DIVERSITY OF CAT ICHTHYOFAUNA (TELEOSTEI: SELURIFORMES) FROM YESGAON, TALUKA KHULATABAD, DIST-CHH.SAMBHAJINAGAR (M.S) INDIA

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Abstract:

During the study period June 2021 to May 2022 the observation revealed the occurrence of 15 species belonging to 09 genera, 05 family. The family bagridae was found dominant with 09 species. Family Bagridae was dominant with (09 species)60 % followed by Siluridae (02 species) 13 % and Schilbeidae (02 species)13 %, Heteropneustidae (01 species) 7 % and Clariidae with (01 species)7 % constituting of the total fish species.

Key ward: Ichthyofauna, Yesgaon, Diversity, Chh.Sambhajinagar

INTRODUCTION

"The most wonderful mystery of the life may well be the means by which it created so much diversity from so little physical matter" [20], There are about 450 families of freshwater fishes globally, about 40 represent in India (warm freshwater fishes) about 25 of these families are commercially important. [8] were the first modern writers of Indian fishes. Osteichthyian fishes of the order Siluriformes, known by the English common name of cat fishes, are the most diverse group and play an important role on decay and feed on dead organic matter. They are basically carnivorous by habit. Live fishes are naked body often with an adipose dorsal fin and spines at the front end of the dorsal and pectoral fins. They are having barbell around the mouth that acts as sensors just like the whiskers of cat .

Marathwada region is one of the six divisions of Maharashtra state comprisng of eight districts, viz. Aurangabad, Beed, Hingoli, Jalna, Latur, Nanded, Osmanabad and Parbhani. The location of Marathwada is on 19°20' 56.76" E longitude and 76°14' 44.62" N latitude (Google Earth, 2013) of forms the part of the vast Deccan plateau of India. The total area of Marathwada region is 64,813 km. and is bounded by Vidarbha region

on the north, by Andhra Pradesh on the east and south east, Karnataka on the south and by Western Maharashtra on the west. Cat fishes have an essential role as indicator of ecological integrity of running waters. Under this concept, there is an increasing emphasis on gathering biological database to serve a broad-spectrum of environment object and plans such as the protection of endangered and threatened cat fish species of Marathwada region.

STUDY SITE

Yesgaon dam is a medium irrigation project construct by government of India in 1984 on river Girja which originated from Girja mandir, Mashmal comes in talukha Khultabad , district-Aurangabad.

The location of site Yesgaon Latitude is **20.23691** and Longitude is **74.39742**. Girja river originate from Mashmal and meet Purna at Hasnabad and travel 80 km.Yesgaon is a Village in Khultabad Taluka in Aurangabad District District of Maharashtra State, India. It belongs to Marathwada region . It belongs to Aurangabad Division . It is located 25 KM towards North from District head quarters Aurangabad. 322 KM from State capital Mumbai.Yesgaon is surrounded by Aurangabad Taluka towards South , Kanand Taluka towards North , Phulambri Taluka towards East , Gangapur Taluka towards South .The main purpose is for drinking water for near by village, domestic use, agriculture and fishery practise under the assistant fishery officer , Aurangabad.

MATERIAL AND METHODS

To study the ichthyofauna (Cat fish) of Yesgaon Dam from June 2021 to May 2022, fish samples were collected from two sampling sites (site I is the river mouth and site II is dam side, which represent the ichthyofaunal composition of Yesgaon Dam. Fish samples were collected every week during the study period from the fish landing centers with the help of skilled local fishermen by various fishing crafts, gears with variable mesh size. Sampling points were distributed throughout the site to cover its whole area and location was changed for the collection of fish fauna according to the season.

Identification of fishes was done up to species level at fish landing center to get its natural colour, pattern of scales, fins, mouth pattern, identification marks like black spot, bloach on operculum, paired and unpaired fins and body parts with the help of standard literature by [5] [8] [18] [6],[10],[11],[12],[13],[14] [21],

Fish species which were not identified on the field (landing center) were preserved in 10 % formalin or 5cc of formalin was injected in the belly of fish with disposable syringe and packed in polythene bags. These fish samples were brought to Fishery research laboratory, Department of Zoology, Rajarshi Shahu Arts, Commerce and Science College, Pathri, Phulambri Aurangabad for further identification.

Specimen with doubtful identifying characters was sent to Zoological Survey of India (ZSI) Pune, regional branch (ZSI) Kolkata for identification.

RESULT AND DISCUSSION

During the study period June 2021 to May 2022 the observation revealed the occurrence of 15 species belonging to 09 genera, 05 family. The family bagridae was found dominant with 09 species. Family Bagridae was dominant with (09 species)60 % followed by Siluridae (02 species) 13 % and Schilbeidae (02 species)13 %, Heteropneustidae (01 species) 7 % and Clariidae with (01 species)7 % constituting of the total fish species.

The minimum species was recorded at site I and Site II maximum Species like Mystus *Bleekeri and Clarias batrachus* were found at all the site and found abundantly .

It was also observed that During the study period it was reported that species like *Ompok bimaculatus, Wallago attu, Mystus bleekeri, Mystus cavasius, Sperata seenghala, Eutropiichthys goongwaree, Clarias batrachus* are having good food as well as market value.

Clarias batrachus Mystus bleekeri, are having experimental value in biological research laboratory.

Similar results were reported by [19] reported 17species from 12 genera and 6 families from River Kelo and Mand in Raigarh District, CG, India. [1] reported 07 species belonging 06 genera and 06 families were Bagridae family was dominant with 02 species from Karala river of Jalapaiguri District, West Bengal, India. [3] reported 15 species belonging to 05 families were family Bagridae was a dominant with 06 species from Kulsi River.

[4] reported 37 species from that 08 species of catfishes belonging to 04 families were recorded from Charju River, irap District, and Arunachal Pradesh, India. [2] reported 08 species belonging to 05 families were Bagridae family was dominant with 03 species from Lentic Freshwater Catfish at Chhatarpur City M.P, India

TABLE 01

CAT FISH DIVERSITY FROM YESGAON DAM, KHULTABAD, DIST- AURANGABAD.

Family	*Genus*	*Species*
Siluridae	*Ompok*	*bimaculatus*
	Wallago	*attu*
Bagridae	*Mystus*	*armatus*
		bleekeri
		cavasius
		vittatus
		horai
		montanus
	Sperata	
		aor
		seenghala
	Rita	
		gogra
Schilbeidae	*Proeutropiichthys*	
		taakree taakree
	Eutropiichthys	
		goongwaree
Heteropneustidae	*Heteropneustes*	
		fossilis
Clariidae	*Clarias*	*batrachus*

DIVERSITY OF CAT FISHES (TELEOSTEI: SELURIFORMES)

FROM YESGAON, TALUKA kHULATABAD, DIST- AURANGABAD

Ompok bimaculatus

Wallago attu

Mystus armatus

Mystus bleekeri

Mystus cavasius

Mystus vittatus

Mystus horai

Mystus montanus

Sperata aor

Sperata seenghala

Rita gogra

Proeutropiichthys taakree taakree

Eutropiichthys goongwaree

Heteropneustes fossilis

Clarias batrachus

FOLLOWING CAT FISH SPECIES WERE OBSERVED AND IDENTIFIED IN THE PRESENT STUDY FROM YESGAON DAM, KHULTABAD, DIST- CHH.SAMBHAJINAGAR.

	Siluridae (Sheat fishes)	Genus	*Ompok* (Bloch, 1794)	Species	*bimaculatus* (Bloch, 1794)
First Record	1797, *Silurus bimaculatus* Bloch, *Hist. Nat.Poiss*., Part: 17, Pl.364.				
Diagnostic characters	Maxillary barnels longer than head extending upto or beyond anal fin, [5]				
Fin formula	D.4-5; P.12-15 (1/11-14); V.8; A.52-75(2/50-73); C.17-18; Barbels two pairs, [5]				
Distribution	**India: -** Freshwater of India; rivers, ponds, lakes, channels and other water bodies, [5]				
	Abroad – Freshwater of Pakistan, Nepal, Sri lanka, Bangladesh, Burma, Thailand, Maleyasia,Malaya, Java, Sumatra, Borneo, Siam, Vietam, East India and Indonesia, [5]				

Family	Siluridae (Sheat fishes)	Genus	*Wallago* (Bleeker, 1851)	Species	*attu* (Bloch & Scheider, 1801)
First Record	1801, *Silurus attu* Schneider, *Syst. Ichth. Bloch*: 378, pl.75.				
Diagnostic characters	Gape of mouth very wide, Extending beyond eyes posteriorly, [10]				
Fin formula	D.5; P.15-16(1/14-15); V.9-10; A.86-88(4/82-84); C.17; Barbels are two pairs, [5]				
Distribution	**India-** Freshwater of east Punjab, U.P, Bihar. Darjeeling district in west Bengal, Assam and Orissa, [15]				
	Abroad – Bangladesh, Pakistan, Myanmar and Thailand, Java and Sumatra, [15]				

Family	**Bagridae (Bagrid catfishes)**	**Genus**	***Mystus* (Bleeker, 1851)**	**Species**	***armatus* (Day, 1865)**
First Record	1865, *Hypselobagrus armatus*, Day, *Proc. Zool. So Lond*. P.289.				
Diagnostic characters	Body plain. Occipital crest smooth .A dark blotch at base of caudal fin. Adipose dorsal fin base longer than anal fin base. Median longitudinal groove extending beyond posterior border of orbit and nearly reaching base of occipital process, [10]				
Fin formula	B.X, D.1/7/0; P. (1/9); V.6; A.11 (3/8); C.17. [4]				
Distribution	**India-** Wynaad range of hills, Western Ghats, Nagaland and Kerala, [4]				
	Abroad – Lower Myanmar, [4]				
Family	Bagridae (Bagrid catfishes)	Genus	*Mystus* (Bleeker, 1851)	Species	*bleekeri* (Day, 1877)
First Record	1846, *Bagrus keletius* (*nec. Valenciennes*) Bleeker, *Nat.Gen. Arch. Ned. India*. 3(2): 135.				
Diagnostic characters	Maxillary barbles reach anal fin interorbital width les than 3.0 (2.0 to 3.0) in head length. No dark spot at base of dorsal fin. Body with two light longitudinal bands, one each above and below lateral line, [10]				
Fin formula	B.X, D.1/7; P. (1/9-10); V.6; A.9-10(3/6-7); C.17. [4]				
Distribution	**India-** Generally confined to North India Mahanadi head Waters and West Bengal, [15]				
	Abroad – Bangladesh, Nepal, Myanmar, and Sumatra, [15]				

Family	Bagridae (Bagrid catfishes)	Genus	*Mystus* (Bleeker, 1851)	Species	*cavasius* ([8], 1822)
First Record	1822, *Pimelodus cavasius* [8], *Fish Ganges* pp.203, 379 pl-11Fig 67.				

Diagnostic characters	Maxillary barbles reach caudal fin base or beyond inter orbital width more than 3.0 (3.0 to 4.0) in head length. A dark spot at the base of dorsal fin. No bands on body, [10]
Fin formula	B.vi, D.1/7; P. (1/8); V.6; A.11-13(4/7-9); C.16. [4]
Distribution	**India-** Fresh water of U.P, Bihar, Darjeeling dist in West Bengal Assam, Orissa and Madhya Pradesh, [15]
Abroad – Bangladesh, Nepal, Myanmar, Sri Lanka and Thailand, [15]	

Family	Bagridae (Bagrid catfishes)	Genus	*Mystus* (Bleeker, 1851)	Species	*vittatus* (Bloch, 1794)
First Record	1797, *Silurus vittatus* Bloch, *Ichth, Hist.Nat*, 11:40, Pl.371, Fig 2.				
Diagnostic characters	Eye diameter 4.5 to 6.0 in head length pectoral fin with nine rays. Body with 3 or 4 longitudinal colour bands above and below lateral line (Plate XI fig 4) .A dark shoulder spot. No spot at base of Caudal fin, [10]				
Fin formula	B.X, D.1/7/0; P. (1/6); V.6; A.11-13(3-4/8-9); C.15. [4]				
Distribution	**India-** Freshwater of Eastern Punjab, Bihar, U.P, Assam, West Bengal and Orissa, [15]				
Abroad – Bangladesh, Nepal, Myanmar, , Pakistan and Thailand, [15]					

Family	Bagridae (Bagrid catfishes)	Genus	*Mystus* (Bleeker, 1851)	Species	*horai* (Jayaram, 1954)
First Record	1954. *Mystus vittatus horai* Jayaram; *Rec.Indian Mus* 51 (4): 536.				
Diagnostic characters	Caudal peduncle constricted its least height about 03 times in its length. Vomerine tooth band not continuous, [13]				
Fin formula	D.I, 7; P.I, 8; V.i, 5; A.iii, 8; C.17. [1]				
Distribution	**India -** River Indus Kalabagh [13]				
	Abroad – West Pakistan, [13]				

Family	Bagridae (Bagrid catfishes)	Genus	*Mystus* (Bleeker, 1851)	Species	*montanus* (Jerdon, 1849)
First Record	1849, *Bagrus montanus* Jerdon *Madras J.lit sci*, 15:337.				
Diagnostic characters	Eye diameter 3.5 to 4.0 in head length. Pectoral fin with six rays body with a bluish shoulder spot and a silvery line along the side ending in a dark spot at base of caudal; one or two light bands along sides above lateral line, [13]				
Fin formula	B.X, D.1/7/0; P. (1/6); V.6; A.12 (3/9); C.19. [4]				
Distribution	**India-** Assam, Kerala State, Wayanad range of hills; Madhya Pradesh, Hosangabad district. Javadi hills; Eastern Ghats, [13]				

Family	Bagridae (Bagrid catfishes)	Genus	*Sperata aor* (Sykes, 1839)	Species	*aor* (Sykes, 1839)
First Record	1822. *Pimelodus aor* [8], *Fish Ganges* pp.205, 379, Pl.20 Fig 68.				
Diagnostic characters	Snout rounded width of gape of mouth less than ½ of head length caudal fin with 17 rays. Maxillary barbels reach nearly to caudal fin or even beyond. Adipose dorsal fin long its base is about twice as long as rayed dorsal, [5]				
Fin formula	D.1/7/0; P. (1/9); V.6; A.11-13(3/8-10); C.17. Barbles four pairs. [5]				
Distribution	**India-** River Ganga, Yamuna, Brahmaputra and Mahaanadi, [15]				
	Abroad – Pakistan, Bangladesh and Myanmar**,** [15]				
Family	Bagridae (Bagrid catfishes)	Genus	*Sperata aor* (Sykes, 1839)	Species	*seenghala* (Sykes, 1839)
First Record	1839. *Platystoma seenghala* Sykes, *Trans. Zool. Sco.lond*., 2:371, pl.65, Fig 2.				
Diagnostic characters	Snout spatulate, width of gape of mouth 1/3 of head length. Caudal fin with 19-21 rays. Maxillary barbels extend to the (reaching) anal fin. Adipose dorsal short and about as long as rayed dorsal, [5]				
Fin formula	D.1/7/0; P. (1/9); V.6; A.11-12(3/8-9); C.19-21. Barbles four pairs. [5]				

Distribution	**India-** Freshwater of East Punjab, Uttar Pradesh, Krishna, Godavari, Cauvery river, Ganga and Yamuna, [15]
Abroad – Pakistan, Bangladesh, Afghanistan, Nepal and Myanmar, [15]	

Family	Bagridae (Bagrid catfishes)	Genus	*Rita* (Bleeker, 1851)	Species	*gogra* (Sykes, 1839)
First Record	1853, *Rita* Bleeker, Verh.Balar.Genootsch, *Kunst.Wet*. 25, p.122.				
Diagnostic characters	Teeth on prevomer mixed with molariform and valliform .Premaxillary band of teeth 3.5 to 4.0 times as long aas broad, [13]				
Fin formula	D.i6, P.i 10, V.i6-7, A.iii 8-9, C.13-16.				
Distribution	**India-** Rivers of Deccan up to Krishna river system. [13]				
	Abroad – Bangledesh, Nepal, Myanmar, Pakistan and Yunnan, [13]				

Family	Schilbeidae	Genus	*Proeutropiichthys* (Sykes, 1839)	Species	*taakree.taakree* (Sykes, 1839)
First Record	1838. *Hypophthalmus taakree* Sykes, *Proc. Zool .Soc .lond*. 6:163.				
Diagnostic characters	Interoperculum almost rounded without any spurs .eye. Diameter 3.5 to 3.6 times in head length .Maxillary barbels extend only up to tip of pectoral fins. [13]				
Fin formula	D.ii 7, P.i 10-11, V.i 5, A.40-44, C.17.				
Distribution	**India-** Peninsular India, Krishna river system, Karnataka and Maharashtra. [15]				
Abroad – Bangladesh, Nepal, Myanmar, Pakistan and Yunnan, [15]					

Family	Schilbeidae	Genus	*Eutropiichthys* (Sykes, 1838)	Species	*goongawaree* (Sykes, 1838)
First Record	1838 .*Hypothalmus goongwaree Sykes, Proc* .Zool. Soc .Lond. p. 163.				
Diagnostic characters	Teeth on palate interrupted in the middle. Nasal barbels longer than head length reaching dorsal fin base. [13]				
Fin formula	D.i 6, P.i 13, V.i 5, A.iii 51, C.17.				
Distribution	**India-** Pennisular India up to Krishna river inhabits rivers and canals of Andhra Pradesh and Maharashtra.[15]				
	Abroad – Bangladesh, Myanmar, Nepal, Pakistan and Thailand, [13]				

Family	Siluriformes	Genus	*Heteropneustes* (Muller)	Species	*fossilis* (Bloch, 1794)
First Record	1798. *Silurus fossilis* Bloch *Ichth, Hist.Nat.Poiss.* 11:36; 370, Fig .02.				
Diagnostic characters	Anal fin separated from the caudal fin. A deep notch occipital process not reaching base of dorsal fin. [13]				
Fin formula	D 6;P.1/7;V. 6; A.63-74; C. 19; barbels four pairs. [5]				
Distribution	**India-** Throughout Indian plains and Andaman's, [15]				
	Abroad – Pakistan, Bangladesh, Sri Lanka Myanmar, Nepal Thailand, Laos, and Indus basin, [15]				

Family	Clariidae (Air Breathing Cat fishes)	Genus	*Clarias* (Linnaeus, 1758)	Species	*batrachus* (Linnaeus, 1758)
First Record	1758, *Silurus Batrachus* Linnaeus, *syst.Nat*. ed.10, 1: 305.				
Diagnostic characters	Distance from dorsal fin base to base of occipital process 4.5 to 6.0 times in head length measured along upper median line from tip of snout to base of occipital process, [13]				
Fin formula	D 65-72; P.9 (1/8); V. 6 (1/5); A.47-55; C. 17. [14]				
Distribution	**India-** Freshwater of the plains of India, [15]				

	Abroad – Pakistan, Bangladesh, Sri-Lanka, Myanmar, Nepal, Thailand, Indonesia, Philippines. [15]

CONCLUSION

During the study period the observation revealed the occurrence of 15 species belonging to 09 genera, 05 family. The family bagridae was found dominant with 09 species. Family Bagridae was dominant with (09 species)60 % followed by Siluridae (02 species) 13 % and Schilbeidae (02 species)13 %, Heteropneustidae (01 species) 7 % and Clariidae with (01 species)7 % constituting of the total fish species.

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