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RESEARCH ARTICLE

ICHTHYOFAUNAL DIVERSITY OF NARMADA RIVER OF OMKARESHWAR REGION IN KHANDWA DISTRICT, MADHYA PRADESH.

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Abstract

The river Narmada is the longest westerly flowing river of the country and total length of 1,312 kilometers flowing between the famous Vindhyas and Satpura ranges. The present work has been conducted to assess the ichthyofaunal diversity of a stretch of Narmada river during year 2010-2011 in the Omkareshwar region, situated between latitude (DMS) 22°15'1" N and longitude (DMS) 76°8'48" E. The study was conducted in monsoon, post monsoon, winter and summer seasons. During the present survey of Narmada river 59 fish species were recorded, which belong to 7 orders, 17 families and 34 genera.

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Introduction:-

Biodiversity is the variation in the genetics and life forms of populations, species, communities and ecosystem. Biodiversity is important for the future sustainability of freshwater natural resources. Biodiversity affects the capacity of living systems to respond to changes in the environment and is essential for providing goods and services from ecosystem (e. g., nutrient cycling and clean water).

Madhya Pradesh, the central state of India. A number of lotic and lentic water bodies present in Madhya Pradesh. Narmada is a west flowing and lotic water resource of Madhya Pradesh. The Narmada river extends over an area of 98,796 Square kilometer and lies between eastern (longitudes 72°32' to 81°45') and northern (latitudes 21°20' to 23°45'). It flows through the state of Madhya Pradesh approximately 1,077 kilometers.

Material and Methods:-

The Narmada river is the fifth largest river of India. It is the longest westerly flowing river of the country and total length of 1,312 kilometers flowing between the famous Vindhyas and Satpura ranges.

Omkareshwar is the tehsil of district Khandwa (East Nimar), Madhya Pradesh. It is known as a famous place of Hindu pilgrimages situated 77 kilometers from Indore. Shaped like the holy symbol 'OM', this sacred island on the conflux of the river Narmada and Kaveri is visit by pilgrims from all over the country to seek blessing at the temple of ShriOmkarMandhata.

Omkareshwar is the important place in Madhya Pradesh where the Narmada flows descends with rapid speed, quickening in pace, rushes over a barrier of rocks. The Sikta and Kaveri joint it below Kanwa plain.

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The Omkareshwar region, situated between latitude (DMS) 22°15'1" N and longitude (DMS) 76°8'48" E.

The present work has been conducted to assess the ichthyofaunal diversity of a stretch of Narmada river during year 2010-2011 in monsoon, post monsoon, winter and summer seasons.

The fishes were collected with the help of local fishermen and tribal people using cast nets and gill nets of different mesh size 10, 20, 30, 40, 50, 60, 70, 80, 90, 100 mm at various locations. The collected fishes were identified using the standard keys of Berg (1940), Day (1958), Jhingran (1982), Qureshi (1983) and Shrivastava (1998).

Result and Discussion:-

During the present survey of Narmada river 59 fish species were recorded, which belong to 7 orders, 17 families and 34 genera in the Omkareshwar region.

List of fish species of Narmada river in the present study

Order	Family	Species
Clupeiformes	Clupeidae	Hilsailisha
	Notopteridae	Notopterusnotopterus
Cypriniformes	Cyprinidae	Cyprinuscaurio
		Oxygasterbacaila
		Catlacatla
		Cirrhinuscirrhusa
		Cirrhinusfulungee
		Cirrhinusmrigala
		Cirrhinusreba
		Crossocheiluslatius
		Garramullya
		Garragotyala
		Labeobata
		Labeocalbasu
		Labeogonius
		Labeorohita
		Labeodyocheilus
		Labeofimbriatus
		Osteobramacotio
		Puntiusconchonius
		Puntiusarana
		Puntiusophore
		Puntiussticto
		Puntiusguganio
		Puntiusdorsalis
		Tor tor
		Bariliusbarila
		Bariliusbendelisis
		Daniodevario
		Rasboradaniconius
		Hypophthalmichthysmolitrix
	Cobitidae	Lepidocephalichthysguntea
		Nemacheilusbotia
	Siluridae	Ompokbimaculatus
		Ompakpobda
		Wallagoattu
	Bagridae	Mystusbleekari
		Mystusseenghala
		Mystusvittatus

		Mystuscavasius
		Mystustengara
		Rita rita
	Schilbeidae	Clupisomagarua
	Saccobanchidae	Heteropneustesfossilis
	Clariidae	Clariusbatrachus
Anguilliformes	Anguillidae	Anguilla bengalensis
Beloniformes	Belonidae	Xenentodoncancila
Ophiocephaliformes	Ophiocephalidae	Channagachua
		Channamarulius
		Channapunctatus
		Channastratus
Perciformes	Centropomidae	Chandanama
		Chandaranga
	Nandidae	Nandusnandus
	Anabantidae	Anabas testudineus
		Colisafasciatus
	Gobiidae	Glossogobiusgiuris
Mastacembeleformes	Mastacembelidae	Mastacembelusarmatus
		Mastacembeluspancalus

Total fifty nine fish species were recorded in the Omkareshwar. The most abundant family was Cyprinidae 49.15% followed by the families of Bagridae 10.17%, Ophiocephalidae 6.78%, Siluridae 5.08%, Cobitidae, Centropomidae, Anabantidae and Mastacembelidae constituting 3.39% each and other families Clupeidae, Notopteridae, Schilbeidae, Saccobanchidae, Clariidae, Anguillidae, Belonidae, Nandidae, and Gobiidae constituting 1.69% each in order of abundance.

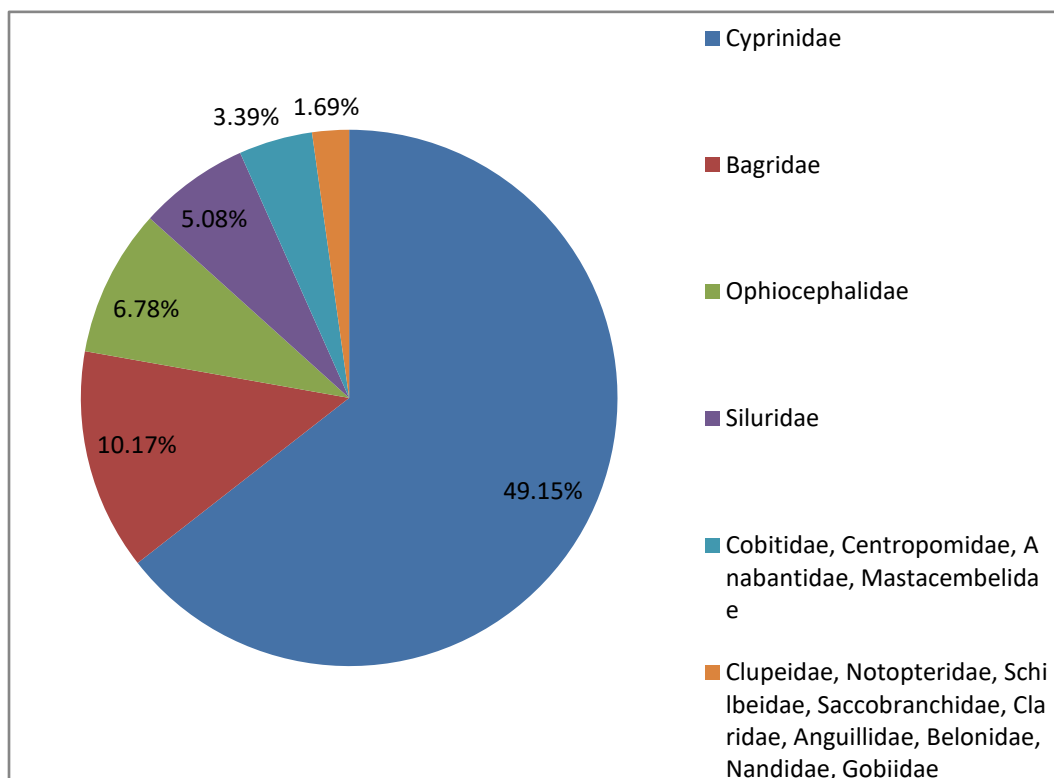


Fig 1:-Percentage of fish species were recorded in Omkareshwar

Total fifty nine fish species were recorded belong to 49.15% carp group, 20.34% catfish, 20.34% miscellaneous, 8.47% perches and 1.69% clupeids.

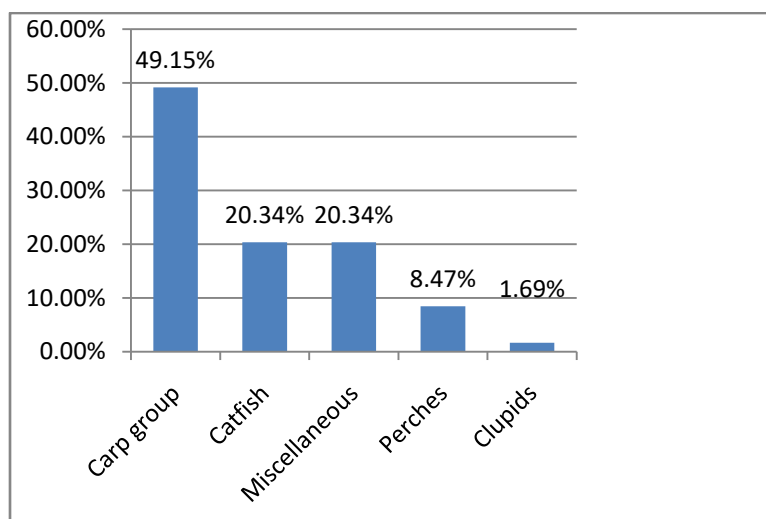


Fig 2:-Percentage of fish species were recorded in groups

Various studies have been done on fish biodiversity and its conservation issues in river systems. The study was executed by the Department of Fisheries, Govt. of M. P. in the year 1967-71 of the river Narmada which covers the stretch from Jabalpur to Khalghat reporting 46 species belonging to 27 genera, 14 families and 7 orders in the stretch (Anon, 1971).

Rao, et. al. (1991) have undertaken pre impoundment survey at Punasa (Khandwa district), Omkareshwar (Khandwa district), Mandleshwar (Khargone district), Maheshwar (Khargone district) and Barwani (Barwani district) pertaining to the river and have enlisted 84 fish species belonging to 45 genera, 20 families and 6 orders.

Another survey of fish fauna on river Narmada was carried out and reported 21 fish species belonging 16 genera, 6 families and 4 orders (Balapure 2001).

Vyas, et. al. (2007) survey of fish fauna on river Narmada and were recorded 46 fish species belonging 16 genera, 6 families and 4 orders in the stretch from Shahganj to Bandua (22km.) districts Hoshangabad and Sehore.

Chouhan, et. al. (2010) during the survey of Narmada river were recorded 43 fish species which belonging to 26 genera, 14 families and 7 orders at Omkareshwar region (Khandwa district).

Sharma, et.al, (2011) were recorded 42 fish species belonging to 25 genera, 14 families and 7 orders in Narmada river at Omkareshwar (Khandwa district), Mandleshwar (Khargone district), Maheshwar (Khargone district) and Barwani (Barwani district).

Chouhan, et. al. (2013) during the another survey of Narmada river were recorded 59 fish species which belonging to 34 genera, 17 families and 7 orders at Maheshwar ,Khalghat and Barwani.

References:-

1. **Anon, (1971):** Fisheries Department, M. P. Fisheries Survey in Narmada River, 1967-71.
2. **Balapure, S. (2001):** Comparative study of Fish Biodiversity in Narmada and Tapti River, Dissertation Report, Department of Limnology, B. U. Bhopal.
3. **Chouhan, M.; Sharma, S.; Malakar, B.; Mudgal, L. K.; Siddiqui, A.; and Mimrot, K. (2010):** Diversity of Ichthyofauna of Omkareshwar region of Narmada River. Proceeding of IInd International River Festival, Narmada Samagra, Bhopal. 96-100.
4. **Chouhan, M.; Siddiqui, A. and Sharma, S. (2013):** Fish Biodiversity of Narmada River in Some Selected Stations of Madhya Pradesh, India. International Journal of Advanced Research, Volume 1, Issue 3: 20-25.
5. **Day, F. S. (1958):** The fishes of India, William Dawson's and Sons, Ltd. London. 1: 777.
6. **Jhingran, V. G. (1982):** Fish and Fisheries of India Hindustan Pub. Corporation. Delhi. 666.
7. **Qureshi, T. A. and Qureshi, N. A. (1983):** Indian fishes. Brij Brothers, Bhopal-462001. 1-206.
8. **Rao, K. S. (1991):** Study on pre-impoundment fisheries potential of Narmada River in Western Zone. J. Inland Fish. Soc. of India. 23(1) : 34-91.
9. **Sharma, S.; Mudgal, L. K.; Siddiqui, A.; Chouhan, M.; Malakar, B.; Singhvi, M. S.; Mimrot, K.; Pir, Z. and Chariya, D. (2011):** Biodiversity of Fish Species Communities of Narmada River, Madhya Pradesh, India. Proceeding International Conference on Ecosystem Responses to Global Environmental Change. Nepal. 119-125.
10. **Shinde, S. E.; Pathan, T. S.; Bhandare, R. Y. and Sonawane, D. L. (2009):** Ichthyofaunal Diversity of HarsoolSavangi Dam, District Aurangabad, (M.S.) India. World J. Fish and Marine Sci., 1(3): 141-143.
11. **Shrivastava, G. (1998):** Fishes of U. P. Bihar, VishwavidhyalayaPrakashan, Chowk Varanasi, 221001. India Pub. (7).