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## DIVERSITY OF ODONATES IN AND AROUND HIPPARGA LAKE OF SOLAPUR, MAHARASHTRA

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### ABSTRACT

*In the communication, efforts are made to study diversity of Odonate in and around Hipparga Lake of Solapur Region. A total of 13 different odonate species belonging to 04 families and 13 genera were found in and around Hipparga lake of Solapur.*

**KEYWORDS:** *study diversity , communication, Dragonflies.*

### INTRODUCTION

Dragonflies and damselflies generally called odonates which are one of the most common insects flying over ponds, and aquatic bodies (Bora and Meitei, 2014). Both Dragonflies and damselflies can easily be identified in the field. Odonates are known as ecological indicators of any freshwater ecosystem because they are very selective and sensitive about their breeding habitat. They also play a key role as prey and predator to maintain the balance of trophic levels of food chain (Hodkinson & Jackson). In the invertebrate world, odonates always attracted the human beings for their variety of color, powerful flight and unusual sense of vision. The adults are terrestrial and larvae are aquatic. Larvae have been recorded as voracious predators and useful in the control of mosquitoes which cause diseases to human beings (Willigalla & Fartmann).

The biology of dragonfly and damselflies depends on the availability and quality of water. Some species of dragonfly nymph are very sensitive to water pollution because their whole life is spending in the water (Rachman & Rohman). The rural areas have higher species richness as compared to urban areas. Worldwide almost 5952 different species of odonates have been recorded of which India contributes approximately 475 species (Mukherjee & Singha). Several studies from different parts of India have already studied the diversity and abundance of odonates Emiliyamma & Gunathilagaraj (2005), Soundarajan & Chitra (1999), Swamiappan & Kandibane (2005), Ganapathy & Karthikeyani (2005), Sasikumar & Ramesh, (2010). The study of dragon flies and damsel flies fauna in and around Hipparga lake has not been comprehensively carried out. In this communication, an attempt has been made to study the diversity.

### METHODS

#### Study area

Hipparga lake (17°40'59.88" N 75°55'12"E). The study area is 6.5 km from Solapur City. Climate of Hipparga lake is tropically wet and dry. It means, the winter and the early part of summer are typically dry periods. The majority of the rainfall occurs between July and early September.



## Sampling

The study was conducted for 5 months from June to November 2019. Sampling of adult odonates were carried out during morning and evening. A collection of specimens was done with the help of specially design insect net.

## Identifications of odonates

Odonates were observed, captured, identified and released immediately at the spot of capture. The Odonates which were not easy to identify in the field were collected as voucher specimens using a hand net.

## RESULTS AND DISCUSSION

A total of 13 different odonate species belonging to 04 families and 13 genera were found in Hipparga lake (Table 1). No previous study was found on odonate diversity of the Hipparga lake to compare the findings with previous one.

Out of the 13 odonates, damsel flies represented with 02 species 11 species of dragonflies sighted in the family *Aeshnidae*, (01), Family *Gomphidae* (02), *Libellulidae* (6) and Family *Cordulidae* (02).

### Table 1

#### Order: Odonata

#### Suborder: Zygoptera

1. *Pseudagrion sp.*
2. *Coenagrion puella*

#### Suborder: Anisoptera

#### Family: Aeshnidae

1. *Anax sp.*

#### Family: Gomphidae

1. *Gomphus sp.*
2. *Gyanacanth sp.*

#### Family: Libellulidae

1. *Veurothemis sp.*
2. *Orthetrum sp.*
3. *Brandinopyga sp.*
4. *Orthetrum Sabina*
5. *Trithemis pallidinervis*
6. *Trithemis sp.*

#### Family: Cordulidae

1. *Rhyothemis variegata*
2. *Pantala flaviscence*

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