

## Abundance, Assemblage, Habitat Characteristics and Seasonal Diversity of Waterbirds at Kalpakkam, South East Coast of India

T. Ramesh<sup>1\*</sup>, K. Jahir Hussain<sup>2</sup>, K. K. Satpathy<sup>3</sup>, N.P.I. Das<sup>3</sup>, P. Rajendran<sup>1</sup> and M. Selvanayagam<sup>4</sup>

<sup>1</sup>PG and Research Department of Zoology, Vivekananda College, Tiruvedakam West-625 234, India

<sup>2</sup>PG and Research Department of Zoology, C. Abdhul Hakeem College, Melvisharam- 632 509, India

<sup>3</sup>Environment and Safety Division, EIRSG, Indira Gandhi Centre for Atomic Research, Kalpakkam- 603 102, India

<sup>4</sup>Loyola Institute of Frontier Energy (LIFE), Loyola College, Chennai- 600 034, India

\*Corresponding Author's E-mail: faunaldiversity@gmail.com

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### ABSTRACT

Patterns of spatial and temporal variation in waterbird species richness, abundance and their relationship with habitat variables were investigated in different wetlands at Kalpakkam, East coast plains of Southern India from June 2008 to July 2011. A total of 54 species, belonging to 41 genera, and 17 families were recorded, among these, the most representative families are Ardeidae, Scolopacidae and Anatidae. The interspecific difference in different wetlands used by waterbirds showed that the shallow marshes accommodate a larger number of species with greater abundance than the deeper lake. The water level fluctuation, depth and heterogeneity of wetlands were the key factors governing the waterbird assemblages in the present study. In addition it is observed that the wetland avian group such as dabbling ducks and wading birds were relatively high in shallow marshes, whereas diving birds preferred deeper lake. Moreover, the Canonical Correspondence Analysis (CCA) revealed that habitat characteristics such as aquatic vegetation cover, water level fluctuation (depth), dissolved oxygen, salinity and total nitrogen influenced the waterbird diversity, abundance and their distribution at various habitats. The information obtained through this study may be useful for management and conservation of waterbird species and their system at south east coastal plains of India.

**Key words:** wetlands, waterbirds, diversity, seasonality, water depth, aquatic vegetation, Kalpakkam

