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Rama Rao K

Assistant Professor

Department of Zoology

Govt. Degree & PG College

Jammikunta, Karimnagar Dt.

Telangana State, India

G Srivanthika

B. Sc; BZC Students,

Department of Zoology, Govt.

Degree & PG College,

Satavahana University

Jammikunta, Karimnagar, Dt.

Telangana, India

B Shivakumar

B. Sc; BZC Students,

Department of Zoology, Govt.

Degree & PG College,

Satavahana University

Jammikunta, Karimnagar, Dt.

Telangana, India

M Shivaji

B. Sc; BZC Students,

Department of Zoology, Govt.

Degree & PG College,

Satavahana University

Jammikunta, Karimnagar, Dt.

Telangana, India

A Sirisha

B. Sc; BZC Students,

Department of Zoology, Govt.

Degree & PG College,

Satavahana University

Jammikunta, Karimnagar, Dt.

Telangana, India

Correspondence

Rama Rao K

Assistant Professor

Department of Zoology

Govt. Degree & PG College

Jammikunta, Karimnagar Dt.

Telangana State, India

Ichthyo faunal diversity of Jammikunta mandal freshwater perennial tanks at Karimnagar district; Telangana State: India

Rama Rao K, G Srivanthika, B Shivakumar, M Shivaji and A Sirisha

Abstract

Fish faunal diversity in the four larger freshwater tanks at Jammikunta mandal was studied from October-2016 to September-2017. A total of 56 species of fishes belonging to 9 orders such as Cypriniformes (27 species) Siluriformes (13 species), Perciformes (14 species), Channiformes (4 species) Beloniformes (2 species), Anguilliformes (2 species) Osteoglossiformes (one species) and Mogiliformes (one species). The number and percentage composition of population status was calculated to 32.81% common, 29.69% abundant, 21.86% moderate, and 15.63% rare species were identified in the freshwater tanks. According to IUCN (2017-2) status 82.14% species are least concerned (LC), 3.57% are data deficient (DD), not evaluate (NE) and endangered (EN), and 1.78% species of fish is vulnerable (VU). CAMP (1998) status revealed that 35.71% not evaluate (NE) and Lower risk near threatened (LRnt), 14.29% vulnerable (VU), 8.93% data deficient (DD), 3.57% endangered (EN), 1.78% Lower risk least concern (LRlc).

Keywords: Fish diversity, Common, Abundant, Moderate, IUCN status, CAMP status

Introduction

Government of Telangana has taken up its flagship program of Mission Kakatiya to restore all the minor irrigation tanks to effectively utilize the 265 TMC of water allocated for minor irrigation sector under Godavari & Krishna River basins for improving agriculture production and live stock productivity. Government has identified 46,531 tanks and lakes in a special intensive survey on minor irrigation tanks. Most of the food grains, vegetables, fruits, milk, and fish are consumed locally and hence, the increased yield because of the project will help to improve the health status of rural people, helps to avoid malnutrition, fisheries and livestock development^[1]. The government of the newly carved state of Telangana in 2014, launched an ambitious project, titled Mission Kakatiya, it was aimed at the rejuvenation of the 350351 tanks and lakes spread over thirty one districts of the state by the year 2020, to bring them back to their past glory, the glory they had when such structures were first built during the rule of Kakatiya dynasty^[2].

Telangana is known as the land of dams, reservoirs, lakes, tanks and canals. It has the most number of Dams, Reservoirs, Lakes, Tanks and Canals than any other South Indian state. Two major rivers of South India the Godavari and the Krishna rivers with their several tributaries form the chief perennial river systems of this state. There are a large number of medium and small sized rivers in addition to several man-made reservoirs, backwaters and tanks^[3]. In 2012 nearly 3200 major / medium dams and barrages were constructed in India. The undivided state of Andhra Pradesh is known to contain 158 species under 68 genera, 27 families and 10 orders of freshwater fishes^[4-5]. During the last 23 years, several localized checklists and compilations confined to smaller regions such as a district, a protected area or a river or reservoir system of Telangana have been published. The present checklist of 165 species includes several new species and those resurrected from synonyms. This includes exotic and secondary freshwater species. Indian region fishes are about 2500 species; freshwater fishes 930 species and remaining 1570 are marine reported by K.C Jayaram^[6]. India has 19,370 small reservoirs with a total water surface area of 3,153,366 ha. At least 100 of them have been subjected to scientific studies. The National Commission on Agriculture (NCA) has estimated the total area under reservoirs at 3 million ha during the mid-sixties and projected its growth to 6 million ha by 2000 AD. Therefore, the present work was needed to document the fish fauna before

Mission Kakatiya of the local freshwater tanks in Karimnagar

district, Telangana State.



Fig: I

Materials and Methods

Fish samples were collected from Nain cheruvu (18°17'15.2"N 79°27'40.7"E), Ellantakunta cheruvu (18°17'34.8"N 79°30'45.2"E), Gundla cheruvu (18°17'48.6"N 79°26'34.5"E) and Korapalli Lake (18°20'04.5"N 79°27'32.6"E) surrounding areas mainly by fishermen, fish collectors, local fish markets, and fish sellers. Different types of nets (Drag nets, Push nets, Cast nets Stationary gill nets) and Bamboo baskets (Traps) were used for collection of fishes [7]. The photographs of the collected fishes were taken at fresh condition immediately and preserve in 10% formalin without any post-mortem stages and recorded vernacular name [8-10]. Sample fishes were brought to the laboratory and fixed in formaldehyde solution in separate glass jars according to size. Smaller fishes were directly placed in the 10% formalin solution and larger fishes were given an incision in the abdomen and removed the gut content before they were preserved. The fishes collected and fixed were labelled giving serial numbers, date of collection, exact locality from where collected. Identification was done based on keys for fishes of the Indian subcontinent [11-16] and classification was carried out on lines of Day.F [11,14,17-18]. Identification of the species was done mainly on the morphometric and meristematic characters.

Results

The results of the present study revealed that the occurrence of fifty six fish species belong to nine orders, 19 families and 39 genera. List of fishes including their order, family, genus, species, common name, vernacular name, IUCN (2017-2) and CAMP status were recorded in the present investigation was given in Table 1. The listed species are *Notopterus notopterus*, *Catla catla*, *Labeo ariza*, *Labeo calbasu*, *Labeo fimbriatus*, *Labeo rohita*, *Cirrhinus mrigala*, *Cirrhinus reba*, **Ctenopharyngodon idella*, **Cyprinus carpio*, *Osteobrama cotio*, *Puntius ticto*, *Puntius sarana*, *Puntius sophore*, *Rasbora daniconius*, *Rasbora elanga*, *Salmostoma bacaila*, *Salmostoma phulo*, *Amblypharyngodon microlepis*,

Amblypharyngodon mola, *Danio devario*, *Lepidocephalichthys berdmorei*, *Schistura cirica*, *Aplocheilus panchax*, *Mystus bleeker*, *Mystus cavasius*, *Mystus tengra*, *Mystus vittatus*, *Spherata seenghala*, *Spherata oar*, *Ompok bimaculatus*, *Wallago attu*, *Eutropneustes vacha*, *Pseudotropius atherinoides*, *Clarias batrachus*, *Heteropneustes fossilis*, *Anguilla bengalensis bengalensis*, *Xenentodon cancila*, *Hyporhamphus gaimardi*, *Channa marulius*, *Channa orientalis*, *Channa panctatus*, *Channa striatus*, *Glosogobius giuris*, *Mastacembelus armatus*, *Mastacembelus pancalus*, *Trichogaster fasciatus*, *Colisa lalio*, *Anabas testudineus*, *Nandus nandus*, **Oreochromis mossambicus*, *Etrophus suratensis*, *Etrophus maculatus*, *Chanda nama*, *Ambassis ranga*, *Rhinomugil corsula*.

In the present study the number and percentage composition of families, genera and species under different orders are shown in Table 2 and Fig 2. Order Cypriniformes was dominant with 22 species which contributed to 39.29% of the total species followed by Siluriformes and Perciformes each with 12 (21.43%), Channiformes 04 (7.14%), Beloiniformes contributed 02 (3.57%), Cyprinodontiformies, Anguilliformes, Osteoglossiformes and Mogiliformes each with 01 (1.79%). Recorded families out of 20, Perciformes contributed 06 (30.00%) families followed by Siluriformes 05 (25.00%), Cypiniformies and Beloiniformes each with 02 (10.00%), Cyprinodontiformies, Osteoglossiformes, Anguilliformes, Channiformes and Mogiliformes each with 01 (05.00%). Recorded genera out of 38, Cypiniformies contributed 13 (34.21%) species followed by Perciformes 10 (21.43%), Siluriformes 08 (21.43%), Beloiniformes 02 (3.57%), Cyprinodontiformies, Osteoglossiformes, Anguilliformes, Channiformes and Mogiliformes each with 01 (1.79%).

In the present study the number and percent composition of genera and species under various families were represented in Table-3. Fig.3. The generic composition of fishes belonging to different families shows that eleven genera under Cyprinidae contributed to 28.95%, three genera under Anabantidae contributed to 7.89%, two genera each under

Cobitidae, Bagridae, Siluridae, and Ambassidae contributed to 5.36% each and one genus under Notopteridae, Aplocheilidae, Gobiidae, Clariidae, Heteropneustidae, Anguillidae, Belonidae, Exocoetidae, Channidae, Schilbeidae, Cichlidae Mastacembelidae, Nandidae and Mugilidae contributed to 2.63% each.

The species composition of fishes belonging to different families has revealed that 20 species belong to family Cyprinidae that made up to 35.71%, 6 species to family Bagridae that contributed to 10.71%, four species each to families Channidae contributed to 7.14%, three species to family Anabantidae and Cichilidae constituted 5.36%, two species to families Cobitidae, Siluridae, Schilbeidae, Mastacembelidae, and Ambassidae contributed to 3.57%, one species to families Notopteridae, Aplocheilidae, Clariidae, Heteropneustidae, Anguillidae, Belonidae, Exocoetidae, Gobiidae, Nandidae and Mugilidae contributed 1.78 each of total fish species.

The number and Percentage composition of Population Status is 08 species were abundant which contributed to 14.28%, 25 species common which contributed to 44.64%, 18 species moderate which contributed to 32.14% and 05 species rare which contributed to 8.93% in the total catch (Table. 4. Fig. 4).

According to IUCN 2017-2 [29] forty six species contributed to 82.14% are least concern (LC), three species contributed to 5.36% are near threaten (NT), two species contributed to 3.57% were endangered (EN), data deficient (DD) and not evaluated (NE), one species is vulnerable contributed to 1.78% (VU) (Table. 5. Fig. 5). According to CAMP (1998) status [32] twenty species of fish were each with Low risk near threatened (LR nt) and not evaluated (NE) contributed to 35.71%, eight species (14.29%) of fish are vulnerable (VU), five species (8.93%) data deficient (DD), two (3.57%) species of fish is endangered (EN) and one species of fish (1.78%) low risk least concern (LRLc) (Table. 5, Fig. 6).

Discussion

Out of fifty six species three are exotic fishes were available in the local area (* indicates exotic fish species (Table 1). In the present study was indicated the number and percentage composition of families, genera and species under different orders. The percentage composition of families, genera and species under different orders were reported in these results. The similar studies were represented by various investigators in the ichthyofaunal diversity in various reservoirs and freshwater tanks. Biju Kumar [19] was reported exotic fishes

and Freshwater fish diversity in 2000. Rama Rao reported 53 ornamental and 58 larvivorous fish and 65 fish species belonging to 8 orders, 19 families and 34 genera, out of the total fishes in Lower Manair Dam [20-21]. Laxmappa *et al* [22] note down a total of 109 fish species belonging to 7 orders 19 families and 46 genera ichthyofaunal diversity in Telangana state. Narasimha Ramulu and Benarjee [23] were reported the fish fauna of Nagaram tank composed of 30 species belonging to order Cypriniformes consists of 13 species, Siluriformes 7 species, Channiformes 03 species, Perciformes 05 species, Osteoglossiformes 01 and Atheriniformes consists of one species in 13 families. Sreenivas Reddy and Satya Parameshwar [24] noted a total of 19 fish species belongs to 3 orders, 16 genera of 8 families were recorded in Chandrasagar and 32 species belong to 6 orders, 21 genera of 11 families in Ramanpad reservoir. Pisca *et al.*, [25] reported a genera fish belonging to four orders and 28 species from Ibrahimbagh reservoir of Hyderabad. Sugunan and Yadava [26] mentioned 40 fish species from Hirakhud reservoir of Orissa forming the commercial fishery.

Mookappa Naik and Hina Kousar [27] noted 23 species of fishes belonging to 6 orders, 18 genera of 10 families. The order Cypriniformes was dominant with 13 species followed by order Siluriformes with 4 species while, the order Channiformes was represented with 3 species and the remaining orders are Perciformes, Osteoglossiformes and Mastacembeliformes were represented with one species respectively. Among the fish families, Cyprinidae was dominant with 12 species followed by Channidae with 3 species and rest of the families consists of single species. A total of 44 species of fishes belonging to 8 orders were reported by Thirupathaiah *et al* [28] of these, 24 species of fish are least concerned, 8 are data deficient (DD), 10 are not evaluate (NE), 1 species of fish is vulnerable and 1 species of fish is near threatened in Lower Manair Dam. Rama Rao [29-30] reported IUCN (2015. 4) fifty four species contributing to 81.82% are least concerned (LC), three species contributing to 4.55% are near threaten (NT), four species contributing to 6.06% are data deficient (DD), two species each contributed to 03.03% are endangered (EN) and not evaluated (NE), one species is vulnerable 1.52% (VU) in the total fish fauna [31]. The number and percent composition of population status is 19 species are abundant which contribute to 28.79% whereas 22 species are common which contribute to 33.33%, 14 species are moderate that are contributing to 21.21% and the rest of the species, i.e. 11 are regarded as rare which contribute to only 16.67% in the total fish fauna.

Table 1: List of fishes and their order, family, genus, species, common name, vernacular name, feeding habitat, population status, IUCN and CAMP status at Lower Manair Dam.

Order / Family	No.	Scientific Name	Common Name	Vernacular Name	Feeding Habitat	Population Status	IUCN Status (2017.2)	CAMP Status
Osteoglossiformes/	I							
1. Notopteridae (1)	1	<i>Notopterus notopterus</i>	Grey feather back	Vellenka	Demersal, insects, fish crustaceans roots of aquatic plants	C	LC	LRnt
Cypriniformes/	II							
2. Cyprinidae (20)	2	<i>Catla catla</i>	Catla	Botchea	Surface layer and zooplankton	C	LC	LRnt
	3	<i>Labeo ariza</i>	Reba carp	Arju	Benthopelagic, feeds on diatoms, algae, insects and detritus	C	LC	NE
	4	<i>Labeo calbasu</i>	Black rohu	Chintara Kakibonda	Bottom dweller & scavenger	C	LC	LRnt
	5	<i>Labeo fimbriatus</i>	Gangetic latia	Chintara	Benthopelagic, feeds on diatoms, algae, insects and detritus	M	LC	LRnt
	6	<i>Labeo rohita</i>	Rohit	Ravvu	Middle layer/ plant matters	C	LC	LRnt
	7	<i>Cirrhinus mrigala</i>	Mrigal	Meriga	Bottom dweller & detritus eater	C	LC	LRnt
	8	<i>Cirrhinus reba</i>	Reba carp	Moyya	Demersal, feed on vegetables, crustaceans and insect larvae	C	LC	VU
	9*	<i>Ctenopharyngodon idella</i>	grass carp	Gasscutter	Substratum's, feed on vegetables, crustaceans and insect larvae	R	LC	NE
	10*	<i>Cyprinus carpio</i>	Common carp	Banaruteega	Bottom dweller feed on plankton and detritus	M	VU	NE
	11	<i>Osteobrama cotio</i>	Cotio	Kagitamparaka	Benthopelagic & larvicide	C	LC	LRnt
	12	<i>Puntius ticto</i>	Ticto barb	Paraka	Surface feeder, feed on diatom, algae, crustaceans, rotifer, insects	A	LC	LRnt
	13	<i>Puntius sarana</i>	Olive barb	Gandeparaka	Surface habitat & omnivorous	C	LC	VU
	14	<i>Puntius sophore</i>	Spot-fin swamp barb	Buddaparaka	Benthopelagic, feed on sSurface phytoplankton and zooplankton	A	LC	LRnt
	15	<i>Rasbora daniconius</i>	Slender rasbora	Katte kodipe	Surface, feed on algae, aquatic insects	M	LC	LRnt
	16	<i>Rasbora elanga</i>	Bengala barb	Katte kodipe	Demersal, feeds on Aquatic insects, algae and protozoans	M	LC	NE
	17	<i>Salmostoma bacaila</i>	Large razorbelly minnow	Chandamama	Surface feeder & a useful larvivorous fish	C	LC	DD
	18	<i>Salmostoma phulo</i>	Fine scale razor belly minnow	Chandamama	Surface feeder & a useful larvivorous fish	A	NE	NE
	19	<i>Amblypharyngodon microlepis</i>	Indian carplet	Kodipe	Surface feeder & a useful larvivorous fish	A	LC	NE
	20	<i>Amblypharyngodon mola</i>	Mola carplet	Irnam Kodipe	Surface feeder, phyto and zooplankton	A	LC	LRlc
	21	<i>Danio devario</i>	Devario danio, Dind Danio	Eela Kodipe	Benthopelagic feeds on worms, crustaceans and insects	C	EN	NE
3. Cobitidae (2)	22	<i>Lepidocephalichthys berdmorei</i>	Leopard Loach	Vulicha	Demersale	R	EN	NE
	23	<i>Schistura corica</i>	Polka Dotted Loach	Vulicha	Benthopelagic feeds on worms, crustaceans and insects	R	LC	NE
Cyprinodontiformes/	III							
4. Aplocheilidae (1)	24	<i>Aplocheilus panchax</i>	Blue panchax	Chukka chepa	Surface feeder, larvivorous fish	C	LC	DD
Siluriformes/	IV							
5. Bagridae (6)	25	<i>Mystus bleeker</i>	Day's mystus	Guddi jella	Demersal, feed on crustacean, algae	A	LC	VU
	26	<i>Mystus cavasius</i>	Gangetic mystus	Kode Jella	Demersal, feed on crustacean, algae	C	LC	LRnt
	27	<i>Mystus tengara</i>	Tengara mystus	Karri Jella	Demersa, predatory	A	LC	NE
	28	<i>Mystus vittatus</i>	Striped dwarf catfish	Natta Jella	Demersal, feed on crustacean, algae	A	LC	VU
	29	<i>Spherata seenghala</i>	Giant river catfish	Pedda Jella	Demersal, carnivore	M	LC	DD

	30	<i>Spherata oar</i>	Long-whiskered catfish	Pedda Jella	Bottom, carnivore	M	LC	DD
6. Siluridae (2)	31	<i>Ompok bimaculatus</i>	Butter Catfish	Bugga damma	Demersal, crustacean, algae	C	NT	EN
	32	<i>Wallago attu</i>	Boal	Waaluga	Benthopelagic feeder, carnivorous	C	NT	LRnt
7. Schibeidae (2)	33	<i>Eutropiichthys vacha</i>	Air breathing catfishes/ Magur	Seerva jella	Surface feeder, carnivorous	C	LC	VU
	34	<i>Pseudeutropius atherinoides</i>	Indian potasi	Seerva jella	Surface feeder, carnivorous	C	LC	NE
8. Claridae (1)	35	<i>Clarias batrachus</i>	Batchwa vacha	Marpoo	Demersal, omnivorous	R	LC	NE
9. Heteropneustidae (1)	36	<i>Heteropneustes fossilis</i>	Stinging catfish	Inglikam	Demersal, omnivorous	M	LC	VU
Anguilliformes/	V							
10. Anguillidae (1)	37	<i>Anguilla bengalensis bengalensis</i>	Indian Long fin eel	Malugu papera	Demersal, small fishes, crustaceans, molluscans	M	LC	EN
Beloniformes/	VI							
11. Belonidae (1)	38	<i>Xenentodon cancila</i>	Freshwater garfish	Kongamuti chapa	Pelagic, voracious	C	LC	LRnt
12. Exocoetidae (1)	39	<i>Hyporhamphus gaimardi</i>	Congaturi halfbeak	Okkamuti chapa	Pelagic, zooplankton	R	DD	NE
Channiformes/	VII							
13. Channidae (4)	40	<i>Channa marulius</i>	Spotted snakehead	Pubomme	Bottom, carnivorous	M	LC	LRnt
	41	<i>Channa orientalis</i>	Walking snakehead	Malapankiri	Bottom, voracious and predatory	C	NE	VU
	42	<i>Channa punctatus</i>	Giant snakehead	Korramatta	Bottom, carnivore	C	LC	LRnt
	43	<i>Channa striatus</i>	Banded snakehead	Bomme	Bottom, carnivorous	C	LC	LRnt
Perciformes/	VIII							
14. Gobiidae (1)	44	<i>Glossogobius giuris</i>	Tank/Bar-eyed goby	Uske donthi Salegada	Benthopelagic, omnivorous	C	LC	LRnt
15. Mastacembelidae (2)	45	<i>Mastacembelus armatus</i>	Zig zag spiny eel	Papera	Bottom, crustaceans	C	LC	VU
	46	<i>Mastacembelus pancalus</i>	Barred spiny eel	Chinna papera	Benthopelagic, insect larvae	C	LC	LRnt
16. Anabantidae (3)	47	<i>Trichogaster faciatius</i>	Banded gaurami	Papera	Surface, carnivorous	M	LC	LRnt
	48	<i>Colisa lalio</i>	Dwarf gaurami	Paraka	Surface, mosquito larvae	M	LC	NE
	49	<i>Anabas testudineus</i>	Climbing perch	Goraka	Demersal Feed on macrophytic, shrimps and fish fry	M	DD	DD
17. Nandidae (1)	50	<i>Nandus nandus</i>	Mud perch	Ganga getchu	Benthopelagic feed on aquatic insects and fishes	M	LC	LRnt
18. Cichlidae (3)	51*	<i>Oreochromis mossambicus</i>	Mozambique Tilapia	China guraka	Surface dweller, omnivorous	M	NT	NE
	52	<i>Etroplus suratensis</i>	Green chromid	Pamplete	Benthopelagic, omnivorous	M	LC	NE
	53	<i>Etroplus maculatus</i>	Ornange chromid	Pandi paraka	Benthopelagic, omnivorous	M	LC	NE
19. Ambassidae (2)	54	<i>Chanda nama</i>	Elongate glass perchlet	Sirabara	All substratum's of water, checks mosquito breeding	C	LC	NE
	55	<i>Ambassis ranga</i>	Indian glassy fish	Podugu sirabara	All substratum's of water, checks mosquito breeding, omnivorous	M	LC	NE
Mogiliformes	IX							
20. Mugilidae (1)	56	<i>Rhinomugil corsula</i>	Corsula mullet	Meedhi kandla chapa	Surface dweller, insects & plant leaves	M	LC	NE

A = Abundant (76-100%); C = Common (51-75%); M = Moderate (26-50%); R = Rare (1-25%) of the total catch.

EN- Endangered; VU- Vulnerable; LRnt- Lower risk near threatened; LRLc- Lower risk least concern; LC- Least concern; DD- Data Deficient; NE- Not evaluated, NT: Near threaten.

*Exotic fishes Nos: 9, 10, 51

Table 2: Number and percentage composition of families, genera and species of fishes under various orders

S. No	Orders	Families	genus	Species	% of families in an order	% of genera in an order	% of species in an order
1	Osteoglossiformes	01	01	01	05	2.63	1.79
2	Cypriniformes	02	13	22	10	34.21	39.29
3	Cyprinodontiformes	01	01	01	05	2.63	1.79
4	Siluriformes	05	08	12	25	21.05	21.43
5	Anguilliformes	01	01	01	05	2.63	1.79
6	Beloniformes	02	02	02	10	5.26	3.57
7	Channiformes	01	01	04	05	2.63	7.14
8	Perciformes	06	10	12	30	26.32	21.43
9	Mogiliformes	01	01	01	05	2.63	1.79

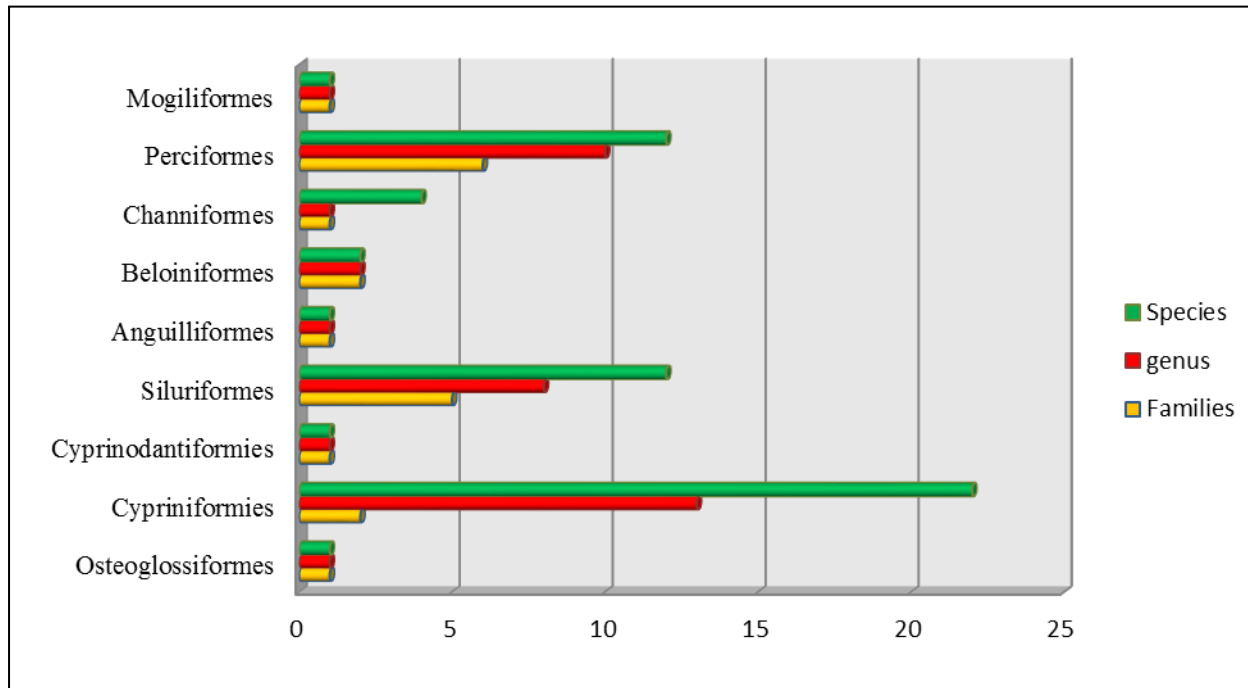


Fig 2: Percentage composition of families, genera and species

Table 3: Number and percentage composition of genera and species under various families

S. No	Families	Genera	% of genera in a family	Species	% of species in a family
1	Notopteridae	01	2.63	01	1.78
2	Cyprinidae	11	28.95	20	35.71
3	Cobitidae	02	5.26	02	3.57
4	Aplocheilidae	01	2.63	01	1.78
5	Bagridae	02	5.26	06	10.71
6	Siluridae	02	5.26	02	3.57
7	Schilbeidae	02	5.26	02	3.57
8	Claridae	01	2.63	01	1.78
9	Heteropneustidae	01	2.63	01	1.78
10	Anguillidae	01	2.63	01	1.78
11	Belonidae	01	2.63	01	1.78
12	Exocoetidae	01	2.63	01	1.78
13	Channidae	01	2.63	04	7.14
14	Gobiidae	01	2.63	01	1.78
15	Mastacembelidae	01	2.63	02	3.57
16	Anabantidae	03	7.89	03	5.36
17	Nandidae	01	2.63	01	1.78
18	Cichlidae	02	5.26	03	5.36
19	Ambassidae	02	5.26	02	3.57
20	Mugilidae	01	2.63	01	1.78

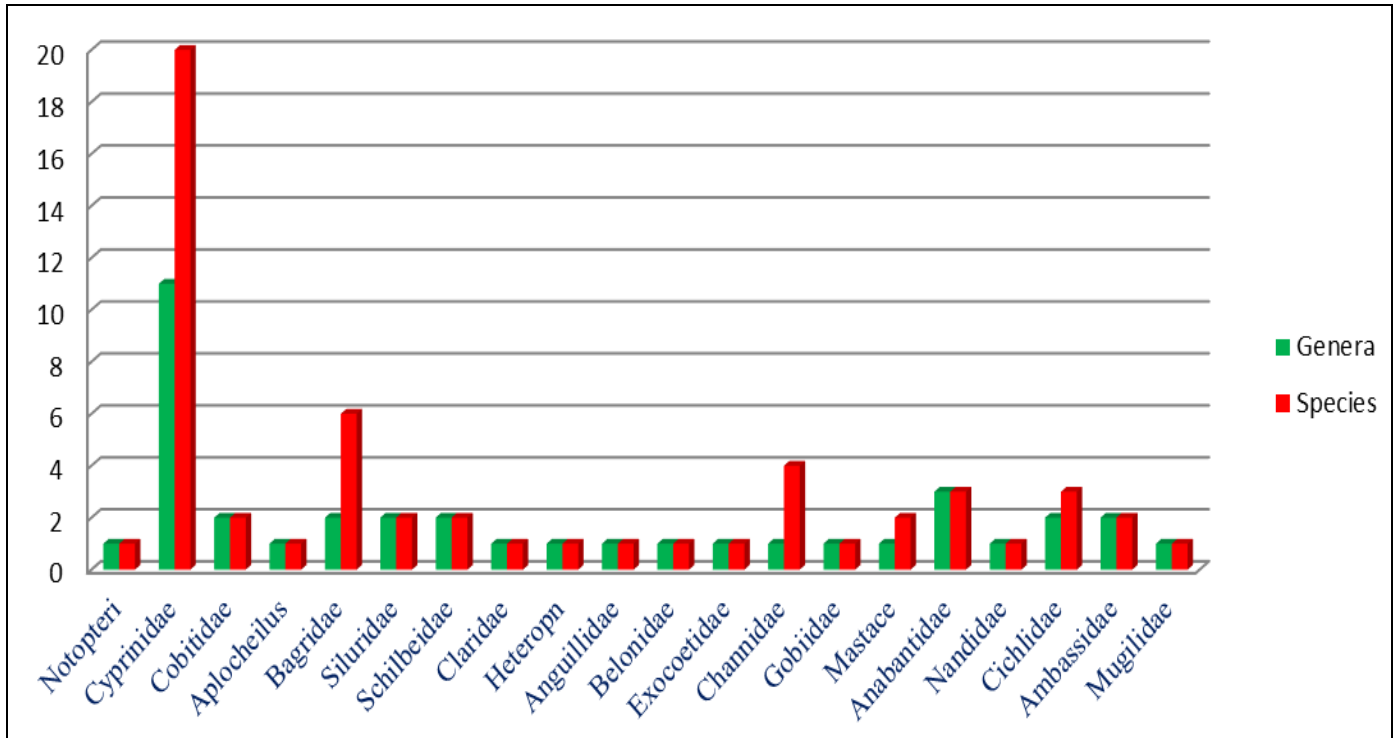


Fig 3: Percentage composition of genera and species under various families

Table 4: Number and Percentage composition of Population Status in the total catch.

Population Status	Abundant (76-100%)	C = Common (51-75%)	M = Moderate (26-50%)	R = Rare (1-25%)
Number of species	08	25	18	05
% Composition	14.28	44.64	32.14	8.93

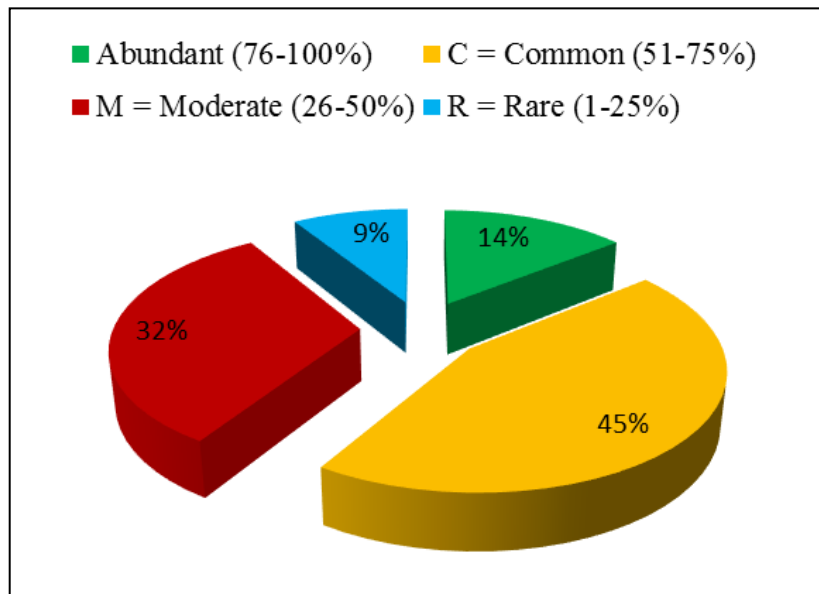


Fig 4: Population Status

Table 5: Percentage occurrence of fish species under the conservation status IUCN (2017-2) and CAMP (1998)

Category		EN	VU	NT	LRnt	LRlc	LC	DD	NE
IUCN (2017.2)	No. of species	02	01	03	-	-	46	02	02
	% contribution	3.57	1.78	5.36	-	-	82.14	3.57	3.57
CAMP (1998)	No. of species	02	08	-	20	01	-	05	20
	% contribution	3.57	14.29	-	35.71	1.78	-	8.93	35.71

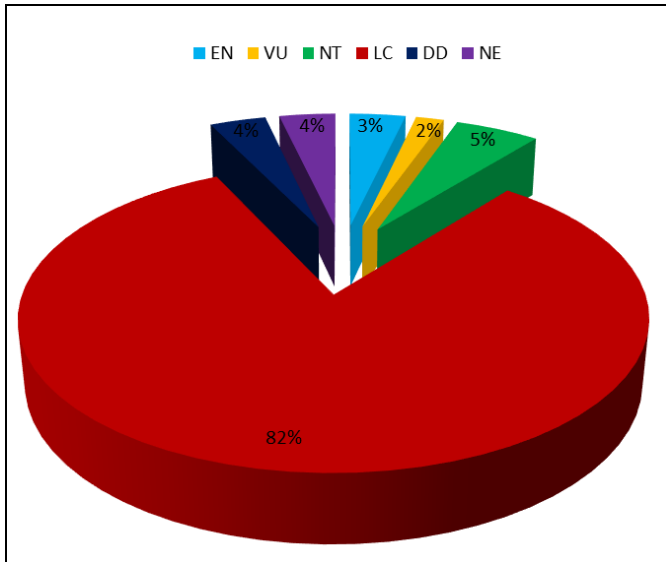


Fig 5: IUCN Red list Status(2017-2)

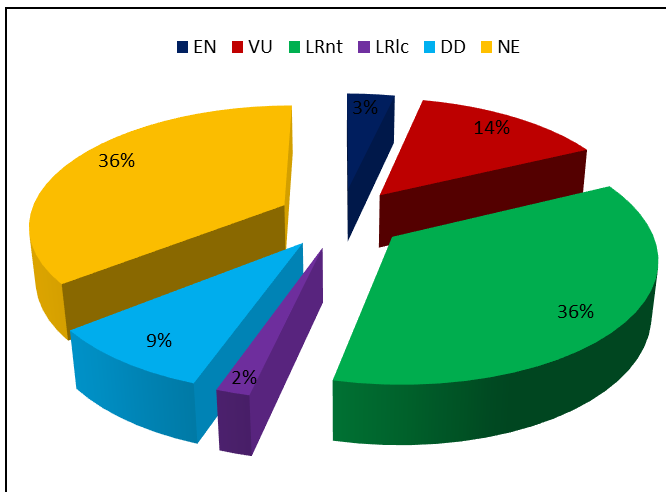


Fig 6: CAMP status (1998)

Conclusion

The minor irrigation tanks restoration capacity will increase after completion of Mission Kakatiya project works. The fish species migrate from major rivers and reservoirs in this minor irrigation tanks and the number of fish species will also increase. Tank fish culture has a huge bearing on the generation of rural employment, reduction of poverty and agriculture growth.

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References

1. Mission Kakatiya Is Boon to farmers in Bangaru Telangana; Hans India, 2017.
2. Srishylam B, Ramesh babu S, Srinivas Reddy G, Shiva Kumar M. Mission kakatiya to boost fish production in Telangana State. International Journal of Multidisciplinary Educational Research 2017; 6, 8(2):152-158.
3. Laxmappa B. Exotic fish species in aquaculture and aquatic ecosystem in Telangana State, India. Journal of

4. Barman RP. Pisces: Freshwater fishes, India: State fauna series 5, Fauna of Andhra Pradesh, Part-I, ZSI Publication, 1993, 89-334.
5. Laxmappa B, Ravinder Rao Bakshi. A checklist of fishes of Telangana State, India. International Journal of Fisheries and Aquatic Studies. 2016; 4(4):35-42.
6. Jairam KC. The freshwater fishes of the Indian region. Narendra Publication New Delhi, India, 1999, 551.
7. Rama Rao K. A study on fishing craft and gear in Lower Manair Dam, Karimnagar Dt. Andhra Pradesh, India. International Journal of Multidisciplinary Educational Research. 2014; 3, 5(2):56-68.
8. Hamilton- Buchanan F. An account of the fishes of river Ganges and its branches. Edinburgh and London, 1822; vii +450.
9. Mishra S. An aid to the identification of the common commercial fishes of India and Pakistan. Rec. Ind. 1. Mus. 1962; 57:1-320.
10. Munro ISR. The Marine and Freshwater Fishes of Ceylon. Biotech Books, Delhi, 2000.
11. Menon AGK. Check list - freshwater fishes of India, Records of the Zoological Survey of India, Occasional, 1999, 175-366.
12. Day F. The Fishes of India, Being a Natural History of The Fishes Known to Inhabit the Seas and Freshwaters of India, Burma and Ceylon, Bernard Quaritch, 15 Piccadilly, London, 1878, I, II,
13. Jairam KC. The freshwater fishes of India, Pakistan, Bangladesh, Burma and Sri Lanka- A Hand book. Zoological Survey of India, Culcutta, 1981, 475.
14. Jairam KC. The proper generic names for some common Indian fishes of commercial importance. J Zoo. Soc. India. 1961; 12(2):239-242.
15. Jayaram KC. The Freshwater Fishes of Indian Region Narendra Publication House, New Delhi, 2nd Edition, 2011.
16. Talwar PK, Jhingran AG. Inland fishes of India and adjacent countries, Balkemra, Rotterdam, 1991, A.
17. Day F. The fauna of British India including Ceylon and Burma. Fishes. 1: 548: 2: 509. The London, Taylor and Francis, 1889.
18. Nelson. Fishes of the World. 3rd Edn. John Wiley and Sons, New York, 1976, 416.
19. Biju Kumar. Exotic fishes and Freshwater fish diversity. Zoos Print Journal. 2000; XV(11):2:2.
20. Rama Rao K. Diversity of ornamental fishes in Lower Manair Dam at Karimnagar Dt. ndhra Pradesh. IOSR Journal of Pharmacy and Biological Sciences 2014; 9(1):I, 20-24.
21. Rama Rao K. A study on larvivorous fish species efficacy of lower Manair dam at Karimnagar, Andhra Pradesh, India. Advances in Applied Science Research. 2014; 5(2):133-143.
22. Laxmappa B, Ravinder Rao Bakshi, Venkata Siva Narayana D. Studies on ichthyofaunal diversity of Krishna River in Mahabubnagar district, Telangana, India. International Journal of Fisheries and Aquatic Studies. 2015; 2(5):99-104.
23. Narasimha Ramulu K, Benarjee G. Fish Species Diversity of Nagaram Tank of Warangal, Andhra Pradesh. IOSR Journal of environmental science, Toxicology and food technology, 2013; 3(4):14-18 www.Iosrjournals.

24. Sreenivas Reddy B, Satya Parameshwar K. Ichthyofaunal Diversity of Chandrasagar and Ramanpad Reservoirs in Mahabubnagar District, Telangana, India. *International Journal of Fisheries and Aquatic Studies*. 2015; 3(2):40-49.
25. Pisca Ravi Shankar, Saraladevi B, Divakara Chary K. The present status of Ibrahimbagh, a minor reservoir of Hyderabad, *Fishing Chimes*. 2000; 20(2):41-43.
26. Sugunan VV, Yadava YS. Hirakhud reservoir strategies for fisheries development. *Bulletin CIFRI, Barrackpore, India*. 1992, 66.
27. Mookappa Naik CK, Hina Kousar. Study on fish diversity status of Talaguppa Tank, Sagara Taluk, Karnataka. *The Ecoscan*. 2012; 6(3, 4):149-151.
28. Thirupathaiah M, Ch. Samatha, Ch. Sammaiah. Diversity of fish fauna in lower Manair reservoir of Karimnagar district (A.P.), India. *Advances in Applied Science Research*. 2013; 4(2):203-211.
29. Rama Rao K. Ichthyofaunal bio diversity in the lower Manair Dam at Karimnagar district; Telangana State; India. *Pelagia Research Library; Advances in Applied Science Research*, 2014; 5(5):237-248. www.pelagiaresearchlibrary.com.
30. Rama Rao K, Leela B. Ichthyofauna and hydrophyte floral diversity in the Lower Manair Dam at Karimnagar district, (Telangana State) India. *International Journal of Fisheries and Aquatic Studies*. 2016; 4(3):109-118.
31. IUCN Red List of threatened species, version 2017.2. www.iucnredlist.org downloaded on November 2017.
32. CAMP. Conservation and Management Plan for Freshwater Fishes of India. Organized by Zoo Outreach Organisation, NBFGR, Lucknow, 1998.