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Faunal diversity of Ameenpur Lake, Telangana state, India: A biodiversity heritage site

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Abstract

The present study was carried out during the period from February 2015 to September 2016 at Ameenpur Lake, Medak district, Telangana state, India. During the study period, a total of 8 mammalian species, 166 avian species, 45 herpetofauna species (12 amphibian and 34 reptiles), 9 fish species and 143 invertebrates species (26 aquatic beetles, 41 butterflies, 18 odonates, 25 Arachnids and 33 other invertebrates) were documented. The baseline data generated during the period provides an idea about various species present in the area and calls for conservation of their natural habitat for future endeavors. Since, Ameenpur Lake newly declared biodiversity heritage site in Telangana state under biological diversity act, 2002.

Keywords: Faunal diversity, Ameenpur Lake, Biodiversity Heritage Site, Telangana

1. Introduction

Biodiversity is characteristically defined on three levels: genetic diversity, species diversity and ecosystem diversity ^[1]. Biologists are well aware of the importance of understanding diversity, at best with respect to the increasing loss of species due to the growing influence of human activities ^[2, 3]. The term biodiversity describes the total number, variety and variability of living organisms as well as the diversity of the ecosystem ^[4]. However, several definitions defined by different authors based on environmental conditions and most of them are unclear, which probably reflects the uncertainty of the concept ^[5]. Even though, there have been many different interpretations of diversity ^[6, 7], the concept of biodiversity is considered to be the integration of biological variability across all scales, from genetic level, through species and ecosystems, to the landscapes that they form, or are part of, and the ecological processes that support them ^[8]. The world's biodiversity includes all living organisms (animals, plants, fungi, and microbial groups inclusive of genetic diversity and ecosystem/landscape diversity) in their interactive state contributing to a multitude of services of relevance to sustain the ecological integrity for the benefit of the humankind ^[9]. It defines biodiversity as the variability among living organisms from all sources including, inter alia (among other things), terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems". However, since the biodiversity of any ecosystem is far too complex to be comprehensively quantified, suitable indicators ^[10] or surrogates ^[11] of biodiversity are needed. Conceptually, species richness appears as the most intuitive and straightforward parameter to measure biodiversity ^[12]. In addition, measures of biodiversity have been developed; the Shannon index (H'), Simpson index (D) and Jaccard's similarity index was considered measures used to compare diversity among communities ^[13]. In general most of studies has been carried out on specific selected taxa only, a few biodiversity studies available on Indian Lakes; Chilika (Odisha) ^[14], Pulicate Lake (Tamil Nadu and Andhra Pradesh) ^[15]. However, "*The Glimpses of Biodiversity of Greater Hyderabad*" had presented rich flora and fauna diversity in Hyderabad of Telangana State ^[16]. A part from that, there was no previous studies in and around Ameenpur Lake. In the present study we made an attempt to record of possible faunal diversity in surroundings of Ameenpur Lake, Telangana State, India.

2. Material and methods

2.1 Study area

Ameenpur Lake ($17^{\circ} 31.198'N$, $78^{\circ} 19.524'E$) situated in Patancheru Mandal, Medak District, Telangana State, India, covering an area of 93.15 Acres (0.38 Sq. km) (Sy.No-231-Shikam Land). It is 27 Km from Hyderabad City (Fig.1). Intensive surveys were conducted during February 2015 to September 2016 on monthly basis to document various faunal

components. The Lake has maximum depth of about 8 meters. The Lake is surrounded by undulating terrain with rocky outcrops (Plate. 1). The lake is surrounded by wonderful rock formations; there are also reports of three caves in a granite rock cropping on the shores of the lake. These caves do not have any stalagmites and stalactites and are cool even during the summer. It is the most sought-after place for a variety of flora and fauna.

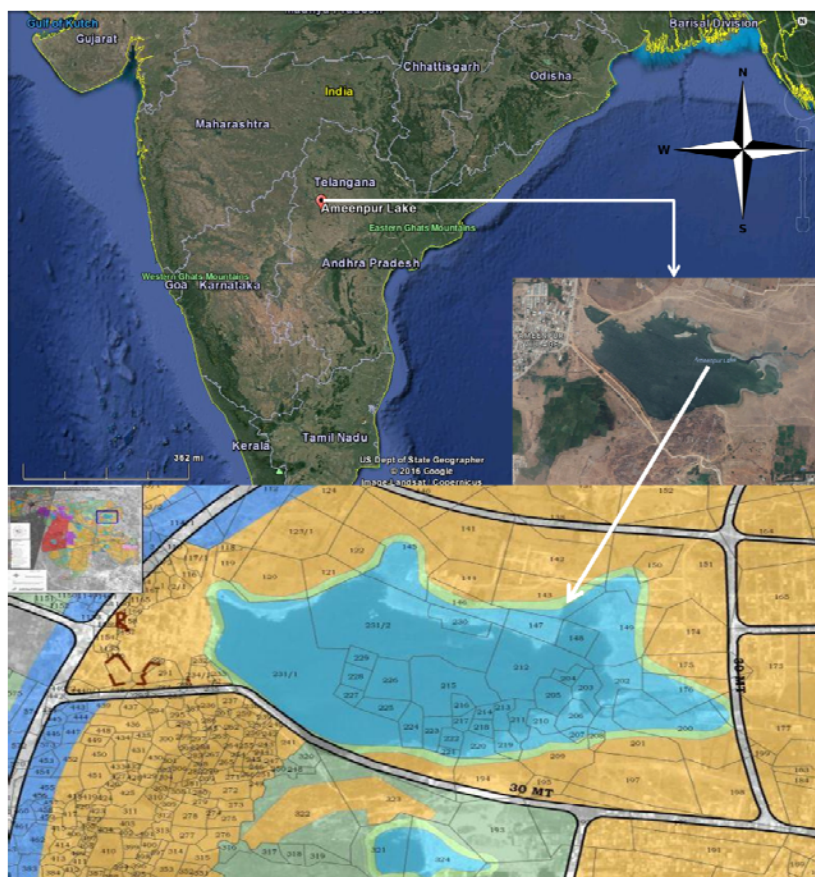


Fig 1: Map showing the Study area of Ameenpur Lake, Telangana

2.2 Methodology

All observations were conducted on foot, and were aided by 7x50 and 80x40 binoculars. Photo records were obtained with the help of Nikon 35 mm camera with 200-400 zoom lenses. For mammals, intensive surveys were conducted by using transect method (by walk and vehicles) and recorded the species through direct and indirect evidence. Species were identified using "A pictorial guide to the mammals of the India" by [17, 18]. Avifauna was recorded direct count method from vantage points and photographs were taken for evidence [19, 20]. All the species were identified using "A pictorial guide to the birds of the Indian Sub-Continent" by [21, 22]. Reptiles were identified by direct and indirect evidence along with good photographs. The available identification keys include Fauna of British India [23, 24, 25, 26] are used. Amphibians were recorded using rapid survey method and careful visual estimation [27, 28]. All the species were identified using keys and descriptions by [29, 30]. For a sampling of invertebrates and butterflies used standard transect counting [31] recorded while walking along the selected transect route of 500 m to 1 km length. Filed guides and published literature were used for the identification of odonates [32, 33, 34, 35] aquatic beetles [36], butterflies [37, 38], Arachnids [39, 40, 41]. Fish catches were made periodically at different locations of the study area and

recorded fish species based on published literature and standard field guide [42, 43, 44].

3. Results

3.1 Mammalian Diversity: A total of 8 mammals' species represented with 5 families. Of which family Muiridae was recorded with 4 species followed by Scuridae, Herpestidae, Vespertilionidae and Leporidae with each 1 species (Table. 1 and Plate. 2).

Avifaunal Diversity: 166 bird species belonging to 22 orders and 55 families which include migratory and residents (Table. 2 and Plate. 3). Among which six species are listed as near threatened species in IUCN Redlist namely Oriental Darter (*Anhinga melanogaster*), Pallid Harrier (*Circus macrourus*), Black-tailed Godwit (*Limosa limosa*), Painted Stork (*Mycteria leucocephala*), River Tern (*Sterna aurantia*) and Black-headed Ibis (*Threskiornis melanocephalus*). Greater Spotted Eagle (*Clanga clanga*) listed as a vulnerable category and Egyptian Vulture (*Neophron percnopterus*) as endangered species.

3.2 Reptilian Diversity: 34 species belonging to 12 families recorded at Ameenpur Lake (Table. 3). Of which 16 species

of snakes (Colubridae-10 species, Boidae-2 species, Elapidae-2 species and Viperidae-2 species) followed by Geckos 7 species (Gekkonidae), Lizards 3 species (Agamidae) and 1 species of Monitor Lizard (Varanidae), Skins 3 species (Scincidae), 2 species of Turtles (Geoemydidae and Trionychidae), 1 species of Chameleon (Chamaeleonidae) and 1 species of Licertid (Lacertidae). Among these only Indian Black Turtle (*Melanochelys trijuga*) listed as near threatened and other least concerned in IUCN Redlist.

3.3 Amphibian Diversity: 12 species belonging to 4 families recorded during the study period at Ameenpur Lanke (Table. 4). Among the families Dicroglossidae was represented with 5 species followed by Microhylidae with 4 species, Bufonidae with 2 species and Rhacophoridae with 1 species. Most of the species are occupied least concerned status as per IUCN and two species namely; Painted Kaloula (*Uperdon taprobanicus*) and Marbled narrow-mouthed frog (*Uperdon variegatus*) are rare in occurrence (Plate. 4).

3.4 Fish Diversity: A total 9 species of fishes belongs 3 orders and 3 families were identified in Ameenpur Lake (Table. 5 and Plate. 5).

3.5 Aquatic Beetles: 26 species of aquatic beetles are noted at Ameenpur Lake (Table. 6). The aquatic coleopterans are highly diverse and distributed, totally four families namely Dytiscidae, Gyrinidae and Hydrophilidae and Halipilidae are chiefly represented at Ameenpur Lake.

3.6 Butterfly Diversity: 41 species of butterflies belonging to 5 families recorded at surroundings of Ameenpur Lake (Table. 7). The highest representation of species found in the family Nymphalidae with 20 species followed by Pieridae (9 species), Lycaenidae and Papilionidae (each 5 species) and Hesperiidae with 2 species.

3.7 Odonata Diversity: 18 species of odonates belonging to 5 families observed and noted in and around Ameenpur Lake (Table. 8). Of which 10 species represented in the family Libellulidae followed by Coenagrionidae 5 species, Gomphidae, Aeshnidae and Cordulidae recorded with each 1 species.

3.8 Arachnid Diversity: 25 species belonging to 10 families recorded at Ameenpur Lake (Table. 9). The families Buthidae and Araneidae represented with each 4 species followed by Pholcidae with 3 species, Hersiliidae, Oxyopidae and Tetragnathidae with each 2 species, Scorpionidae and Eresidae with 1 species.

3.9 Other Invertebrates' Diversity: 33 species belonging to 3 orders noted and presented in Table 10. The order Orthoptera represented with 3 families; Gryllidae and Acrididae (each 2 species) and Pyrgnomorphidae (1 species). Order Hymenoptera belongs to 2 families; Formicidae (11 species) and Apidae (2 species). Order Coleoptera belongs to 4 families; Carabidae and Scolopendridae (each 2 species), Scarabaeidae and Termitidae (each 1 species) (Plate. 6).

Table 1: Checklist of mammals recorded during the study period at Ameenpur Lake.

S. No.	Scientific Name	Common Name	Abundance	IUCN Status ^[46]
Family : Scuridae				
1	<i>Funambulus palmarum</i>	Three-striped Palm Squirrel	Very Common	Least Concern
Family : Muiridae				
2	<i>Bandicota bengalensis</i>	Lesser Bandicoot-rat	Common	Least Concern
3	<i>Mus booduga</i>	Indian Field Mouse	Common	Least Concern
4	<i>Mus musculus</i>	House Mouse	Common	Least Concern
5	<i>Rattus rattus</i>	House Rat	Common	Least Concern
Family : Herpestidae				
6	<i>Herpestes edwardsii</i>	Common Grey Mongoose	Very Common	Least Concern
Family : Vespertilionidae				
7	<i>Pipistrellus tenuis</i>	Least Pipistrelle	Common	Least Concern
Family : Leporidae				
8	<i>Lepus nigricollis</i>	Black-naped Hare	Common	Least Concern

Table 2: Checklist Avifuna recorded during the study period at Ameenpur Lake.

S. No	Order	Family	Scientific Name	Common Name	IUCN Status ^[46]
1	Accipitriformes	Accipitridae	<i>Accipiter badius</i>	Shikra	LC
2			<i>Butastur teesa</i>	White-eyed Buzzard	LC
3			<i>Circus aeruginosus</i>	Western Marsh-Harrier	LC
4			<i>Circus macrourus</i>	Pallid Harrier	NT
5			<i>Circus pygargus</i>	Montagu's Harrier	LC
6			<i>Clanga clanga</i>	Greater Spotted Eagle	VU
7			<i>Elanus caeruleus</i>	Black-shouldered Kite	LC
8			<i>Haliastur Indus</i>	Brahminy Kite	LC
9			<i>Hieraaetus pennatus</i>	Booted Eagle	LC
10			<i>Milvus migrans</i>	Black Kite	LC
11			<i>Neophron percnopterus</i>	Egyptian Vulture	EN
12		Pandionidae	<i>Pandion haliaetus</i>	Osprey	LC
13	Anseriformes	Anatidae	<i>Sarkidiornis melanotos</i>	Comb Duck	LC
14			<i>Tadorna ferruginea</i>	Ruddy Shelduck	LC
15			<i>Anas acuta</i>	Northern Pintail	LC
16			<i>Anas clypeata</i>	Northern Shoveler	LC
17			<i>Anas poecilorhyncha</i>	Spot-billed Duck	LC
18			<i>Anas querquedula</i>	Garganey	LC

19			<i>Anas strepera</i>	Gadwall	LC
20			<i>Dendrocygna javanica</i>	Lesser Whistling-Duck	LC
21			<i>Netta rufina</i>	Red-crested Pochard	LC
22	Apodiformes	Apodidae	<i>Apus affinis</i>	Little Swift	LC
23			<i>Cypsiurus balasiensis</i>	Asian Palm-Swift	LC
24	Bucerotiformes	Upupidae	<i>Upupa epops</i>	Common Hoopoe	LC
25			<i>Upupa epops marginata</i>	Eurasian Hoopoe	LC
26		Bucerotidae	<i>Ocyrceros birostris</i>	Indian Gray Hornbill	LC
27	Caprimulgiformes	Caprimulgidae	<i>Caprimulgus asiaticus</i>	Indian Nightjar	LC
28	Charadriiformes	Rostratulidae	<i>Rostratula benghalensis</i>	Greater Painted-snipe	LC
29		Sternidae	<i>Sterna aurantia</i>	Indian River Tern	NT
30			<i>Sternula albifrons</i>	Little Tern	LC
31			<i>Chlidonias hybrid</i>	Whiskered Tern	LC
32		Scolopacidae	<i>Tringa glareola</i>	Wood Sandpiper	LC
33			<i>Tringa nebularia</i>	Common Greenshank	LC
34			<i>Tringa ochropus</i>	Green Sandpiper	LC
35			<i>Tringa stagnatilis</i>	Marsh Sandpiper	LC
36			<i>Tringa tetanus</i>	Common Redshank	LC
37			<i>Actitis hypoleucos</i>	Common Sandpiper	LC
38			<i>Calidris ferruginea</i>	Curlew Sandpiper	LC
39			<i>Calidris minuta</i>	Little Stint	LC
40			<i>Limosa limosa</i>	Black-tailed Godwit	NT
41			<i>Philomachus pugnax</i>	Ruff	LC
42			<i>Calidris temminckii</i>	Temminck's Stint	LC
43		Charadriidae	<i>Vanellus indicus</i>	Red-wattled Lapwing	LC
44			<i>Vanellus malabaricus</i>	Yellow-wattled Lapwing	LC
45			<i>Charadrius dubius</i>	Little Ringed Plover	LC
46			<i>Charadrius leschenaultii</i>	Greater Sand-Plover	LC
47		Laridae	<i>Chroicocephalus brunnicephalus</i>	Brown-headed Gull	LC
48			<i>Chroicocephalus ridibundus</i>	Black-headed Gull	LC
49		Burhinidae	<i>Esacus recurvirostris</i>	Great Thick-knee	LC
50		Glareolidae	<i>Glareola lacteal</i>	Small Pratincole	LC
51			<i>Glareola maldivarum</i>	Oriental Pratincole	LC
52		Jacanidae	<i>Hydrophasianus chirurgus</i>	Pheasant-tailed Jacana	LC
53			<i>Metopidius indicus</i>	Bronze-winged Jacana	LC
54	Ciconiiformes	Ciconiidae	<i>Anastomus oscitans</i>	Asian Openbill	LC
55			<i>Mycteria leucocephala</i>	Painted Stork	NT
56	Columbiformes	Columbidae	<i>Streptopelia chinensis</i>	Spotted Dove	LC
57			<i>Streptopelia decaocto</i>	Eurasian Collared-Dove	LC
58			<i>Streptopelia senegalensis</i>	Laughing Dove	LC
59			<i>Columba livia</i>	Rock Pigeon	LC
60	Coraciiformes	Alcedinidae	<i>Alcedo atthis</i>	Common kingfisher	LC
61			<i>Ceryle rudis</i>	Pied Kingfisher	LC
62			<i>Halcyon smyrnensis</i>	White-throated Kingfisher	LC
63		Coraciidae	<i>Coracias benghalensis</i>	Indian Roller	LC
64		Meropidae	<i>Merops orientalis</i>	Green Bee-eater	LC
65			<i>Merops philippinus</i>	Blue-tailed Bee-eater	LC
66	Cuculiformes	Cuculidae	<i>Centropus sinensis</i>	Greater Coucal	LC
67			<i>Eudynamys scolopacea</i>	Asian Koel	LC
68			<i>Hierococcyx sparverioides</i>	Common Hawk-Cuckoo	LC
69	Falconiformes	Falconidae	<i>Falco chicquera</i>	Red necked Falcon	LC
70			<i>Falco tinnunculus</i>	Common Kestrel	LC
71	Galliformes	Phasianidae	<i>Francolinus pictus</i>	Painted Francolin	LC
72			<i>Francolinus pondicerianus</i>	Gray Francolin	LC
73			<i>Pavo cristatus</i>	Indian Peafowl	LC
74	Gruiformes	Rallidae	<i>Porphyrio porphyrio</i>	Purple Swampphen	LC
75			<i>Amaurornis phoenicurus</i>	White-breasted Waterhen	LC
76			<i>Fulica atra</i>	Eurasian Coot	LC
77			<i>Gallinula chloropus</i>	Common Moorhen	LC
78	Passeriformes	Phylloscopidae	<i>Phylloscopus trochiloides</i>	Greenish Warbler	LC
79		Ploceidae	<i>Ploceus manyar</i>	Streaked Weaver	LC
80			<i>Ploceus philippinus</i>	Baya Weaver	LC
81			<i>Prinia hodgsonii</i>	Gray-breasted Prinia	LC
82		Cisticolidae	<i>Prinia inornata</i>	Plain Prinia	LC
83			<i>Prinia socialis</i>	Ashy Prinia	LC
84			<i>Prinia sylvatica</i>	Jungle Prinia	LC
85			<i>Cisticola juncidis</i>	Zitting Cisticola	LC
86			<i>Orthotomus sutorius</i>	Common Tailorbird	LC
87		Pycnonotidae	<i>Pycnonotus cafer</i>	Red-vented Bulbul	LC

88		Muscicapidae	<i>Pycnonotus luteolus</i>	White-browed Bulbul	LC
89			<i>Saxicola caprata</i>	Pied Bushchat	LC
90			<i>Saxicoloides fulicata</i>	Indian Robin	LC
91			<i>Phoenicurus ochruros</i>	Black Redstart	LC
92			<i>Eumyias thalassinus</i>	Verditer Flycatcher	LC
93			<i>Monticola solitaries</i>	Blue Rock-Thrush	LC
94			<i>Cyornis tickelliae</i>	Tickell's Blue-Flycatcher	LC
95		Sturnidae	<i>Sturnia pagodarum</i>	Brahminy Starling	LC
96			<i>Acridotheres tristis</i>	Common Myna	LC
97			<i>Pastor roseus</i>	Rosy Starling	LC
98		Sylviidae	<i>Gracupica contra</i>	Asian Pied Starling	LC
99			<i>Sylvia curruca</i>	Lesser Whitethroat	LC
100		Leiothrichidae	<i>Chrysomma sinense</i>	Yellow-eyed Babbler	LC
101			<i>Turdoides affinis</i>	Yellow-billed Babbler	LC
102			<i>Turdoides caudatus</i>	Common Babbler	LC
103		Acrocephalidae	<i>Turdoides malcolmi</i>	Large Gray Babbler	LC
104			<i>Acrocephalus dumetorum</i>	Blyth's Reed-Warbler	LC
105			<i>Acrocephalus stentoreus</i>	Clamorous Reed-Warbler	LC
106		Aegithinidae	<i>Iduna caligata</i>	Booted Warbler	LC
107			<i>Aegithina tiphia</i>	Common Iora	LC
108		Alaudidae	<i>Alauda gulgula</i>	Oriental Skylark	LC
109			<i>Ammodramus phoenicurus</i>	Rufous-tailed Lark	LC
110			<i>Eremopterix grisea</i>	Ashy-crowned Sparrow-Lark	LC
111			<i>Galerida deva</i>	Sykes's Lark	LC
112			<i>Mirafra affinis</i>	Jerdon's Bushlark	LC
113			<i>Mirafra cantillans</i>	Singing Bush lark	LC
114			<i>Mirafra erythroptera</i>	Indian Bushlark	LC
115		Corvidae	<i>Corvus macrorhynchos</i>	Large-billed Crow	LC
116			<i>Corvus splendens</i>	House Crow	LC
117		Dicaeidae	<i>Dicaeum erythrorhynchos</i>	Pale-billed Flowerpecker	LC
118			<i>Dicrurus macrocercus</i>	Black Drongo	LC
119		Estrildidae	<i>Estrilda amandava</i>	Red Avadavat	LC
120			<i>Lonchura Malacca</i>	Tricolored Munia	LC
121			<i>Lonchura punctulata</i>	Scaly-breasted Munia	LC
122			<i>Euodice malabarica</i>	Indian Silverbill/White-throated Munia	LC
123		Hirundinidae	<i>Hirundo daurica</i>	Red-rumped Swallow	LC
124			<i>Hirundo rustica</i>	Barn Swallow	LC
125			<i>Hirundo smithii</i>	Wire-tailed Swallow	LC
126			<i>Petrochelidon fluvicola</i>	Streak-throated Swallow	LC
127			<i>Ptyonoprogne concolor</i>	Dusky Crag-Martin	LC
128		Laniidae	<i>Lanius cristatus</i>	Brown Shrike	LC
129			<i>Lanius schach</i>	Long-tailed Shrike	LC
130			<i>Lanius vittatus</i>	Bay-backed Shrike	LC
131		Motacillidae	<i>Motacilla alba</i>	White Wagtail	LC
132			<i>Motacilla flava</i>	Western Yellow Wagtail	LC
133			<i>Motacilla maderaspatensis</i>	White-browed Wagtail	LC
134			<i>Anthus rufulus</i>	Oriental Pipit	LC
135		Nectariniidae	<i>Nectarinia asiatica</i>	Purple Sunbird	LC
136			<i>Nectarinia zeylonica</i>	Purple-rumped Sunbird	LC
137		Oriolidae	<i>Oriolus oriolus</i>	Eurasian Golden Oriole	LC
138		Passeridae	<i>Passer domesticus</i>	House Sparrow	LC
139		Campephagidae	<i>Pericrocotus cinnamomeus</i>	Small Minivet	LC
140	Pelecaniformes	Ardeidae	<i>Ardea cinerea</i>	Gray Heron	LC
141			<i>Ardea intermedia</i>	Intermediate Egret	LC
142			<i>Ardea purpurea</i>	Purple Heron	LC
143			<i>Ardeola grayii</i>	Indian Pond-Heron	LC
144			<i>Bubulcus ibis</i>	Cattle Egret	LC
145			<i>Egretta garzetta</i>	Little Egret	LC
146			<i>Egretta gularis</i>	Western reef heron	LC
147			<i>Ixobrychus cinnamomeus</i>	Cinnamon Bittern	LC
148			<i>Ixobrychus sinensis</i>	Yellow Bittern	LC
149			<i>Mesophoyx intermedia</i>	Median Egret	LC
150			<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron	LC
151			<i>Ardea alba</i>	Great Egret	LC
152		Threskiornithidae	<i>Platalea leucorodia</i>	Eurasian Spoonbill	LC
153			<i>Plegadis falcinellus</i>	Black-winged Stilt	LC
154			<i>Threskiornis melanocephalus</i>	Black-headed Ibis	NT
155			<i>Pseudibis papillosa</i>	Indian Black Ibis	LC
156	Phocoeniformes	Phocoenidae	<i>Phocoenoides roseus</i>	Greater Flamingo	LC

157	Piciformes	Megalaimidae	<i>Psilopogon haemacephalus</i>	Coppersmith Barbet	LC
158	Podicipediformes	Podicipedidae	<i>Tachybaptus ruficollis</i>	Little Grebe	LC
159	Psittaciformes	Psittaculidae	<i>Psittacula krameri</i>	Rose-ringed Parakeet	LC
160	Pteroclidiformes	Pteroclididae	<i>Pterocles exustus</i>	Chestnut-bellied Sandgrouse	LC
161	Strigiformes	Strigidae	<i>Athene brama</i>	Spotted Owlet	LC
162			<i>Bubo bengalensis</i>	Indian Eagle-Owl	LC
163	Suliformes	Phalacrocoracidae	<i>Phalacrocorax carbo</i>	Greater Cormorant	LC
164			<i>Phalacrocorax fuscicollis</i>	Indian Cormorant	LC
165			<i>Phalacrocorax niger</i>	Little Cormorant	LC
166		Anhingidae	<i>Anhinga melanogaster</i>	Oriental Darter	NT

*IUCN= International Union for Conservation of Nature, LC= Least Concern, NT= Near Threatened, EN=Endangered

Table 3: Checklist Reptiles recorded during the study period at Ameenpur Lake.

Sl. No.	Scientific Name	Common Name	Abundance	IUCN Status ^[46]
Family : Geoemydidae				
1	<i>Melanochelys trijuga</i>	Indian Black Turtle	Rare	Near Threatened
Family : Trionychidae				
2	<i>Lissemys punctata</i>	Indian Flap-shelled Turtle	Un Common	Least Concern
Family : Agamidae				
3	<i>Calotes versicolor</i>	Indian Garden Lizard	Very Common	-
4	<i>Psammophilus dorsalis</i>	South Indian Rock Agama	Rare	Least Concern
5	<i>Sitana ponticeriana</i>	Fan-throated lizard	Very Common	Least Concern
Family : Chamaeleonidae				
6	<i>Chamaeleo zeylanicus</i>	Indian Chameleon	Rare	Least Concern
Family : Gekkonidae				
7	<i>Hemidactylus brookii</i>	Brook's House Gecko	Very Common	-
8	<i>Hemidactylus flaviviridis</i>	Yellow-green House Gecko	Common	-
9	<i>Hemidactylus frenatus</i>	Asian House Gecko	Very Common	Least Concern
10	<i>Hemidactylus giganteus</i>	Giant South Indian Gecko	Common	Least Concern
11	<i>Hemidactylus leschenaultii</i>	Bark Gecko	Common	-
12	<i>Hemidactylus triedrus</i>	Termite Hill Gecko	Rare	-
13	<i>Hemidactylus treutleri</i>	Treutler's Gecko	Common	Least Concern
Family : Lacertidae				
14	<i>Ophisops jerdonii</i>	Snake-eyed Lacerta	Rare	Least Concern
Family : Scincidae				
15	<i>Lygosoma punctata</i>	Spotted Supple Skink	Common	-
16	<i>Eutropis carinata</i>	Keeled Grass Skink	Very Common	Least Concern
17	<i>Eutropis macularius</i>	Bronze Grass Skink	Very Common	-
Family : Varanidae				
18	<i>Varanus bengalensis</i>	Bengal Monitor	Very Common	Least Concern
Family : Boidae				
19	<i>Eryx johnii</i>	Red Sand Boa	Common	-
20	<i>Gongylophis conicus</i>	Common Sand Boa	Common	Least Concern
Family : Colubridae				
21	<i>Ahaetulla nasuta</i>	Common Vine Snake	Rare	-
22	<i>Boiga trigonata</i>	Common Cat Snake	Common	-
23	<i>Coelognathus Helena</i>	Common Trinket Snake	Common	-
24	<i>Dendrelaphis tristis</i>	Common Bronzeback Tree Snake	Rare	-
25	<i>Lycodon aulicus</i>	Common Wolf Snake	Common	Least Concern
26	<i>Macropisthodon plumbicolor</i>	Green Keelback	Very Common	-
27	<i>Oligodon arnensis</i>	Common Kukri Snake	Very Common	-
28	<i>Oligodon taeniolatus</i>	Russell's Kukri Snake	Very Common	Least Concern
29	<i>Ptyas mucosa</i>	Indian Rat Snake	Very Common	-
30	<i>Xenochrophis piscator</i>	Checkered Keelback	Common	-
Family : Elapidae				
31	<i>Bungarus caeruleus</i>	Common Krait	Common	-
32	<i>Naja naja</i>	Spectacled Cobra	Very Common	-
Family : Viperidae				
33	<i>Daboia russelii</i>	Russell's Viper	Very Common	Least Concern
34	<i>Trimeresurus gramineus</i>	Bamboo Pit Viper	Rare	Least Concern

Table 4: Checklist of Amphibians recorded during the study period at Ameenpur Lake.

S. No.	Scientific Name	Common Name	Abundance	IUCN Status ^[46]
Family : Bufonidae				
1	<i>Duttaphrynus stomaticus</i>	Marbled Toad	Common	Least Concern
2	<i>Duttaphrynus melanostictus</i>	Common Indian Toad	Very Common	Least Concern
Family : Dicroglossidae				
3	<i>Euphlyctis cyanophlyctis</i>	Skittering Frog	Very Common	Least Concern
4	<i>Euphlyctis hexadactylus</i>	Indian Pond Frog	Very Common	Least Concern
5	<i>Fejervarya limnocharis</i>	Indian Cricket Frog	Very Common	Least Concern
6	<i>Hoplobatrachus tigerinus</i>	Indian Bull Frog	Very Common	Least Concern
7	<i>Sphaerotheca breviceps</i>	Indian burrowing frog	Common	Least Concern
Family : Microhylidae				
8	<i>Uperdon taprobanicus</i>	Painted Kaloula	Rare	Least Concern
9	<i>Microhyla ornate</i>	Ornate Microhylid	Common	Least Concern
10	<i>Uperdon variegates</i>	Marbled narrow-mouthed frog	Rare	-
11	<i>Uperodon systoma</i>	Marbled Balloon Frog	Common	Least Concern
Family : Rhacophoridae				
12	<i>Polypedates maculatus</i>	Common Tree Frog	Common	Least Concern

Table 5: Checklist of Fishes recorded during the study period at Ameenpur Lake.

S. No.	Order	Family	Scientific Name	Common Name	IUCN Status ^[46]
1	Cypriniformes	Cyprinidae	<i>Labeo rohita</i>	Rohu	Least Concern
2			<i>Catla catla</i>	Catla	Least Concern
3			<i>Cyprinus carpio</i>	Common Carp	Vulnerable
4	Perciformes	Channidae	<i>Channa striata</i>	Murrel	Least Concern
5			<i>Channa punctata</i>	Murrel	Least Concern
6			<i>Channa marulius</i>	Murrel	-
7		-	<i>Oreochromis sp.</i>	Tilapia	-
8	Siluriformes	-	Un Identified	Catfish	-
9		Bagridae	<i>Mystus vittatus</i>	Mystus	Least Concern

Table 6: Checklist of Aquatic beetles recorded during the study period at Ameenpur Lake.

S. No	Scientific names
1.	<i>Berosus indicus</i> Mots, 1861
2.	<i>Berosus pulchellus</i> Macleay, 1825
3.	<i>Canthydrus laetabilis</i> Walker, 1882
4.	<i>Canthydrus morsbachi</i> Wehncke, 1876
5.	<i>Cybister (Melanectes) tripunctatus asiaticus</i> Sharp, 1899
6.	<i>Cybister (Melanectes) convexus</i> Sharp, 1882
7.	<i>Dactylosternum abdominale</i> Fabricius, 1792
8.	<i>Dineutus (Protodineutus) indicus</i> Aube, 1838
9.	<i>Enochrus esuriens</i> Walker, 1858
10.	<i>Eretes sticticus</i> Linnaeus, 1833
11.	<i>Guignotus flammulatus</i> Sharp, 1854
12.	<i>Gyrinus convexusculus</i> Macleay, 1871
13.	<i>Haliplus (Liaphlus) pulchellus indicus</i> Regimbart, 1899.
14.	<i>Helochares anchoralis</i> Sharp, 1890
15.	<i>Hydaticus (Guignotites) fabricii</i> Macleay, 1833
16.	<i>Hydaticus (Guignotites) vittatus</i> Fabricius, 1838
17.	<i>Hydrochus bindosus</i> Mots., 1860
18.	<i>Hydrocoptus subvittulus</i> Motschulsky, 1859
19.	<i>Hydrophilus</i> Leach, 1764.
20.	<i>Hydrophilus olivaceous</i> Fabricius, 1781
21.	<i>Hydrovatus confertus</i> Sharp, 1882
22.	<i>Laccophilus elegans</i> Sharp, 1882
23.	<i>Laccophilus ellipticus</i> Regimbart, 1899
24.	<i>Orectochilus (Patrus) discifer</i> (Walker, 1859)
25.	<i>Orectochilus (Patrus) semivestitus</i> Guerin, 1893
26.	<i>Regimbartia attenuate</i> Fabricius, 1801

Table 7: Checklist of Butterflies (Order: Lepidoptera) recorded during the study period at Ameenpur Lake.

S. No.	Scientific Name	Common Name	Abundance
Family : Hesperidae			
1	<i>Hasorachromus</i>	Common Banded Awl	Common
2	<i>Spialagalba</i>	Indian Skipper	Common
Family : Lycaenidae			
3	<i>Castaliusrosimon</i>	Common Pierrot	Very Common
4	<i>Catochrysops Strabo</i>	Forget-me-not	Common
5	<i>Freyeriatrochylus</i>	Grass Jewel	Very Common
6	<i>Jamidesceleno</i>	Common Cerulean	Common
7	<i>Leptotesplinius</i>	Zebra Blue	Common
Family : Nymphalidae			
8	<i>Acraea violae</i>	Tawny Coster	Very Common
9	<i>Ariadne ariadne</i>	Angled Coster	Un Common
10	<i>Byblia Ilithyia</i>	Joker	Very Common
11	<i>Danaus chrysippus</i>	Plain Tiger	Very Common
12	<i>Danaus genutia</i>	Striped Tiger	Very Common
13	<i>Euploea core core</i>	Common Crow	Common
14	<i>Euthalia nais</i>	Baronet	Un Common
15	<i>Hypolimnas bolina</i>	Great Eggfly	Common
16	<i>Hypolimnas misippus</i>	Danaid Eggfly	Common
17	<i>Junonia altites</i>	Grey Pansy	Very Common
18	<i>Junonia hierta</i>	Yellow Pansy	Common
19	<i>Junonia lemonias</i>	Lemon Pansy	Very Common
20	<i>Junonia orithya</i>	Blue Pansy	Common
21	<i>Melanitis leda</i>	Common Evening Brown	Very Common
22	<i>Moduza procis</i>	Commander	Un Common
23	<i>Phalanta phalantha</i>	Common Leopard	Common
24	<i>Polyura athamas</i>	Common Nawab	Un Common
25	<i>Precis almana</i>	Peacock Pansy	Very Common
26	<i>Precis iphita</i>	Chocolate Pansy	Common
27	<i>Tirumala limniace</i>	Blue Tiger	Common
Family : Papilionidae			
28	<i>Graphium agamemnon</i>	Tailed Jay	Rare
29	<i>Pachliopta aristolochiae</i>	Common Rose	Very Common
30	<i>Pachliopta hector</i>	Crimson Rose	Very Common
31	<i>Papilio demoleus</i>	Lime Butterfly	Very Common
32	<i>Papilio polytes</i>	Common Mormon	Common
Family : Pieridae			
33	<i>Catopsilia pomona</i>	Common Emigrant	Common
34	<i>Cepora nerissa</i>	Common Gull	Common
35	<i>Colotis danae</i>	Crimson Tip	Common
36	<i>Colotis etrida</i>	Small /Little Orange Tip	Common
37	<i>Delias eucharis</i>	Common Jezebel	Common
38	<i>Eurema hecabe</i>	Common Grass Yellow	Common
39	<i>Ixias marianne</i>	White Orange Tip	Common
40	<i>Leptosia nina</i>	Psyche	Common
41	<i>Pareronia valeria</i>	Common Wanderer	Common

Table 8: Checklist of Odonata recorded during the study period at Ameenpur Lake.

S. No.	Scientific Name	Common Name	Abundance
Family : Gomphidae			
1	<i>Ictinogomphus rapax</i>	Common Clubtail	Un Common
Family : Aeshnidae			
2	<i>Anax guttatus</i>	Blue-tailed Green Darner	Rare
Family : Cordulidae			
3	<i>Aethriamanta brevipennis</i>	Scarlet Marsh Hawk	Rare
Family : Libellulidae			
4	<i>Brachythemis contaminata</i>	Ditch Jewel	Common
5	<i>Crocothemis servilia</i>	Rudy Marsh Skimmer	Common
6	<i>Diplacodes trivialis</i>	Ground Skimmer	Very Common
7	<i>Orthetrum luzonicum</i>	Tricoloured Marsh Hawk	Very Common
8	<i>Orthetrum sabina</i>	Green Marsh Hawk	Common
9	<i>Orthetrum taeniolatum</i>	Little Skimmer	Very Common
10	<i>Rhodothermis rufa</i>	Rufous Marsh Glider	Very Common

11	<i>Rhyothemis variegata</i>	Common Picture Wing	Very Common
12	<i>Tramea basilaris</i>	Red Marsh Trotter	Very Common
13	<i>Trithemis pallidinervis</i>	Long-Legged Marsh Glider	Very Common
Family : Coenagrionidae			
14	<i>Ceragrion coromandelianum</i>	Coromandel Marsh Dart	Common
15	<i>Ischnura aurora</i>	Golden Dartlet	Very Common
16	<i>Ischnura senegalensis</i>	Senegal Golden Dartlet	Very Common
17	<i>Pseudagrion microcephalum</i>	Blue Grass Dartlet	Common
18	<i>Pseudagrion rubriceps</i>	Saffron-faced Blue Dart	Very Common

Table 9: Checklist of Arachnids recorded during the study period at Ameenpur Lake.

S. No.	Scientific Name	Common Name	Abundance
Family : Buthidae			
1	<i>Hottentotta tamulus</i>	Brown Scorpion	Very Common
2	<i>Lyhcas scaber</i>	-	Rare
3	<i>Lyhcas tricarinatus</i>	-	Common
4	<i>Isometrus corbeti</i>	-	Common
Family : Scorpionidae			
5	<i>Heterometrus swammerdami</i>	Giant Forest Scorpion	Very Common
Family : Araneidae			
6	<i>Argiope anasuja</i>	Signature Spider	Very Common
7	<i>Argiope pulchella</i>	Garden Cross Spider	Un Common
8	<i>Neoscona bengalensis</i>	Spotted Orb Spider	Very Common
9	<i>Neoscona mokerjei</i>	Common Garden Spider	Common
Family : Eresidae			
10	<i>Stegodyphus sarasinorum</i>	Social Spider	Very Common
Family : Hersiliidae			
11	<i>Hersilia savignyi</i>	Common Two Tail	Very Common
12	<i>Murrcia</i> sp.	Spotted Orb Spider	Un Common
Family : Lycosidae			
13	<i>Lycosa</i> sp.	-	Common
14	<i>Hippasa agelenoides</i>	Wolf Spider	Un Common
15	<i>Pardosa birmanica</i>	Wolf Spider	Common
16	<i>Pardosa sumatrana</i>	Wolf Spider	Common
Family : Oxyopidae			
17	<i>Oxyopes pawani</i>	Pawan's Green Lynx Spider	Un Common
18	<i>Peucetia yogesh</i>	Yogesh's Green Lynx Spider	Un Common
Family : Pholcidae			
19	<i>Artema atlanta</i>	Atlanta Spider	Un Common
20	<i>Crossopriza lyoni</i>	Daddy Long Legs	Un Common
21	<i>Pholcus phalangioides</i>	Pholcus Spider	Very Common
Family : Tetragnathidae			
22	<i>Leucauge decorata</i>	Decorated Spider	Common
23	<i>Tetragnatha mandibulata</i>	Spike Orb Spider	Un Common
Family : Salticidae			
24	<i>Plexippus paykulli</i>	Jumping Spider	Common
25	<i>Myrmarachne plataleoides</i>	Ant Mimic Spider	Common

Table 10: Checklist other Invertebrates recorded during the study period at Ameenpur Lake.

S. No.	Scientific Name	Common Name	Abundance
Order : Orthoptera			
Family : Gryllidae			
1	<i>Acheta domesticus</i>	House Cricket	Very Common
2	<i>Nemobius sylvestris</i>	Wood Cricket	Common
Family : Acrididae			
3	<i>Chortophaga viridifasciata</i>	Green-striped Grasshopper	Common
4	<i>Melanoplus sanguinipes</i>	Brown Grasshopper	Very Common
Family : Pyrgomorphidae			
5	<i>Poecilocus pictus</i>	Painted Grasshopper	Rare
Order: Hymenoptera			
Family : Formicidae			
6	<i>Componatus compressus</i>	Common Godzilla ant	Very Common
7	<i>Componatus irritans</i>	Giant Honey Ant	Common
8	<i>Crematogaster subnuda</i>	Common Board Acrobat Ant	Common
9	<i>Diacamma ceylonense</i>	Greater Striated Bispinous Ant	Common
10	<i>Leptogenys processionalis</i>	Procession Ant	Common

11	<i>Monomorium rubriceps</i>	Spineless Harvester Ant	Common
12	<i>Monomorium pharaonis</i>	Pharaonis Ant	Very Common
13	<i>Occophylla smaragdina</i>	Weaver Ant	Very Common
14	<i>Pachycondyla tesseronoda</i>	Rare Sausage Huntress Ant	Very Common
15	<i>Solenopsis geminata</i>	Common Red Fire Ant	Common
16	<i>Tetraponera rufonigra</i>	Arboreal Bicolored Ant	Very Common
Family : Apidae			
17	<i>Apis cerana</i>	Asiatic Honey Bee	Common
18	<i>Apis dorsata</i>	Giant Honey Bee	Very Common
Order : Coleoptera			
Family : Carabidae			
28	<i>Anthia sexguttata</i>	Six-spot Ground Beetle	Un Common
29	<i>Cicindela sp.</i>	Green Tiger Beetle	Un Common
Family : Scarabaeidae			
30	<i>Oryctes nasicornis</i>	Palm Rhinoceros Beetle	Common
Family : Scolopendridae			
31	<i>Scolopendra amazonica</i>	Amazon Centipede	Common
31	<i>Scolopendra hardwickei</i>	Tiger Centipede	Rare
Family : Termitidae			
33	<i>Odontotermes formosanus</i>	Termite	Very Common



Plate 1: A panoramic view of Ameenpur Lake, Telangana



Plate 2: Mammalian diversity of Ameenpur Lake. (A). *Funambulus palmarum*, (B). *Herpestes edwardsii*, (C) *Lepus nigricollis*



Plate 3: Avian diversity of Ameenpur Lake. (A). *Phoenixipterus roseus*, (B). *Alcedo atthis*, (C). *Haliastur indus*, (D). *Himantopus himantopus*, (E). *Actitis hypoleucos*, (F). *Fulica atra*, (G). *Porphyrrio porphyrio*, (H). *Anas querquedula*, (I). *Tadorna ferruginea*, (J). *Threskiornis melanocephalus*, (K). *Sterna aurantia*, (L). *Pterocles exustus*, (M). *Tachybaptus ruficollis*, (N). *Mycteria leucocephala*



Plate 4: Herpetofauna diversity of Ameenpur Lake. (A). *Naja naja*, (B). *Daboia russelii*, (C). *Ptyas mucosa*, (D). *Lycodon aulicus*, (E). *Boiga trigonata*, (F). *Psammophilus dorsalis*, (G). *Hemidactylus treutleri*, (H). *Sitana ponticeriana*, (I). *Chamaeleo zeylanicus*, (J). *Melanochelys trijuga*, (K). *Lissemys punctata*, (L). *Uperodon taprobanicus*, (M). *Uperodon systoma*, (N). *Sphaerotheca breviceps*



Plate 5: Fish diversity of Ameenpur Lake. (A). *Labeo rohita*, (B). *Catla catla*



Plate 6: Invertebrate diversity of Ameenpur Lake. (A). *Danaus genutia*, (B). *Danaus chrysippus*, (C). *Colotis danae*, (D). *Junonia almana*, (E). *Hypolimnys misippus*, (F). *Orthetrum sabina*, (G). *Diplacodes trivialis*, (H). *Argiope anasuja*, (I). *Plexippus paykulli*, (J). *Canthyrus sp.*

4. Discussion

A total of 364 noteworthy multi taxa recorded in the vicinity of Ameenpur Lake. Of 8 species mammals recorded in the present study, all are found to be common in nature and most commonly sighted species namely Three-striped Palm Squirrel (*Funambulus palmarum*) and Common Grey Mongoose (*Herpestes edwardsii*). Our mammalian records not correlated with nearer area records of the environs of Greater Hyderabad, Telangana State [16]. A total of 58 species belonging to 25 families have been recorded [16]. The above stats are clearly related to habitats and studied area. The Hyderabad spread over an area of 67.4 square kilometres which is covering 1000 water bodies [16] of the compression of current study area 0.38 square kilometres with one water body. In other measures of ecological occurrence of mammals in associated with wetland habitats that rely on varying combinations of aquatic invertebrates, amphibians and other prey [45]. A rich diversity of 166 bird species were recorded in surroundings of Ameenpur Lake, which includes a total of 66 aquatic and 100 terrestrial birds. Of these eight species are listed as threatened category species in IUCN Redlist [46] (six species near threatened and each one species as a vulnerable and endangered). In Greater Hyderabad records of birds are represented 315 species distributed in 60 families as of 22 species are globally threatened species [47]. A good divers of some wintering birds like Greater Flamingo (*Phoenicopterus roseus*), Northern Pintail (*Anas acuta*), Garganey (*Anas querquedula*), Gadwall (*Anas strepera*), Common Greenshank (*Tringa nebularia*), Common Redshank (*Tringa totanus*), Green Sandpiper (*Tringa ochropus*), Marsh Sandpiper (*Tringa stagnatilis*), Curlew Sandpiper (*Calidris ferruginea*), Ruff (*Philomachus pugnax*), Temminck's stint (*Calidris temminckii*), Greater Sand plover (*Charadrius*

leschenaultii), Brown-headed Gull (*Chroicocephalus brunnicephalus*), Yellow-wattled Lapwing (*Vanellus malabaricus*), Black Redstart (*Phoenicurus ochruros*), Verditer Flycatcher (*Eumyias thalassinus*), Western Reef Heron (*Egretta gularis*), Osprey (*Pandion haliaetus*), Eurasian spoonbill (*Platalea leucorodia*) were also documented in the current study. Reptile fauna consist of 33 species, of total only one species Indian Black Turtle (*Melanochelys trijuga*) listed as near threatened category in IUCN Redlist [46]. This species inhabits to variety of water bodies including ponds, marshes, streams, rivers and artificial water bodies like rice paddies, watering holes [48]. It is usually rare or absent in the areas were water ponds heavily altered by humans [49]. Other lizards, geckos and snakes species commonly distributed surrounding habitats of rocky hillocks, scrub jungles of the study area. In current study a recently discovered gecko species *Hemidactylus treutleri* by Mahony (2009) type locality from Golconda Fort, Hyderabad [50] has also commonly recorded. It is an additional new site record to Medak district of Telangana of earlier records by [51, 52]. Whereas in earlier study at Greater Hyderabad presented 44 reptiles species belonging to 16 families [53]. The present study reveals that the area holds handful diversity of Amphibian fauna. In entire Greater Hyderabad, 16 species (4 families) of Amphibians have been reported [54], on recently 14 species (4 families) had recorded from central and northern Telangana [28] and in this study we are reporting 12 species (4 families). Of these checklist of Amphibian fauna all are commonly occurrence except two species namely Painted Kaloula (*Uperdon taprobanicus*) and Marbled Narrow-Mouthed Frog (*Uperdon variegates*) were rarely seen. The Marbled Balloon Frog (*Uperodon systoma*) was new report to Hyderabad in 2010 by [55] and only one record available from Medak district in ICRISAT [56]. Here we considered this species as a second report to Medak district and third record to Telangana State. Furthermore, Ameenpur Lake with its diversity has a very good possible to support several Herpetofauna. The fish diversity consists of 9 species in the vicinity of Ameenpur Lake. It is refers to variety of fish species depending on context and scale [57]. Inland fisheries in India have great potential of contributing to the food security of the country [58]. Reservoirs and lakes are the main resources exploited for inland fisheries and understanding of fish faunal diversity is a major aspect for its development and the sustainability management [59]. Studies on ichthyofauna studies have been carried out in Greater Hyderabad region and reported 60 species of fishes belonging to 14 families [60]. The fish diversity of the lake represents the culture of Tilapia (*Oreochromis sp.*) and Catfish which is a threat to the local aquatic biodiversity of the lake. The Telangana State Biodiversity Board will prepare the management plan for the Biodiversity Heritage Site and the measurements will be taken up for removal of the invasive fish species. Native fish and forgotten species will be reared in the lake for the livelihoods of the local fish community. A total of 143 invertebrates species (26 aquatic beetles, 41 butterflies, 18 odonates, 25 Arachnids and 33 other invertebrates) were documented in the present study. Insects are the most diverse group of organisms in freshwater [36]. They are the best indicators for bio-assessment and the biotic environment of the water body which directly affect the distribution, population density and diversity of the fresh water insects. Insects are especially of great significance for fisheries since they act as food for bottom feeder fishes. They play an important role in ecosystem functioning viz., nutrient [61] cycling primary

production, decomposition and materials translocation [62]. Insects are extremely important components of the bio indicators of the world [63]. On the other hand, very limited intensive studies were carried out on butterflies (141 species represented 5 families), spiders (42 species represented 11 families) and odonates (30 species represented 6 families) of the region of Telangana [64, 65, 66].

5. Conclusion

Even though with small size (93.15 Acres/0.38 Sq. km) and unpredictable nature, this Ameenpur Lake is known to harbour novel, rare and/or threatened fauna and their resting stages, thus acting as “local nature reserve” or “hotspot”. During the study period a total of 364 faunal components were recorded and the diversity indicates heterogeneous pattern. The key species represents namely Oriental Darter (*Anhinga melanogaster*), Pallid Harrier (*Circus macrourus*), Black-tailed Godwit (*Limosa limosa*), Painted Stork (*Mycteria leucocephala*), River Tern (*Sterna aurantia*) and Black-headed Ibis (*Threskiornis melanocephalus*), Greater Spotted Eagle (*Clanga clanga*), Egyptian Vulture (*Neophron percnopterus*), Greater Flamingo (*Phoenicopterus roseus*), Northern Pintail (*Anas acuta*), Garganey (*Anas querquedula*), Indian Black Turtle (*Melanochelys trijuga*), Treutleri's Gecko (*Hemidactylus treutleri*) Painted Kaloula (*Uperdon taprobanicus*) and Marbled Narrow-Mouthed Frog (*Uperdon variegates*) shows the characteristic feature of the habitat. The high beta diversity of this lake is related to the high diversity in habitat characteristics. Keeping in view of the importance of lake the Telangana State Biodiversity Board has declared the lake as Biodiversity Heritage Site under the Section-37 of the Biological Diversity Act, 2002. In consultation with Biodiversity Management Committee, Ameenpur and the board initiated preparing the management plan for conservation activities such as desilting of the Lake, stopping of pollution entries, habitat improvement activities with native species, improvement of water quality and minimize anthropogenic activities for long term sustainability of the Lake to attract further more diversity of faunal components.

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