habitats and as avian census is more favorable during early and late hours, observations were carried out in the morning between 6:00Hrs to 11:00Hrs followed by 16:00Hrs to 18:00Hrs till light fall in the evening, aided with 7X50 binoculars and Nikon D90 SLR with 400mm lenses and a hand held GPS Oregon-550 Garmin unit.

Results and Discussion:

Great crested grebe being known as a winter migrant is a regular visitor to the lakes and reservoirs of Srikakulam district. As a part of water fowl surveys conducted during 2009 to 2013, Great crested grebe is recorded every year regularly at five water bodies in the study area and the status of the species was recorded (Table.1). The maximum of 16 birds were recorded at Temburu reservoir, followed by 8 birds in Dhalicheruvu, 6 birds in Ooracheruvu and 4 birds in Nandigam Peddacheruvu. Of all the water bodies the species preferred, the species was sighted for breeding in fresh waters of Dhalicheruvu (Cheruvu=lake), Vishwanathapuram village, Tekkali Mandal (Plate.1) with an area of 193 acres with abundant emerging and submerged vegetation on the west part of the water body. During



A large flock of waterfowl, likely ducks or geese, is gathered in a shallow, marshy area. The foreground is filled with dense green vegetation, possibly reeds or grasses. The waterfowl are scattered across the shallow water, some standing and others swimming. In the background, there is a line of trees and a clear sky.

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Plate.2: Breeding location of Great crested grebe at Dhalicheruvu, Vishwanathapuram (18.593565°N 84.258332°E).

- (A) Adult male and female birds
 (B) Adult male with ducklings
 (C) Sub-adults wandering in the water body guarded by adults
 (D) Adults foraging on fish from the lake

Table.1: Status and geographical distribution of Great crested grebe at Srikakulam district

S. No	Name of Water body	Village	Mandal	Type	Area (Acres)	Maximum Count	Status
1	Temburu	Temburu	Saravakota	Reservoir	341	16	WM
2	Dhalicheruvu	Vishwanathapuram	Tekkali	Lake	193	8	WM, Breeding
3	Nandigam Peddacheruvu	Nandigam	Nandigam	Lake	146	4	WM
4	Sagaram	Sagarampeta, Kaijola	Nandigam	Reservoir	110	2	WM
5	Ooracheruvu	Pentavooru	Nandigam	Lake	23	6	WM

Table.2: Status and occurrence of species at Dhalicheruvu during the study period

Year of study	No. of adults	No. of chicks recorded	No. of sub-adults
2010-11	2	3	2
2011-12	4	-	-
2012-13	8	-	-
2013-14	6	-	-

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