

# Rising Population of Bronze Winged Jacana in Naregal Wetland of Haveri District

Narayan Ramappa Birasal\*

Department of Zoology, Associate Professor, KLE Society's G H College, Haveri – 581 110, Karnataka, India

## Introduction

It is strongly believed that good knowledge leads to better conservation decisions and actions on the ground [1]. There is still a huge gap in our knowledge of the world's water birds. This is highlighted in four important publications on Water bird population estimates by the Wetlands International. Many water bird populations are poorly known and for many more, knowledge of the population trends is lacking [2]. The Fourth edition *Water bird Population Estimates* (Wetlands International 2006) has detailed information on water birds. The Fourth Edition also gives crucial information necessary for the conservation of species, or population of a species. It also includes (a) Where individuals live (geographical distribution) (b) How many individuals exist (population estimates) and (c) Whether numbers are increasing, stable or decreasing (population trend).

The fourth edition also provides updated information on 878 species recognized by Wetlands International as water birds. This publication has contributed to wetland conservation policy at the international level by providing the authoritative basis of Criterion 6 of the Ramsar Convention on Wetlands, under which any site that regularly holds 1% or more of a water bird population qualifies as a Ramsar or IBA site under the Convention. This aspect also prompted me to make the observations for the presence of Bronze Winged Jacana at the wetlands in and around Haveri. As part of Minor Research Project entitled "A survey of birds in and around Haveri" sanctioned to KLE Society's Gudleppa Hallikeri College Haveri, surveying the lakes of Haveri for the bird species is under progress since January 2014.

## Study area: Naregal wetland (Figure 1)

Naregal, a large village in Haveri district had population of 1340 in 1881, which increased to 5196 in 2011 census. It is referred as Nareyagal in inscriptions. Naregal is 20 km North East of Hangal and 19 km from Haveri. Haveri and Hangal are connected to some major towns of Karnataka state. Haveri is the nearest railhead. Naregal Village is in Bommanalli Hobli of Hanagal taluka. Registered Number

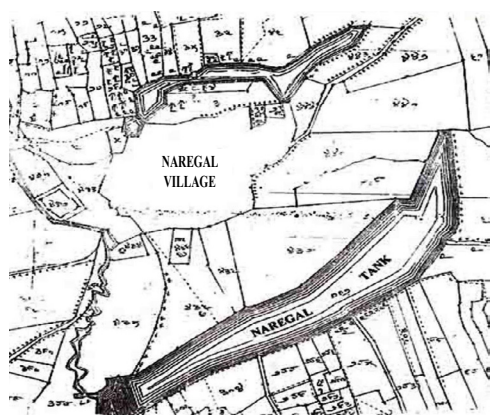


Figure 1: Study area map showing location of Naregal tank in Haveri district.

of wetland is 324/2006-07. Catchment area is 5.88 sq km with water spread area of 115.74 hectare. It is artificially built for irrigation purpose.

## Bronze Winged Jacana (*Metopidius indicus*) (Plate 1)

It is the only member of the genus *Metopidius*. The jacanas are a group of waders in the family Charadriidae, which are identifiable by their huge feet and claws which enable them to walk on floating vegetation in the shallow lakes that are their preferred habitat. They are found worldwide within the tropical zone. The Bronze Winged Jacana breeds in India and Southeast Asia. The Bronze Winged Jacana population recorded during the months of January to April from 2006 to 2013 and May to August of 2014 at Naregal tank is given in Table 1. Interestingly, it is not found in the neighbouring lake of Heggeri.

Table 2 gives the Bronze Winged Jacanas observed in a few wetlands by ornithologists like Tawa reservoir of Hoshangabad district [3], Ponds and Lakes of Biligiri Rangaswamy Temple Wildlife Sanctuary [4], Wetland habitats like Brahma Sarovar, Bohar Saidan Crocodile Sanctuary, National Fish Breeding Centre, Jyotisar, paddy fields and village ponds situated around Kurukshetra [5], Bhitarkanika Mangrove ecosystem [6], Pench Tiger Reserve [7], Kundavada Lake [8], Aanekere Man made wetland [9], Fifteen lakes in Greater Bangalore Metropolitan City [10], Puttanhalli Tank [11], Sakhya Sagar and Madhav Lakes [12],

	January	February	March	April
2006	4	7	8	10
2007	6	6	13	15
2008	7	8	17	19
2009	7	7	21	22
2010	8	9	22	23
2011	9	11	25	26
2012	10	12	26	29
2013	10	13	29	33
	May	June	July	August
2014	34	33	35	38

Table 1: Bronze Winged Jacana number recorded from 2006 to 2014 at Naregal wetland.

\*Corresponding author: Narayan Ramappa Birasal, Associate Professor, Department of Zoology, KLE Society's G H College, Haveri – 581 110, Karnataka, India, Tel: +91 94491 22732; E-mail: [nrbirasal@gmail.com](mailto:nrbirasal@gmail.com)

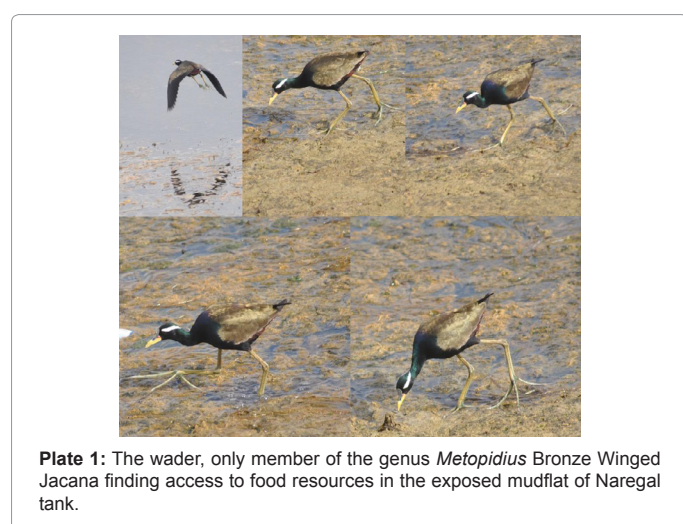
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Sl. No	Name of the wetland reported	State	Period	Reference
1	Tawa reservoir of Hoshangabad district	Madhya Pradesh	January to December 2009	[3]
2	Ponds and Lakes of Biligiri Rangaswamy Temple Wildlife Sanctuary, Western Ghats	Karnataka	Recorded for 18 months from August 1998	[4]
3	Wetland habitats like Bohar Saidan Crocodile Sanctuary, Fish Breeding Centre, Paddy fields and village ponds situated around Kurukshetra	160 km North of Delhi	January 2004 to December 2008	[5]
4	Bhitarkanika Mangrove ecosystem (Kendrapara District)	Odisha	August 2004 to December 2006	[6]
5	Pench Tiger Reserve (PTR)	Madhya Pradesh	February 1996 and July 2000	[7]
6	Kundavada Lake (Davanageri district)	Karnataka	October 2007- September 2008	[8]
7	Aanekere Man made wetland (Near Karkala)	Karnataka	April to June 2001	[9]
8	15 lakes in Greater Bangalore Metropolitan City	Karnataka	February 2008 to January 2010	[10]
9	Puttanhalli Tank (Near Bangalore)	Karnataka	4 years (from 1999)	[11]
10	Sakhya Sagar and Madhav Lakes (Madhav National Park, Shivpuri)	Madhya Pradesh	October 2006 to February 2008	[12]
11	Koradi Lake in Nagpur District	Maharashtra	2008 to 2010	[13]
12	Bhadra Reservoir Project area (Shivamogga)	Karnataka	February 2008 to January 2010	[14]
13	Gudavi Bird Sanctuary (near Soraba, Shimoga district)	Karnataka	2001 to 2003	[15]

Table 2: A few records of Bronze Winged Jacana in wetlands of India.



Koradi Lake [13] and Bhadra Reservoir Project area [14] and Gudavi Bird Sanctuary [15].

The team headed by R D Kanamadi of Karnatak University Dharwad visited Naregal from September to November 2002 to observe the distribution of avifauna. They have recorded 24 species of which 3 were migratory and remaining 21 were residents/winter visitors to the tank. During 2002, they have not recorded Bronze Winged Jacana [16].

## Discussion

Naregal is a wetland in tropical agricultural landscape maintained largely by local institution explicitly for human use, which is assumed to deter biodiversity. Conservation efforts have been biased towards protecting large wetlands that are assumed to be adequate to conserve the majority of species of focal taxa, usually birds [17]. This assumption is tested and carried out a landscape-scale survey to understand diversity of birds using agricultural wetlands. Though several wetlands have experienced prolonged and intensive human use for several centuries, lot many species of birds are reported. Bronze-Winged Jacana, which was found in the Pallikaranai marsh in impressive numbers, left the city in 1980s. Today, the Bronze-Winged Jacanas are found in the south, mostly in the wetlands of Kanyakumari and Tirunelveli. The Bronze Winged Jacana has lower tolerance levels, and it left the city [18].

The congregation of large number of migratory species at Ambazari

Lake in Central India for feeding, resting and roosting is due to the abundance of food such as macrophytes, macrobenthic organisms and fishes [19]. Accessibility to food resources and availability of exposed mudflats and shorelines of lakes provides an ideal location as a stopover site to the ducks and waders. During December, Naregal tank becomes dry and water is restricted to small pockets in the middle of the tank. This exposed mudflat may be one of the reasons for increase in the number of Bronze Winged Jacanas year after year.

Many reports which we observe are related to checklist of birds in different wetlands. But researchers need to find out birds occurrence status year after year. Such studies aim at providing the basic information of the avifauna for further studies related to biodiversity.

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