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Catfish fauna (Order- Siluriformes) Diversity of Pranhita River Sub basin at Sironcha, Gadchiroli District, Maharashtra, India

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ABSTRACT

Catfish investigation of Pranhita River sub basin at Sironcha Dist. Gadchiroli, Maharashtra was carried out during July 2015 to June 2017. Pranhita River is boon for peoples of Sironcha. The documented paper deals with the diversity, abundance and conservation (IUCN) status of catfish. Sampling sites were selected along 10km and visited fortnightly. A total of 15 species of order siluriformes belonging to 5 families and 9 genera were recorded during study period. In study Bagridae was dominant family with 8 species, from families like Sisoridae and Pangasiidae single species recorded from each. Abundance shows majority of catfish are common, few are uncommon and only one species was rare. 4 catfish species were under near threatened category while 11 were under least concern category according to IUCN red list status.

Keywords: Catfish, Siluriformes, Pranhita, River, Sironcha

INTRODUCTION

Pranhita River (19°35'24"N and 79°47'59"E) is major tributary of Godavari River system formed by the confluence of Wardha and Wainganga Rivers at Kouthala (village in Maharashtra) at an elevation of about 146m above mean sea level. Main tributaries of Pranhita River are Dina, Nagulvagu and Peddawagu. Total length of river is 113km. It form boundary between Gadchiroli district of Maharashtra state and Adilabad district of Telangana state. The river is very beneficial for peoples of Sironcha as it is ultimate source of water for drinking and irrigation, beside this it provide shelter to various endemic flora and fauna.

The study area for present documentation was Sironcha a pollution free area, located at southward region of Gadchiroli District of Maharashtra State, India. This Area is mostly surrounded by rivers such as Indravati (East), Godavari (South) and Pranhita (West).

In this town during summer temperature may riches up to 48^0 C and in winter it may falls up to 8^0 C. Area of Sironcha never faces the condition of drought because of Pranhita River sub basin.

Fishes are large group of vertebrates having enormous variation in shape, size, biology and habitat (Bobdey 2014). Catfish are group of fishes belongs to order siluriformes of teleostie fishes and are characterized by the grayish or silver colored roughly cylindrical body without scales and a large mouth with barbels, a character that give catfish their name (Fink & Fink 1981). They are present nearly all countries of world. There are about 3407 species of catfish in the World (Armbruster 2011). Indian water bodies provide shelter to 197 species of catfish (Jayaram 2009). Various researchers have studied the catfish diversity includes Patra (2011) studied the catfish diversity of karala River of West Bengal and recorded presence of 7 species. Kumbar and Lad (2014) reported 13 catfish species from Krishna River, Maharashtra. Lalronunga et al. (2014) recoded 37 species of catfish from rivers of Barak drainage of Mizoram. Gedekar and Tijare (2012) studied the fish diversity of Wainganga river of Gadchiroli district and documented 49 fish species out of which 9 species belong to order siluriformes. Shaikh (2014) reported 37 species of fish from Pranhita River at Sironcha out of which 8 species were of Catfish.

However, very little information available about catfish diversity of Pranhita River without separate account, therefore the aim current research is to provide separate record of catfish diversity, abundance, their Conservation (IUCN) status and to create awareness regarding their conservation.

MATERIAL AND METHODS

Data on Pranhita River catfish diversity were taken from 2 selected sampling sites along 10 km during study period of two years from July 2015 to June 2017. Fish samples were collected from local fishermen. Two sampling sites are Site-1 and Site-2. Site-1(Sironcha fishing Station) is located at Westward direction of Sironcha town near Vithhaleshwar temple. Site-2 (Nagram fishing Station) is on Southwestern direction of Sironcha near Nagram Village. It is 7 km from Sironcha town, after this station river travels little and combines with Godavari River near Kaleshwaram.

Fish samples were collected fortnightly and photographed by using Canon Eos 1300d DSLR camera after that immediately fishes brought to laboratory to preserve them in 10% formaldehyde solution for further investigation. Identification of fishes was based on standard taxonomic keys as described by Talwar and Jhingran (1991), Jayaram (1999), Day (1958) and Fish Base website was also referred (www.fishbase.org). Checklist of captured catfish their scientific name, common name, abundance as C(common) U (uncommon) O (occasional) and R(rare) and conservation (IUCN)status as NT (near threatened) and LC (least concern) is presented in Table 1.

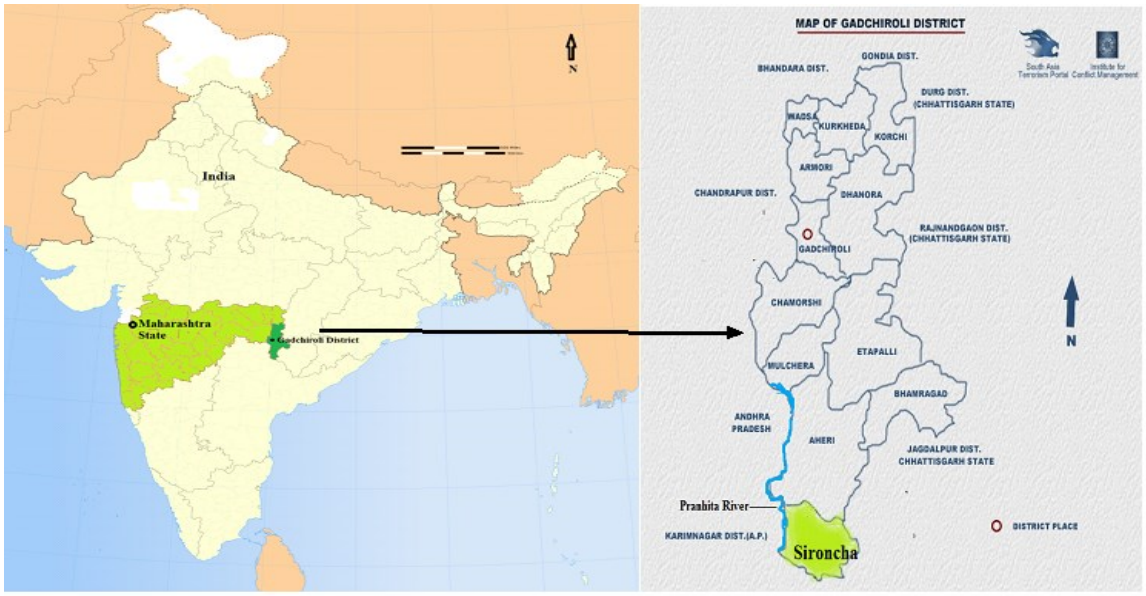

Fig 1: Location map of Pranhita River at Sironch

RESULTS AND DISCUSSION

In present catfish diversity investigation from Pranhita River sub basin at Sironcha during July 2015 to June 2017, 15 species were recorded belonging 5 families and 9 genera of order siluriformes (Table-1). Dominant family was Bagridae with 8 species belonging to genus Mystus, Rita and Sperata (Fig-2). Second dominant family was Siluridae with 3 species of genus Ompok and Wallago. From family schilbeidae 2 species were documented these were *Clupisoma garua* and Eutropichthys vacha, from families like Pangasiidae and Sisoridae only one species reported from each i.e., *Pangasius pangasius* and Bagarius and bagarius.

The conservation (IUCN) status of species belonging to family Siluridae and Sisoridae shows near threatened (NT) and remaining families like Bagridae, schilbeidae and Pangasiidae species are under least concern (LC) category. 15 photographs of captured catfish (Fig. 2: Image 1-15) were documented through this paper.

Abundance based upon catch frequency shows (Fig-3) majority (53.33%) of catfish were common (C) such as *Ompok bimaculatus*, *Wallago attu, Mystus vittatus, Mystus cavasius, Mystus tengara, Rita kuturnee, Sperata seenghala, Clupisoma garua*, etc. Uncommon (U) Species were Ompok pabda, *Mystus bleekeri*, *Sperata aor*, *Eutropiichthys vacha* and *Pangasius pangasius*. Bagarius

Table- 1: Showing families, scientific names, Common name, abundance and IUCN status of catfish.

Sr. No.	Family	Scientific Name	Common Name	Abundance	Conservation Status (IUCN)
1	Siluridae	*Ompok bimaculatus*(Bloch)	Butter Catfish	C	NT
2		*Ompok pabda* (Ham)	Pabdah Catfish	U	NT
3		*Wallago attu* (Bloch & Schneider)	Boal	C	NT
4	Bagridae	*Mystus vittatus* (Bloch)	Stripe Dwarf Catfish	C	LC
5		*Mystus cavasius* (Ham)	Gangetic Mystus	C	LC
6		*Mystus tengara* (Ham)	Tengara Catfish	C	LC
7		*Mystus bleekeri* (Day)	Day's Mystus	U	LC
8		*Rita gogra* (Sykes)	-	R	LC
9		*Rita kuturnee* (Sykes)	Deccan Rita	C	LC
10		*Sperata seenghala* (Sykes)	Seenghala	C	LC
11		*Sperata aor* (Ham)	-	U	LC
12	Schilbeidae	*Clupisoma garua* (Ham)	-	C	LC
13		*Eutropiichthys vacha* (Ham)	Bachawa	U	LC
14	Pangasiidae	*Pangasius pangasius* (Ham)	Pungas	U	LC
15	Sisoridae	*Bagarius bagarius* (Ham)	Goonch	O	NT

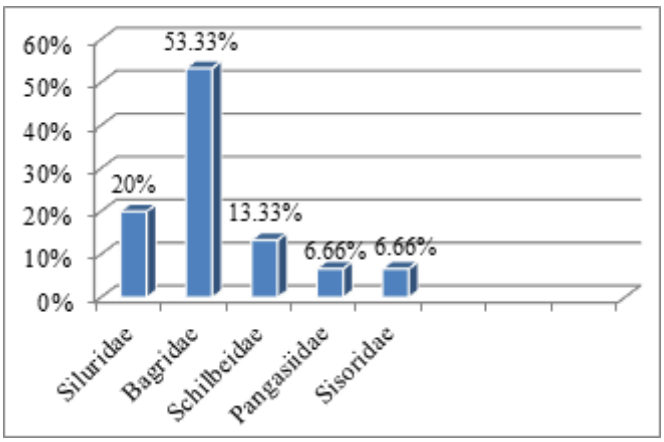

Fig. 2: Family wise Composition of Catfish fauna

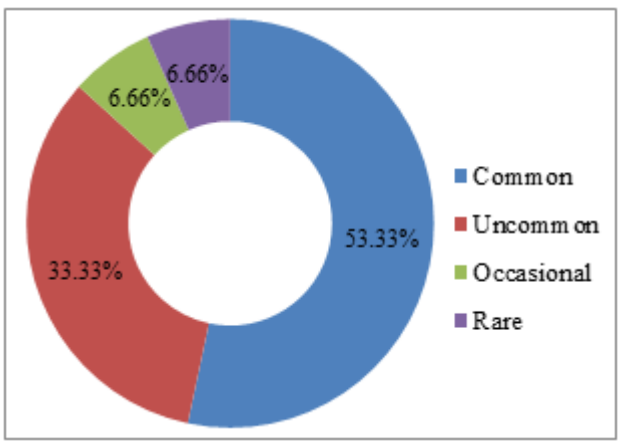

Fig. 3: Abundance of Catfish Fauna

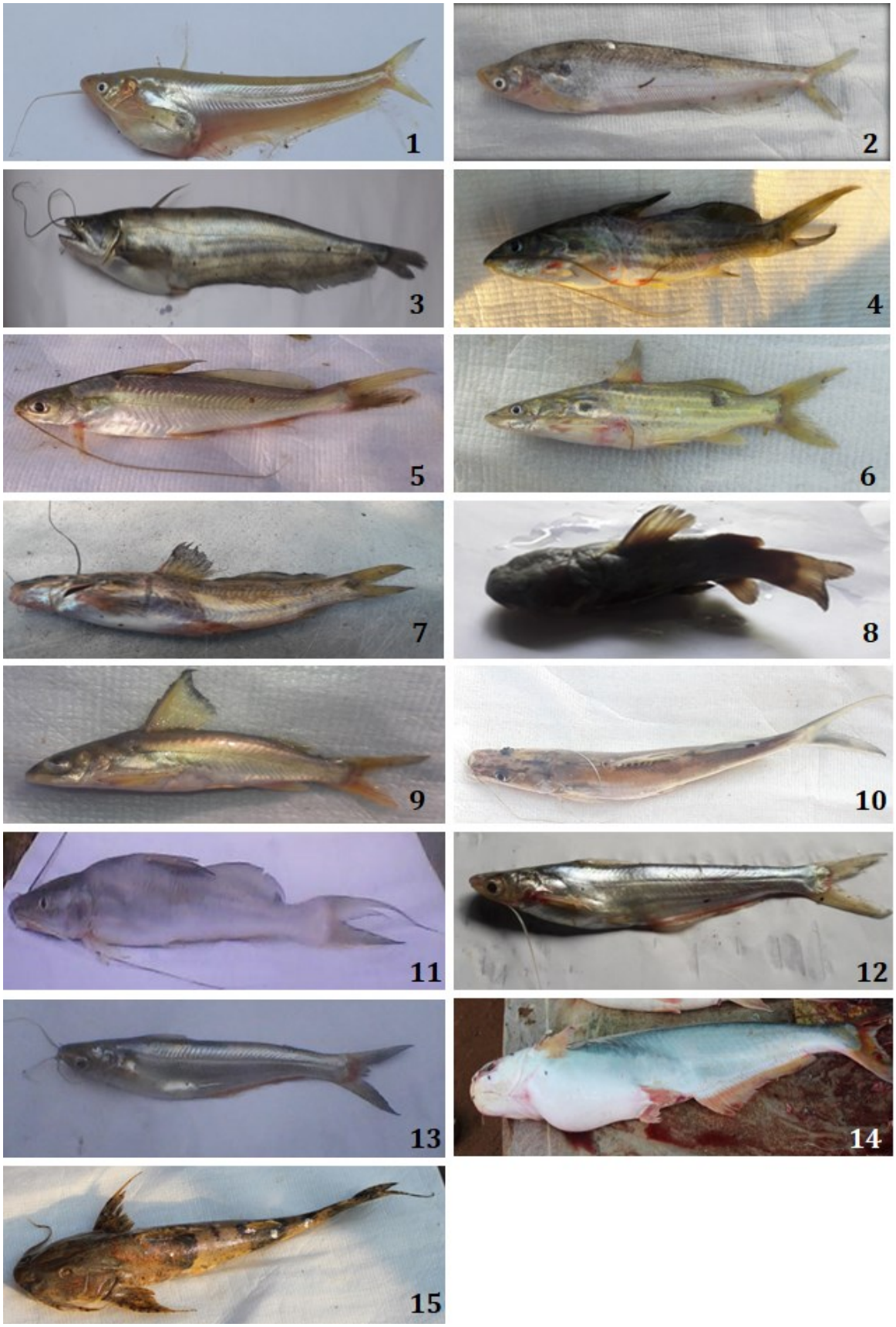

Fig. 2: 1: *Ompok bimaculatus,* 2: *Ompak pabda,* 3: *Wallago atta* 4: *Mystus vittatus* 5 : *Mystus Cavasius 6: Mystus tengara* 7: *Mystus bleekeri* 8: *Rita gogra* (preserved specimen) 9: *Rita kuturnee* 10: *Sperata seenghala* 11: *Sperata aor* 12: *Clupisoma garua* 13. *Eutropiichthys vacha* 14. *Pangasius pangasius* 15. *Bagarius bangarius.*

bagarius are occasionally captured (7 to 9 times) during study period by fishermen while rare fish *Rita gogra* was caught only once in two year. Most abundant fish which caught daily by fishermen in great number was *Rita kuturnee*. Both Rita species has great demand in local fish market of Sironcha because of its taste and it is preferred more after Labeo rohita by local villagers.

Pranhita river is unpolluted river as there were no industries in surrounding area and river never dry up in summer therefore it is suitable area for conservation of catfish, beside this fishermen of this area mainly use environment friendly fishing technique, do not use technique such as liming and dynamite fishing which cause decline of rare species but over exploitation may occur because of demand in local fish market which may cause loss of catfish fauna. Strict management measures and educating local people will help to conserve catfish.

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