

Department of Zoology

**Dr.BRR Government College
Jadcherla**

Student Study Project

On

**“Abundance and diversity of Dragonflies and
Damselies in and around of Dr.BRR
Government Degree College Jadcherla Town
of Telangana State”.**

Academic Year 2021-22



**Dr. BRR GOVERNMENT DEGREE COLLEGE
JADCHERLA – 509 301**

(Accredited with B⁺⁺ by NAAC)

Dr. CH.Appiya Chinnamma, M.Sc., Ph.D.
Principal

The department of Zoology has conducted student study projects during the academic year 2021-22

Title: "Abundance and diversity of Dragonflies and Damselflies in and around of Dr.BRR Government Degree College Jadcherla Town of Telangana State".

Place of Work: Dr.BRR Government Degree College Jadcherla T.S

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Supervised By

B.Ravinder Rao, Asst. Professor of Zoology


Supervisor


In-Charge of the Department

DEPT. OF ZOOLOGY
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Jadcherla-509 301



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Student Study Project Certificate

CERTIFICATE

This to certify that, the project work “Abundance and diversity of Dragonflies and Damselflies in and around of Dr.BRR Government Degree College Jadcherla Town of Telangana State” is a bonafide work done by B.Gayathri, S.Shivaiah, K.Aravind, B.Ashok and K.Satyamma the students of B.Sc (BZC) IV semester under my supervision in Zoology at the Department of Zoology Dr.BRR Government Degree College Jadcherla during the academic year 2021-22 and the work has not been submitted to any other college or university either par or full for the award of any degree.

Place

Jadcherla

Date:

31/12/2021

B.Ravinder Rao

Asst,Prof,of Zoology

Department of Zoology
Dr.BRR Government Degree College Jadcherla

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Acknowledgements:

The members of this project extend thanks to Dr.CH.Appiya Chinnamma, Principal for permitting to conduct this project.

The team is indebted to all the zoological student community for allowing us to use Animal album

Special thanks are due to K.Neeraja, lecturer in Zoology and Smt.K.Subhashini Asst.Prof, of Zoology for their help and advice to complete this project.

Finally thanks are also due to Sri B.Ravinder Rao,HOD for guiding the team to during period the project.

Objectives:

To Promote interest in research aptitude among students

To promote the concept of Biodiversity

To preserve the natural composition of Biota in the College garden

To know the niche of odonates in Nature

ABSTRACT

The present work is aimed to study diversity and abundance of dragonflies and damselflies in Jadcherla in the surroundings of Dr.BRR Government Degree College Jadcherla. This study has been carried out for six months from July 2021 to December 2021. The team observed a total of 28 species of odonates, including 18 species of dragonflies (Suborder Anisoptera) belonging to 3 families and 10 species of damselflies (Suborder Zygoptera) belonging to two families. The most abundant family was Libellulidae comprising 14 species followed by Coenagrionidae comprising 9 species. The least abundant families were Gomphidae, Ashnidae, and Platycenemididae comprise one, three and one species respectively

Key words: Diversity, Dragonflies, Damselflies and Dr.BRR Government Degree College Jadcherla

INTRODUCTION

Dragonflies and damselflies (Order – Odonata) are multicolored predatory insects of freshwater habitat and characterized by their elongate body, extended wings and large eyes. Odonates are the most exciting and energetic of all insects. Silsby (2001), recorded eight super families, 29 families and some 58 sub-families of dragonflies for just about 600 genera and 6000 named species have up to now been explained all over the world. India is also most diverse with above 500 known species of Odonata (Subramanian, 2005). These are carnivorous and a number of species are predators. They prefer to live in freshwater, non-polluted and well oxygenated habitats. Therefore, Dragonflies and Damselflies are precious bio-indicators for environmental contamination studies (Lehmkuhl, 1976; Morin, 1984; Needham, et al., 2000). Yet, there is no report on Diversity and abundance of Dragonflies and Damselflies of the Erstwhile district of Mahabubnagar, Telangana State. The present investigation was, therefore, done as a project work to document the Diversity and abundance of Dragonflies and Damselflies in the surroundings of Dr.BRR Government College Jadcherla of Telangana State

MATERIALS AND METHODS: 1) Study area:

Jadcherla Town is located 80KMs away from Hyderabad, the capital city of Telangana State. It is located on National Highway 44 south to Hyderabad. The topographical details are Longitude: 78.1442814, Latitude: 16.7629646, Elevation: 548m / 1798feet and Barometric Pressure: 95KPa. Population of Jadcherla in 2021 is 127,430. Dr.BRR Government Degree college is located at Signalgadda landmark with an area of around 15Acres of land. this college has good greenery with gardens covering 7 Acres of land.

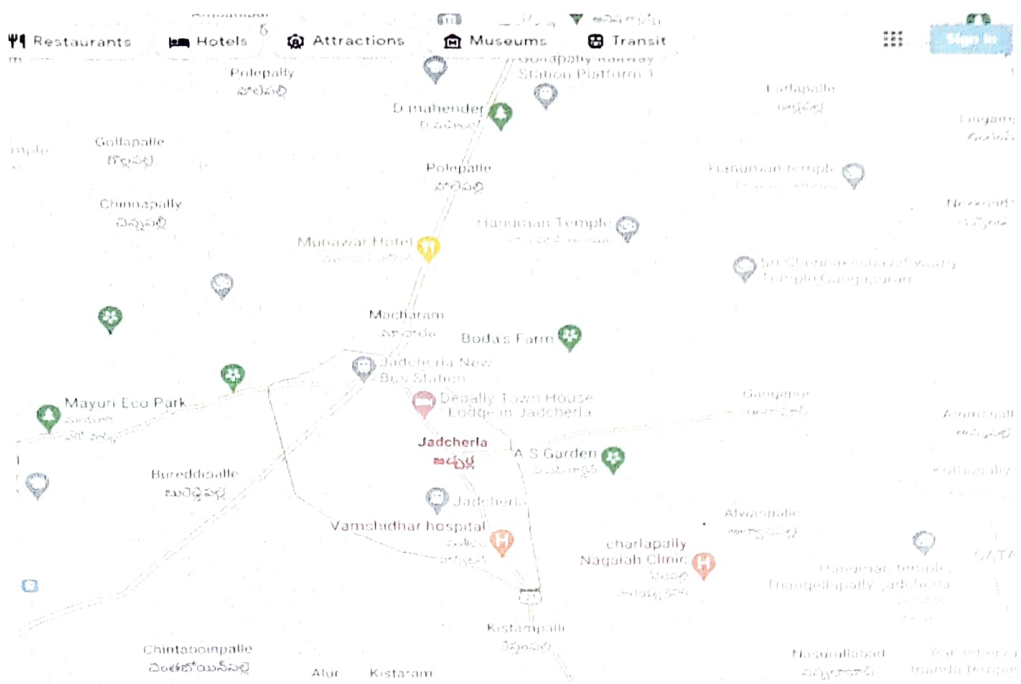


Fig.1: Map of Study area - Jadcherla

2) Specimen observations and photography:

The present study was done for six months from July 2021 to December 2021. Specimens of Dragonflies and damselflies were observed in the field with careful note on their habitats. Repeated visits to the field have been made in morning, afternoon and evening time. For diversity and abundance, specimen numbers of each species have been counted by visual observations.

The students studying biological science in this college are having a habit of preparing Animal albums with locally inhabiting faunal species to submit for their Practical lab study. In the present study project, the data of odonate species is collected from the Animal albums of the Department of Zoology and compared with the available checklist. The findings presented here are based on a bi-weekly random survey in and around areas of Jadcherla town carried out by the members of this group project. Odonates were accessed in the study area by random observations during walking through the college garden and nearby crop fields based on habitats present in the study area as per COVID-19 precautions. In the field, photographs of the odonates were taken with the mobile cameras of students for the identification purpose.

The specimens were identified in the field by using field guides. Most specimens were identified in the field by visual observations. The photography was done by using the Mobile phone

cameras. Though the clarity of pictures is not satisfactory, the specimens are identified by using standard classification charts. Results were recorded by visualizing the specimens

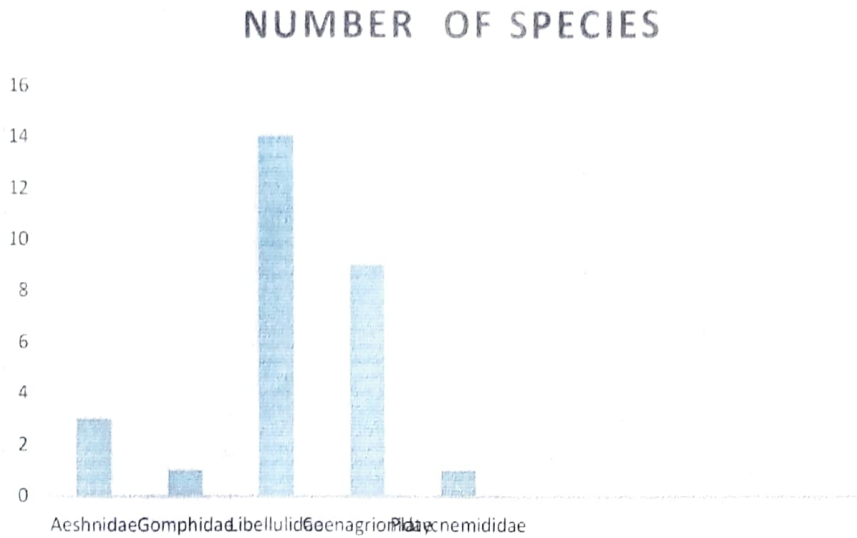


Fig. 2: Number of species of Odonates at Jadcherla

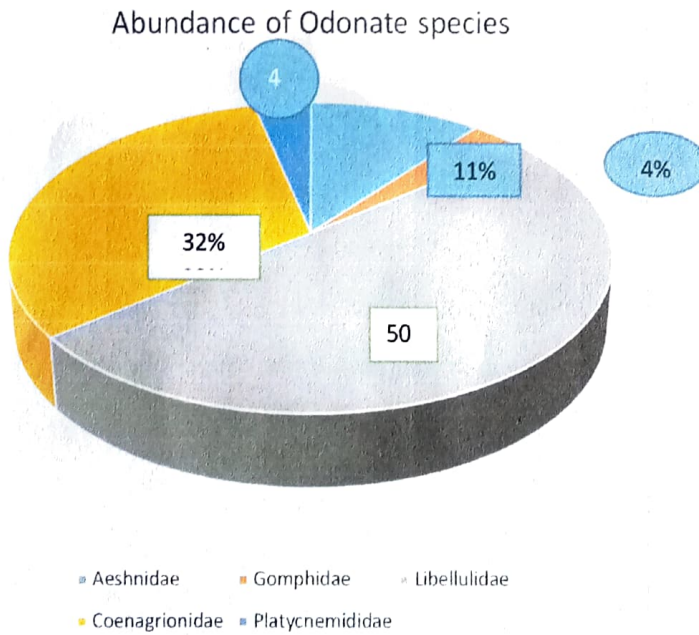
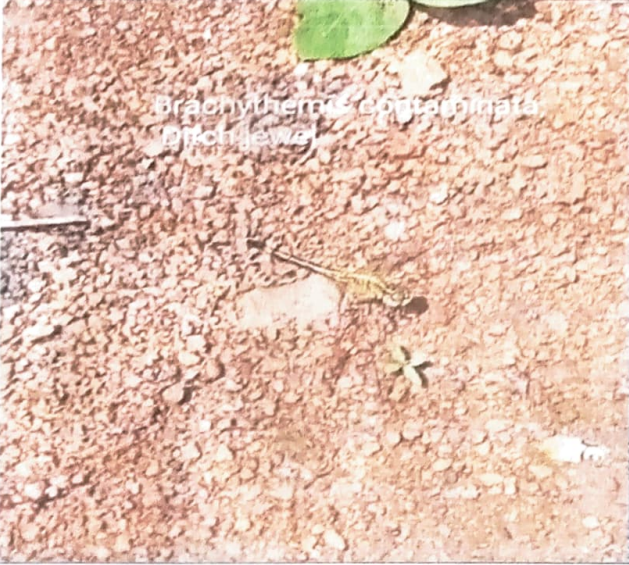
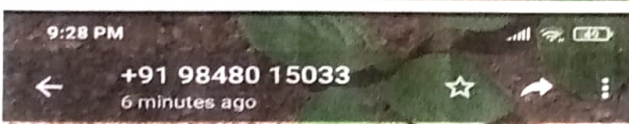


Fig.3: Representation of Odonates at Jadcherla

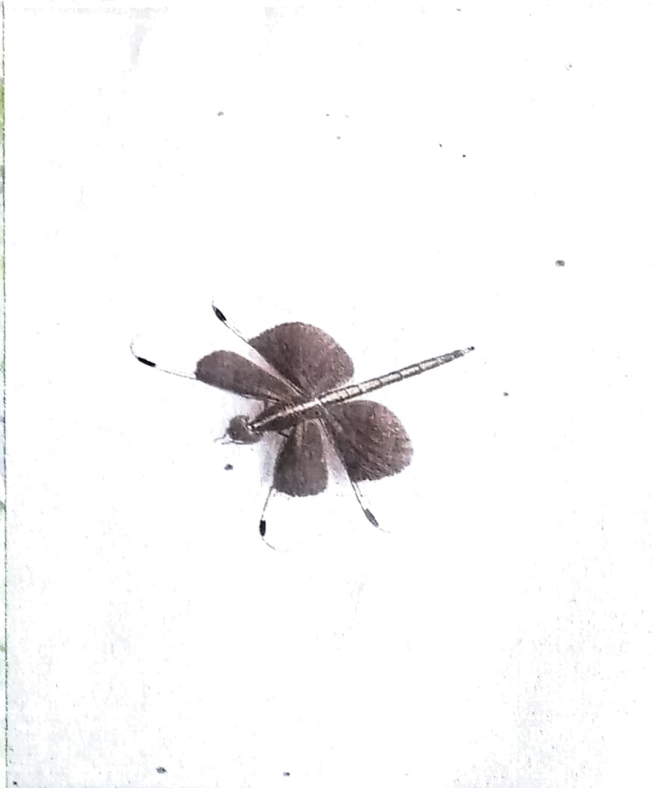


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Brachythemis contaminata
Mich. Jewe





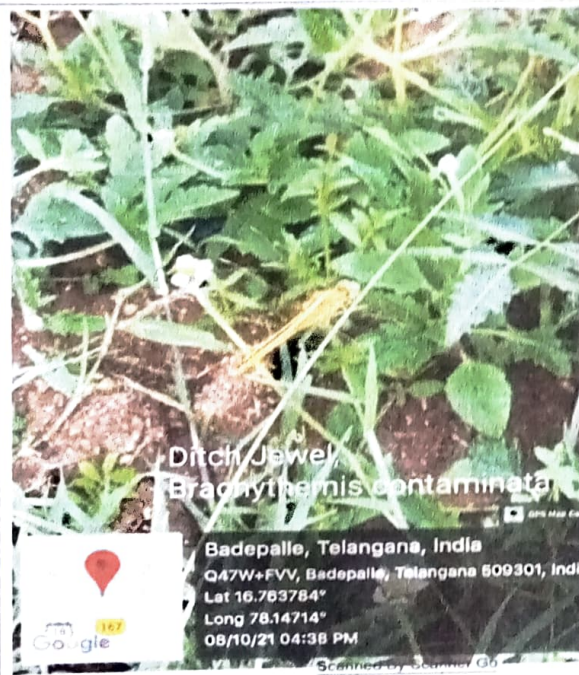
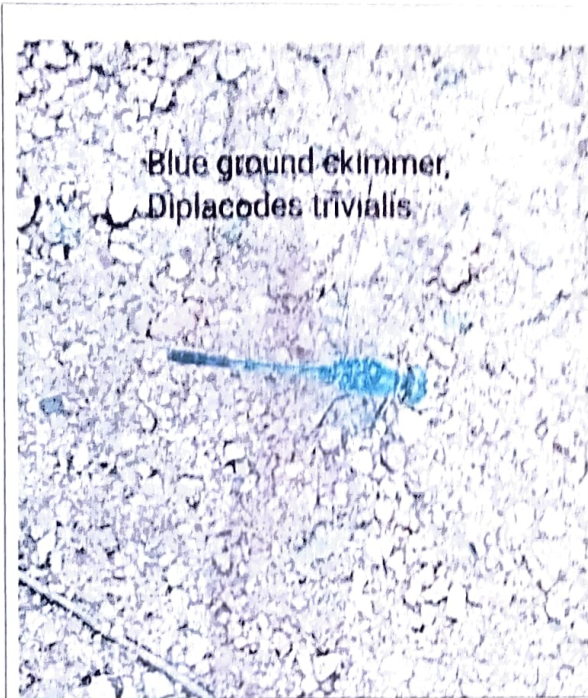


Fig. 4: Odonates (selected species) of Jadcherla of Telangana State, India

Table 1: Odonates of Jadcherla, Dist.Mahabubnagar, Telangana State India

S.No	Family	Scientific Name	Common Name	Status
1	Aeshnidae	Rusty darner	<i>Anaciaeschna jaspidea</i>	C
2		Blue-tailed green darner	<i>Anax guttatus</i>	NR
3		Blue darner	<i>Anax immaculifrons</i>	NR
4	Gomphidae	Common clubtail	<i>Ictinogomphus rapax</i>	VC
5	Libellulidae	Trumpet tail	<i>Acisoma panorpoides</i>	NR
6		Little blue marsh hawk	<i>Brachydiplax sobrina</i>	NR
7		Ditch jewel	<i>Brachythemis contaminata</i>	VC
8		Granite ghost	<i>Bradinyopygia geminata</i>	VC
9		Ruddy marsh skimmer	<i>Crocothemis servilia</i>	C
10		Ground skimmer	<i>Diplacodes trivialis</i>	VC
11		Pied paddy skimmer	<i>Neurothemis tullia</i>	NR
12		Blue marsh hawk	<i>Orthetrum glaucum</i>	NR
13		Crimson-tailed marsh hawk	<i>Orthetrum pruinosum</i>	NR
14		Green marsh hawk	<i>Orthetrum sabina</i>	VC
15		Wandering glider	<i>Pantala flavescens</i>	C
16		Common picture wing	<i>Rhyothemis variegata</i>	VC
17		Crimson marsh glider	<i>Trithemis aurora</i>	C
18		Long-legged marsh glider	<i>Trithemis pallidinervis</i>	VC
19	Coenagrionidae	Pigmy dartlet	<i>Agriocnemis pygmaea</i>	NR
20		Coromandel marsh dart	<i>Ceriagrion coromandelianum</i>	VC
21		Rusty marsh dart	<i>Ceriagrion olivaceum</i>	C
22		Unknown	<i>Coenagrion dyeri</i>	R
23		Golden dartlet	<i>Ischnura aurora</i>	VC
24		Senegal golden dartlet	<i>Ischnura senegalensis</i>	VC
25		Elegant sprite	<i>Pseudagrion decorum</i>	R
26		Blue grass dartlet	<i>Pseudagrion microcephalum</i>	C
27		Pixie dartlet	<i>Rhodischnura nursei</i>	VR
28	Platycnemididae	Blue bush dart	<i>Copera vittata</i>	R

Key: VC-Very Common, C-Common, NR-Not Rare, R-Rare, VR-Very Rare Unknown: Common name unknown.

RESULTS AND DISCUSSION: In present investigation of Six months we recorded a total of 28 species of odonates, including the most abundant family, Libellulidae comprising 14 species 50% followed by Coenagrionidae comprising 9 species 32%, Ashnidae 11%. The least abundant families were Gomphidae 4%, and Platycenemididae 4% comprising one, three and one species respectively.

CONCLUSION: From the above investigation we conclude that Jadcherla is moderate in Dragonflies and Damselflies diversity. Some protection plans have to be implemented in the area to preserve and build up the diversity.

ACKNOWLEDGEMENT: The team members are thankful to Dr.CH Appiya Chinnamma, Principal for permitting to do the project

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