"Study of Diversity of Fresh Water Molluscs From Drought Prone Region Sangola, District Solapur (MS) India"

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Abstract:

Molluscas are considered the most diverse and dominant benthic fauna both from lentic and lotic aquatic ecosystems. Present study is an attempt to study diversity of fresh water molluscs from drought prone region Sangola of Solapur district of Maharashtra state. In present study, 19 species belongs to 10 genera and 02 classes were recorded. 10 species belongs to class gastropods and 09 species from class bivalvia.

Key words : Molluscs, Diversity, Drought prone, Fresh water, Aquatic ecosystem

Introduction:

Biodiversity is one of the important lives supporting system on the earth. Molluscs are found in various habitat and are divided into freshwater, marine and terrestrial forms. The freshwater Mollusca play an important role in water ecosystem. The phylum Mollusca have a large group of animals having varied size, shape, habits & occupy different environment (Subba Rao1993). The freshwater molluscs have a shell, in which the soft parts are enclosed. Most species can be suitably recognised by their shell characters. However, in some groups the conchological characters have to be complemented by their structural characters which are used for study of molluscan taxonomy. The taxonomic survey of Indian freshwater Mollusca has been done by Zoological Survey of India (Subba Rao 1989) Indian gastropod studied by many workers Annadale (1919), Prasad (1925), Hora (1925 & 1926). Satyamurthi (1952), studied the diversity of molluscs from the Gulf of Mannar and recorded 450 species of gastropod and 156 species of bivalves. The main objective of the present study was to document the molluscan diversity of the freshwater from the drought-prone region. The identification, taxonomic account and distribution of molluscs found in freshwater reservoirs will serve to keep complete record for further study.

Material and Methods:

a. Study region.

Sangola taluka comes under the Western part of the zone of Solapur district, Maharashtra situated between 17° 26' 0" N latitude. and 75° 12' 0" E. longitude. The region was classified as drought-prone region, low and poor type of soil, scanty and uncertain rainfall, due to scanty and ill-distributed rainfall, scarcity situation prevails in the talukas. Molluscan shells were collected from pre-identified four sampling stations form different directions of Sangola city viz, Chincholi water tank (3 Km), Bhudhehal water tank (16 Km), Gherardi water tank (17 Km) and Vadhegaon water tank (5 Km). .

b. Collection of molluscan Shells

Collected shells we cleaned with water and sun-dried. Dry shells then packed in plastic pouches and brought to the laboratory for further identification. The molluscs were identified by using Handbook of Freshwater Molluscs of India by N. V. Subba Rao, Zoological Survey of India, Calcutta, and Handbook on Indian Freshwater Molluscs Ramakrishnaanirudha Dey Zoological Survey of India,

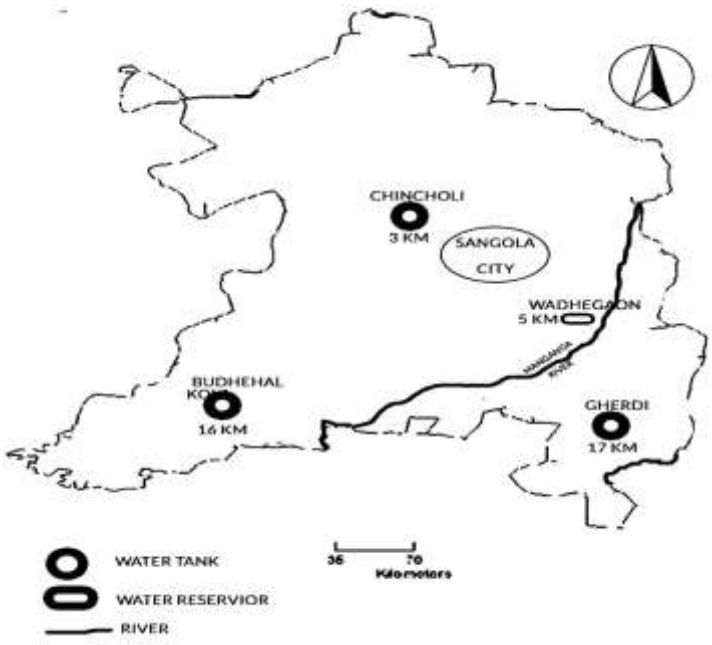

Fig. No. 1. Map showing collection of molluscan sites shells from drought prone region Sangola

Results : Table No. 1 showing diversity of fresh water molluscs

Sr. No.	Class	Order	Family	Genus	Species
1	Gastropoda	Basomamatophora	Planorbidae	*Indoplanorbis*	*exustus*
				Segmentina	*calatha*
			Lymnaeidae	*Lymnaea*	*luteola*
		Mesogastropoda	Thiaridae	*Thiara*	*granifera*
					tuberculata
					lineate
			viviparadae	*Bellamya*	*dissimilis*
					bengalensis

					ebornea
		Stylommatophora	Subulinidae	*Zootecus*	*Chion*
2	Bivalvia	Unionoida	Unionidae	*Parreysia*	*favidens*
					Shurtleffiana
					khadakvaslaensis
				Spherium	*indicum*
				Lammelidens	*marginalis*
					corrianus
		Veneroida	Corbiculidae	*Corbicula*	*Peninsularis*
					striatella
			Cyrenidae		*fluminea*

Discussion

Molluscan are considered are the most diverse and dominant benthic fauna both from lentic and lotic region which are mainly represented by the two major classes namely Gastropods and Pelecypods. (Mackie, 1998). Patil and Talmale (2005) published the checklist of the land and fresh water molluscan of Maharashtra state reported, 142 species of molluscan of all forms belonging to 42 genera including 23 families. Amitkumar and Roy (2009) have observed 18 Gastropod species and 7 Pelecypod species from north Bihar region of India. Patil (2003) studied the existence of freshwater bivalve molluscs from Pusad region of Yavatmal district, (Maharashtra.) Surya Rao et al., (2000) studied the molluscan diversity from the Ujain wet land region. Kamble and Kamble (2004) have reported the biodiversity of aquatic animal including some molluscs from Ruti reservoir near Asthi, district Beed (Maharashtra) and identified two orders and three genera of mollusks. Kamble and Rao (2009) studied the diversity of fresh freshwater molluscs from Chincholi tank near Sangola and reported, 12 species of molluscs.

In the present study, 19 species of molluscs belong to class gastropoda and bivalvia were recorded from four pre-identified spots from drought-prone region Sangola (Fig. No. 1). In the present study 10 species from class, gastropoda belongs to 03 orders, 05 families and 06 genera were recorded. From class bivalvia, 09 species belong to 02 orders, 03 families and 05 genera were recorded (Table No. 1). A large number of species were recorded from class gastropoda includes 11 species. Order mesogastropods consists of species (07) followed by basommatophoran (03). From class bivalvia, a large number of species were recorded form genus corbicula and parreysia consists of 03 species each. 02 species were recorded from genus lammelidens and only one species was recorded from Order stylommatophora (Zootecus chion).

Conclusion

During study altogether 19 species of mollusca belonging to 10 genera, under 08 families were recorded. This information of freshwater Mollusca from drought-prone region Sangola is pioneer work. There is a quiet need for comprehensive study of freshwater Mollusca from the drought-prone region. Further, extensive surveys of this area will definitely make known the presence of voluminous species than what is known today.

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