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PARVATI ARANGA BIRD SANCTUARY - CASTLE FOR PURPLE GALLINULE IN EASTERN UTTAR PRADESH

The Parvati Aranga Bird Sanctuary is one of the largest natural flood plain wetland in Uttar Pradesh, situated in Tarabganj tehsil on way to Gonda district between 27°10'' to 27° 24'' N latitude and 82° 15'' to 82° 20'' E longitude. It was named after two important lakes-Parvati and Aranga located in the Wildlife sanctuary. These are rainfed horse shoe shaped lakes in a deep natural depression in the Gangetic plains of the terai region established in 1990 with an area of about 11 km^2. This wetland of eastern Uttar Pradesh, provides a wintering and performing ground for a number of migratory aquatic bird species and a breeding ground for local birds such as Indian cormorant (*Phalacrocorax fuscicollis*), Darter (*Anhinga melanogaster*), Black necked stork (*Ephippiorhynchus asiaticus*), Black headed ibis (*Threskiornis melanocephalus*), Sarus crane (*Grus antigone*) as well as different species of Heron, Eagles, Jacanas, Pigeons, Doves, Barbets, Starlings, Bee-eaters and Wagtails.

The Indian purple Gallinule (*Porphyrio porphyrio* Linnaeus, 1758) is one of the striking wetland bird species of India. An attractive but inept purplish-blue bird with long rosy legs and toes, shaved red forehead, and size near to a domestic hen is found in the different kinds of wetlands at different tropical and subtropical altitudes. It is a sedentary and shy species that inhabits the wetlands (marshes, lagoons, swamps, lakeshores and reservoirs) at altitudes ranging from 0 to 1700 m amsl (Tripathy, 2004). This is avian species is omnivorous; mostly prefer shoots, leaves and roots of *Eichhornia crassipes* (Mart.) Solms (Fig.1), *Typha angustifolia* L., *Phragmites karka* (Retz.) Trin ex Steud. and some other aquatic vegetation for their survival. Hence, they live where these vegetation cover and water depth are suitable for hiding and feeding. Rice can be temporally an important food during shortage of these plants. It mainly favours stagnant, shallow water with dense vegetation which can act as trail for roaming all over the places.

Fig. 1: www.iucnredlist.org/details/22692792/0

During field exploration tour to the sanctuary from April 2014 to May 2016 the author observed the population status, habitat, behaviour and feeding habit of this magnificent bird and their relationship with the floral components of the area. It was initially observed that there were more than 1500 individuals including young ones. In the current situation along with its abundance and distribution the emphasis may be needed to draw on the future sustenance of this species in this wetland.

This avian species inhabited well in the entire wetland supported by dense vegetation. Peak breeding activity occurred from early January to late March. Nest were built on the thick floating vegetation of nesting material comprised of stems, leaves as well as entire plant part of *Eichhornia crassipes* (Mart.) Solms, *Hygrorhiza aristata* (Retz.) Nees ex Wight and Arnott ,*Ipomoea aquatic* Forssk, *Oryza rufipogon* Griff., *Pistia stratiotes* L., *Rumex dentatus* L., *Typha angustifolia* L. and vegetative parts of some water lilies.

Due to habitat deprivation, the loss of emergent, marshy vegetation, used by this bird for nest building, shelter and feeding is still a major problem in wetlands. Swampy vegetation is frequently burned out in an unrestrained manner, due to unplanned human management for their livestock, resulting in a major cause of habitat degradation. Tourism growth around swampland also results in habitat degradation. Agriculture lands near wetlands also results in the loss of aquatic flora and fauna. In addition, alteration and overexploitation of wetlands also uphold the waste of water resources and dilapidation of flooded areas. This risk is particularly relevant during dry periods, and sometime causes the complete desiccation of wetlands.

At some sites local populations become isolated due to habitat loss and degradation. This factor may considerably reduce populations' ability to expand, recover and occupy new areas, which may have eventually developed suitable conditions for the species (Grussu, 1999). Small wetlands have a fundamental role during the dispersal of the juveniles or non-breeding adults; their preservation will assure a constant flux of individuals between the most important breeding areas. Since the Purple Gallinule is a quite sedentary bird, it is essential to plan the conservation of every important breeding area

having a metapopulation perspective - both at a regional and national level.

Although it's acquired its position under least concern category of IUCN list but the population is dwindling at an alarming rate due to natural and anthropogenic pressure which ultimately leads to the shrinkage of wetlands. The Bombay Natural History Society has identified this wetland of nationally importance for siting birds under the Important Bird Area (IBA) programmes governed by the Birdlife International, United Kingdom.

This is one of the signature bird species of the wetlands; Therefore, there is need for suitable conservation priorities for preservation and protection of this wetland. This can be achieved by promoting re-establishment, conservation and augmentation of suitable habitats and reintroduction programs and recovery plans in regions with patchy habitats or populations of the avian species. Hunting restrictions in the breeding sites is also a crucial step towards its protection. Need to initiate research to study the ecology, behaviour, breeding biology, management for habitat requirements, etc. in a project mode are of instantaneous need.

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VINEET SINGH AND S.K.SRIVASTAVA[1]
Botanical Survey of India,
Central Regional Centre,
Allahabad 211 002, Uttar Pradesh

[1]Botanical Survey of India, Northern Regional Centre, Dehradun 248195, Uttarakhand