



DIVERSITY AND CHECKLIST OF AQUATIC BEETLES FROM VARIOUS REGIONS OF WANI TEHSIL, DISTRICT YAVATMAL, MAHARASHTRA

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ABSTRACT:

Coleoptera is the largest order of the class insecta consisting of 330,000 species. All insects of this order are collectively called as beetles which are variable in their habits. There are about twelve families of aquatic beetles. The present survey was carried out from September 2011 to August 2015 around Wani Tehsil to identify the diversified species of aquatic beetles in this area for further research. A total of 6 genera and 11 species belonging to two families of beetles viz. Dytiscidae and Hydrophilidae, were collected and identified from various habitats of Wani Tehsil.

KEYWORDS: Aquatic beetles, Diversity, Dytiscidae, Hydrophilidae Wani

INTRODUCTION:

Aquatic insects are broadly diverse group playing an important role in ecosystem functioning, in virtue of their numerical abundance, taxonomic diversity (DeGuire *et al.*, 2013). Water beetles are very integral parts of the biotic component of any water bodies or wetlands. They are indicator of ecological diversity and habitat characteristics (Eyre, M.D. and G.N. Foster, 1989; Sanchez-Fernandez *et al.*, 2004). The beetles are especially useful in certain habitats as peat bogs, coastal and saline lagoons, wood and wetland ponds, etc. Aquatic beetles are found in nearly any aquatic habitat including potholes but beetles reach their greatest diversity in lentic habitats such as wetlands and pond margins (Swetapadma Dash and Sanmitra Roy, 2017).

Vajirani (1968), gave a detail taxonomic account of different families of aquatic beetles. Since then, the study of Indian aquatic Coleoptera has received considerable interest. Afterwards a detailed study on the family Dytiscidae, Gyrinidae, Hydrophilidae, of West Bengal was done (Biswas *et al.*, 1995). Aquatic Coleoptera belong to the family Gyrinidae, Dytiscidae and

Hydrophilidae had been described from Tripura (Ghosh *et al.*, 2000). Mukhopadhyay and Ghosh (2007) reported aquatic Coleoptera from Andhra Pradesh pertaining to the family Gyrinidae and Dytiscidae. The present survey was carried out to identify various species of aquatic beetles around Wani of Yavatmal district (M.S.).

MATERIAL & METHODS:

i) Study Area:

Wani town is situated in the south-east corner of the Maharashtra state. It is at south-east border of the Yavatmal district. The town measures about 13 sq. km. and fairly linear in shape along north to south direction. It lies between the Latitudes: 20° 03' to 20° 06'N and Longitudes: 79° 01' to 79° 03'E. The city has hot and dry tropical climate with moderate rainfall of 950 mm per annum.

ii) Surveying:

Intensive search for beetles is performed from September 2011 to August 2015 at different sites in the vicinity of the Wani, District-Yavatmal of Maharashtra. Sampling is carried out twice a month. The study was performed each month throughout the year and the

observations are confirmed for the successive years.

iii) Sample collection:

Collection was done by hand picking of the beetles that are attracted towards light. Samples after collection were preserved in 70% alcohol in glass vials and brought to laboratory.

Result

The collection from the survey consist of 38 examples of aquatic coleoptera of family Dytiscidae and Hydrophilidae including 11 species of 6 genera (Table-1).

Literature survey indicates, Thakare and Zade (2012) surveyed the Melghat Tiger reserve and enlisted coleopteran diversity in the region. They have reported a total of 12 species belonging to 5 families. Kazimi and Ramamurthy (2004) recorded 102 species belonging to 13 families from Thar Desert Rajasthan, India. Aland *et al.*, (2012) investigates 152 species under 101 genera belonging to 25 families from Amba Reserve forest, Western Ghat Kolhapur. Dabhade *et al.*, (2012) reported 25 beetles' species belonging to the 8 super families and 11 families from Mangrulpir Tahsil, Dist. Washim, and Maharashtra. Gajendra and Prasad (2015) updated the checklist of coleopteran fauna from Chhattishgarh.

CONCLUSION :

This is the first report of aquatic beetles from Wani Tehsil, district Yavatmal (M.S.). A total of 38 specimens of 6 genera and 11 species of 2 families are recorded including *Cybister convexus*-1, *Cybister limbatus*-3, *Cybister tripunctatus*-3, *Eretus griseus*-8, *Hydaticus fabricii*-1, *Hydaticus luczonicus*-2, *Hydaticus vittatus*-3, *Sandracottus dejeanii*-3, *Sandracottus festivus*-1, *Hydrophilus olivaceous*-6 and *Sternolophus rufipes*-7. This indicates the significant diversity of aquatic beetles in the Wani region. On the basis of observation it is

concluded that the members of family Dytiscidae are dominant in study area.

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Table 1: Diversity of aquatic beetles recorded from Wani region.

Family	Generic Name
Dytiscidae	<i>Cybister convexus</i> (Sharp, 1882)
	<i>Cybister limbatus</i> (Fabricius, 1775)
	<i>Cybister tripunctatus</i> (Olivier, 1795)
	<i>Eretes griseus</i> (Fabricius, 1781)
	<i>Hydaticus fabricii</i> (Mac Leay, 1825)
	<i>Hydaticus luczonicus</i> (Aube, 1838)
	<i>Hydaticus vittatus</i> (Fabricius, 1775)
	<i>Sandracottus dejeanii</i> (Aube, 1838)
	<i>Sandracottus festivus</i> (Illiger, 1801)
Hydrophilidae	<i>Hydrophilus olivaceous</i> (Fabricius, 1781)
	<i>Sternolophus rufipes</i> (Fabricius, 1792)

Fig 1: Genus wise distribution of aquatic beetles recorded from Wani region

