



Study of biodiversity of Odonates Near Ayana Pond, Kota, Rajasthan

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Abstract

The study was carried out near Ayana pond in the Ayana village, Tehsil Pipalda of Kota district. A total of 18 species from order Odonata were identified among which 2 species belong to suborder Anisoptera and 2 species belong to suborder Zygoptera. Libellulidae family of suborder Anisoptera was the dominating family with seven species belonging to five different genera. The most abundant species was *Pantala flavescens*.

Keywords: Ayana Pond, biodiversity, Odonata, damselflies, dragonflies

Introduction

The Insect order Odonata includes dragonflies and damselflies. Odonates' biodiversity, ecological and evolutionary aspects are well studied and documented. Odonates are considered key biotic factors in wetland ecosystems and it is much easier to identify and categorize them. They are amphibious because their larvae are found in water while adults are terrestrial. (Subramanian and Babu, 2018) [17]. Several members of Odonata can be used as bioindicators for the health status of aquatic ecosystems and their conservation strategies (Kalkman *et al.*, 2008) [12]. Dragonflies and Damselflies are larvivorous predators, and they act as biological controlling agents for many harmful insects by feeding on their larvae. The Ayana Village, which is situated in the Kota district, has a temperate climate. The Odonate biodiversity of Ayana village is worth bringing to ecologists' and taxonomists' notice. This work on Ayana Pond provides wholesome data on the biodiversity of odonates of this site.

Materials and Methods

Field surveys were conducted from April 2019 to September 2020 near the habitats. Specimens were identified in the field and collected by handpicking or with the help of an aerial net. The methodology of Boudot *et al.* 2016 [3] was followed for surveys and preservation of specimens. Species were identified following field guides of Mitra, 2002; 2006, Andrew *et al.*, 2008 [13, 15, 1]. The preserved specimens of animals have been deposited at the Department of Zoology, Govt. College Kota (Rajasthan).

Results

Surveys carried out between April 2019 and September 2020 in different areas around Ayana pond revealed a total of 18 species of Odonata under two suborders Anisoptera which belongs to dragonflies and Zygoptera which belongs to damselflies. All these species fall under three superfamilies and families and into nine genera (Table 1). Anisoptera is the most dominant with nine species under seven genera; while Zygoptera is represented only by two.

Table 1: Biodiversity of Odonata in Ayana

S.No.	Scientific Name	Common Name
1.	<i>Brachythemis contaminata</i>	Ditch jewel
2.	<i>Bradinopyga geminata</i>	Granite ghost
3.	<i>Crocothemis erythraea</i>	Common scarlet-darter
4.	<i>Crocothemis servilia</i>	Ruddy marsh skimmer
5.	<i>Diplocodes trivialis</i>	Ground Skimmer
6.	<i>Orthetrum brunneum</i>	Southern skimmer
7.	<i>Orthetrum cancellatum</i> *	Black-tailed skimmer
8.	<i>Orthetrum glaucum</i>	Blue marsh hawk
9.	<i>Orthetrum luzonicum</i>	Slender Blue Skimmer
10.	<i>Orthetrum sabina</i>	Slender skimmer
11.	<i>Trithemis annulata</i>	Violet dropwing darter
12.	<i>Trithemis aurora</i>	Crimson marsh glider

13.	<i>Trithemis pallidinervis</i>	Long-legged marsh glider
14.	<i>Ceriatrion coromandelianum fabricius</i>	Coromandel marsh dart
15.	<i>Ischnura aurora</i>	Golden dartlet
16.	<i>Ischnura senegalensis</i>	Senegal golden dartlet
17.	<i>Rhodischnuranursei</i>	Pixie dartlet
18.	<i>Lestes sp.</i>

Discussion and Conclusion

A list of 18 species of Odonates is known to occur in Ayana Village, Tehsil Pipalda, Kota. Among these 14 species belong to Dragonflies (Family: Libellulidae) and 5 species Damselflies (Family: Coenagrionoidea and Lestidae). The family Libellulidae with 14 species forms the largest single group of Odonate fauna of Ayana. Black-tailed skimmer (*Orthetrum cancellatum*), Violet dropwing darter (*Trithemis annulata*), and Pixie dartlet (*Rhodischnuranursei*) were seen for the first time in Kota District.

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