

10. Fish and Fisheries

10.1 Introduction

The South India was ruled by four famous kingdoms Chola, Sera, Pandiya and Pallavas. Mazdai or Matsiadev was the South Indian Ruler of Pandya kingdom in the Coromandel Coast and he was called the “King of the fish emblem”. A king, to have fish as his national emblem would amount the national importance given to fish related economy (Menachery, 2000). Secondly, on the roof of the Pulicat temple, which is now in a dilapidated condition, fishes have been chiseled out on the roof stones. This is an indication that fishes played an important role in their day-to-day life. The naming of the satellite settlement as the “Fishing Village” adds to the importance of fish-related economy in the Dutch settlement of Palleicatta.

India has three major lakes namely, Chilka lake (978 sq km) in Orissa, perhaps the largest lake in Asia, the Vembanad Lake (300 sq km) in Kerala and the Pulicat Lake (350 sq.km) in Tamil Nadu. The waters of Pulicat Lake are very rich in productivity. It acts as a breeding and nursery ground for many commercial important species of finfish and shellfish (Kathirvel, 2003; Anon 2006; Nammalwar, 2006; Sanjeevaraj, 2006). The biodiversity (finfish and shellfish species) of Pulicat Lake is highly variable; according to sessions, localities and the time spent in field collection. Moreover the condition of the lake mouth may also affect the distribution of fishes. When the mouth of the lake is open several marine species particularly, planktonic and euphotic forms and finfish and shellfish from the inshore as well as the offshore waters of the adjacent Bay of Bengal can migrate in to the Pulicat Lake. These species may stay in the lake for a shorter or longer duration. Therefore, any lists of finfish and shellfish species is not necessarily complete for all times. A wide diversity of macro fauna is bound to appear in this rich and vast lake. Therefore the list provided in this study is only basic rather of more common species that occur in the lake. Hence, the possibility exists for the entry of new migrants and settlers, which would only go to reveal the full resource potential of the Pulicat Lake. All the fishes were identified and were listed according to their family, order, genus and species. A list of species (Fishes, Prawns, Molluscan species) that inhabit the Pulicat Lake and the coastal inshore waters is given separately. Since the collection at CReNIEO – IFDP Pulicat and identification of the fishes were started before Tsunami in 2004 data on the occurrence of fish species for the pre-Tsunami and post Tsunami periods are available. The names of fishes were sorted out according to their family and are presented in Tables 1,2,3 & 4 in an alphabetical order. These Tables also gives the scientific names along with the local names in Tamil and in English languages. It may be pointed out the Tamil local names may vary from region to region.

10.2 Methodology

Due to the importance given by the then Government of Tamil Nadu, Chacko et. al., (1953) described a total of 65 species of this lake. Selvanathan and Kaliyamurthy (1972) identified an additional 81 species, making a total of 146 species varieties of fishes. The common methodology followed by the taxonomists is to collect the fishes from the Pulicat fish market. Hence, one is not sure what species are resident in the lake and what fishes are entirely marine in their distribution. In order to avoid such an ambiguity in fish collection, it was decided to adopt a methodology in which all the fishes used in this study were collected immediately after fishing i.e. from the fisherman's net itself. The lake fishes were stored in separate tank while the fishes from the marine catch were stored in another separate tank. Such a procedure ensured the identify of the fishes, whether they are from the lake or from the seacoast. However, due to the opening of the lake mouth, migration of the sea fishes into the lake is also possible. Moreover, in this taxonomic study large fishes, which may migrate temporarily into the lake, were not considered e.g. sharks and rays.

In the present survey conducted in Pulicat Lake by the Centre for Research on New International Economic Order (CRENIEO), Chennai during January 2003 to June 2004, a total of 90 nos. of finfish species and 13 nos. of shellfish species were recorded (Table 2 and 3). Soon after the Tsunami (26th December 2004) the second collection was made during January 2005 to Dec.2005. This species are listed as Post Tsunami. (Tables 4,5)

The present list replaces all other previous lists provided by different authors, because this study has listed separately and specifically the occurrence of the fishes in the lake areas as well as coastal inshore waters separately.

10.3 Fishermen Vs Fisheries:

At least 97 villages are said to be located around the Pulicat Lake, harboring about 30 to 40 thousand fisher folk, who have been subsisting for generations, exclusively catching fishes of this lake. The population of fisher folk has been steadily growing, but the fishery resources in the lake have been inversely dwindling rapidly, so that there is a severe competition between the escalating fishing pressure and the depleting fishery resources of this lake. Around 1643 kg of fin fishes has been caught daily, which has an economic value of Rs.49, 290/day and about Rs.1,79,90,850/annum. The sharp fluctuations in fish yields [catch reduced from 2562 tons (1951) to 1282 (2006)] (as shown in Table 1) can be attributed to rapid siltation and consequent reduction in tidal impact and reduction of freshwater flow,

change in water quality and selective fishing have naturally lead to decline in the commercial species of finfish and shellfish.

Table. 1. Average fish Catch in Coromandel Coast (Pulicat region) since 1951

Year	Average Catch (In tons)	References
1951	2562	Chacko <i>et.al.</i> , 1951
1970	1170	Jhingaran, 1988
1990	1200	WWF, wetlands of India, 1999
2000	1120	Report – Institute for Ocean Management, 2000
Present (2005-2006)	1282	Report – Tamil Nadu Fisheries Department, 2006

Fishery resources of Pulicat Lake for the livelihood security of fishermen:

The waters of Pulicat Lake are very rich in productivity (Phytoplankton – 87 species, Macro algae –18 species Zooplankton- 88 species and Benthos – 59 species). It acts as breeding and nursing ground for many commercially important species of finfish and shellfish.

Finfish and shellfish resources of Pulicat Lake during pre-tsunami period:

The total number of fish genera earlier authors ranged from 22-25 (Anantharaman, 1951, Chacko, 1951, 1952; Chacko et. al., 1953; Krishnan and Sampath, 1976 and Nammalwar, 1982, 2007).

10.4 Pre Tsunami period

Pulicat Lake species. (Table 2)

It may be seen that a total of 33 species of fishes were collected from the Pulicat Lake waters and there were a total of 103 species of fishes in the coastal region. These fishes represent a total of 26 families. Only the genus *Therapon*. was represented by two species.

**Finfish and shellfish species in the Pulicat Lake during Pre-tsunami period
Sorted in Family wise**

Table -2

Sl. No.	Order	Suborder	Genus	Family	Scientific Name	Local English name	Local Tamil Name	Size in mm
1	Anguilliformes	Anguilloidei	Auguilla	Auguillidae	Auguilla bicolor bicolor McClelland	Finned eel	Nalagujan, Velangu	210
2	Beloniformes	Scomberescoid ei	Belone	Belonidae	Tylosurus stronylura (Van Hasselt)	Round tail Alligator Gar	Usi kola, Othamaaku Kola - (Pulicat name)	145
3	Beloniformes	Scomberescoid ei	Tylosurus	Belonidae	Tylosurus stronylura (Van Hasselt)	Rounded tail (Needle fish)	Usi kola	225
4	Perciformes	Percoidei	Carangoides	Carangidae	Carangoides chrysophrrys (Cuvier)	Dusky trevally	Parai	100
5	Perciformes	Percoidei	Selaroides	Carangidae	Selaroides leptolepis (Cuvier)	Slender scaled scad	Kumara paraī	180
6	Clupiformes	Chanoidei	Chanos	Chanidae	Chanos chanos (Forskal)	Milk fish	Palmeen, Kulal fish – Pulicat	125
7	Perciformes	Percoidei	Etroplus	Cichlidae	Etroplus suratensis (Bloch)	Pearl spot	Pattai fish	150
8	Perciformes	Percoidei	Tilapia	Cichlidae	Tilapia mossambica (Peters)	Tilapia	Sleppy kendi, Slape kendi - Pulicat name	150
9	Clupiformes	Clupeoidei	Sardinella	Clupeidae	Sardinella fimbriata (Valenciennes)	Sardines	Kavaali fish	105
10	Perciformes	Percoidei	Cobis	Cobiidae	Cobis ornatus (Ham & Buch)	Cobids	Mud skipper, Manchalgill- Pulicat	85
11	Perciformes	Percoidei	Cobitis	Cobittidae	Cobitis botia (Ham & Buch)	Mud skipper	sagathi fish, Nachiali fish- Pulicat name	115
12	Pleuronectiformes		Cynoglossus	Cynoglossidae	Cynoglossus macrostomus (Ham & Buch)	Tongue sole	Naakkku meen, Paloral- Pulicat name	150
13	Clupiformes	Clupeoidei	Anodontostoma a	Dorosomatidae	Anodontostoma chacunda (Ham & Buch)	Short nose Gizzard shad	Madhu kendai	110
14	Clupiformes	Clupeoidei	Elops	Elopidae	Elops saurus (Forskal)	Giant herring	Allathi	172
15	Clupiformes	Clupeoidei	Anchoviella	Engraulidae	Anchoviellas commersoni (Lacepede)	Commerson's Anchovy	Thogai meen, Nethelimeen	75
16	Perciformes	Percoidei	Gerres	Gerridae	Gerres filamentosus (Cuvier)	Long rayed silver biddy	Oodan fish- Pulicat, Oodakum fish	105
17	Perciformes	Percoidei	Secutor	Leiognathidae	Secutor insidiator (Bloch)	Slender barred ponyfishes	karial fish, Ora fish- Pulicat name	88
18	Perciformes	Percoidei	Leiognathus	Leiognathidae	Leiognathus equulus (Forskal)	Greater Pony fish	Thata karal fish	55
19	Perciformes	Percoidei	Lethrinus	Lethrinidae	Lethrinus nebulosus (Forskal)	Pigface bream	Sangkara fish - Pulicat name velameen	135
20	Perciformes	Percoidei	Lutianus	Lutianidae	Lutianus russelli (Bleeker)	Russel's, One spot snapper	Parithi vela Meen	92
21	Perciformes	Percoidei	Lutianus	Lutianidae	Lutianus argenteimaculatus (Forskal)	Red snapper	Parithi vela meen, Sudhati- Pulicat name	105

22	Mugiliformes	Nil	Liza	Mugilidae	Liza parsia Ham Buch	Grey mullet	Madavai, manalai, Chala – pulicat name	135
23	Perciformes	Nil	Nemipterus	Nemipteridae	Nemipterus mesopion (Forskal)	Thread fin bream	Chankara	145
24	Perciformes	Cottoidei	Platycephalus	Platycephalidae	Platycephalus indicus (Linnaeus)	Indian flat head	Oduppathi	195
25	Cypriniformes	Cyprinidei	Plotosus	Plotosidae	Plotosus canius Ham-Buch	Catfish- eels	Irruga kelthi	330
26	Perciformes	Percoidei	Pomodasys	Pomodasyidae	Pomodasys hasta (Bloch)	Lined silver Gruster	Cherry fish, Korkuai fish	185
27	Perciformes	Percoidei	Callyodon	Scaridae	Callyodon fasciatus (Valenciennes)	Parrot fish	Keli fish, Koli fish- Pulicat name	150
28	Perciformes	Siganoidei	Siganus	Siganidae	Siganus javus (Linnaeus)	Parrot fish Streaked spinefoot	Kolhi meen, Oraa meen - Pulicat name	170
29	Perciformes	Siganoidei	Siganus	Siganidae	Siganus virgatus (Valenciennes)	Rabbit fishes	Ora meen	90
30	Cypriniformes	Cyprinidei	Arius	Tachysuridae	Arius dussumieri (Valenciennes)	Dussumier's Catfish	Keluthy	180
31	Perciformes	Siganoidei	Therapon	Therapontidae	Therapon jarbua (Forskal)	Tiger perches	Keechan	135
32	Perciformes	Percoidei	Therapon	Therapontidae	Therapon jarbua (Forskal)	Therapon	Keechan, Yellow keechan – Pulicat name	100
33	Perciformes	Percoidei	Triacanthus	Triacanthidae	Triacanthus strigilifer (Cantor)	Long spined tripod fish	Mullaklathi, Mullar – Pulicat name	70

Finfish and shellfish species in the Coromandel Coast - Pulicat Region during pre-tsunami period – (Sorted – Family wise)

Table - 3

Sl. No .	Order	Suborder	Genus	Family	Scientific Name	Local English name	Local Tamil Name	Size in mm
1	Mollusca	Gastropoda	Anadara	Arcidae	<i>Anadara granosa</i> (Linnaeus)	Bivalve / Cockle Blood clam	Varimatti	35
2	Echinodermata	nil	Astropecton	Astropectinidae	<i>Astropecton Sp (-)</i>	Sea – Starfish	Natchathra meen	90
3	Perciformes	Percoidei	Selaroides	Carangidae	<i>Selaroides leptolepis</i> (Cuvier)	Slender scaled scad	Kumara parai	195
4	Perciformes	Percoidei	Carangooides	Carangidae	<i>Carangooides malabaricus</i> (Bloch)	Travelly	Parai meen	110
5	Perciformes	Percoidei	Chorinemus	Carangidae	<i>Chorinemus Lysan</i> (Forskal)	Leather skin	Aakhaparai, Katta	120
6	Perciformes	Percoidei	Carangooides	Carangidae	<i>Carangooides chrysophrys</i> (Cuvier)	Dusky Trevally	Parai meen	148
7	Perciformes	Percoidei	Decapterus	Carangidae	<i>Decapterus russelli</i> (Ruppell)	Horse – Mackerel Russell's scad	Keezhachi meen	220
8	Perciformes	Percoidei	Caranx	Carangidae	<i>Caranx Melampygus</i> (Cuvier)	Trevally	Parai meen	130
9	Perciformes	Percoidei	Caranx	Carangidae	<i>Carangoides – (chrysophrys)</i>	Daskytrevally	Semparai meen	182
10	Clupeiformes	Clupeoidei	Chirocentrus	Chirocentridae	<i>Chirocentrus dorab</i> (Forskal)	Wolf herrings	Mul vazhai meen	415
11	Clupeiformes	Clupeoidei	Sardinella	Clupeidae	Sardinella	Oil sardine	Madhi kavalai	200

					longiceps (Valenciennes)			
12	Clupiformes	Clupeoidei	Sardinella	Clupeidae	<i>Sardinella fimbriata</i> (Valenciennes)	Sardines fimbriata	Sudai meen	155
13	Gastropoda	Nil	Conus	Conidae	<i>Conus amadis</i> <i>Gmelin</i>	Cones	Puli chungu	-
14	Plecronectiformes	Nil	Cynoglossus	Cynoglossidae	<i>Cynoglossus macrolepidotus</i> (Bleeker)	Tongue sole	Nakumeen (Nedi arul - Pulicat)	140
15	Pleuronectiformes	Nil	Cynoglossus	Cynoglossidae	<i>Cynoglossus bilineatus</i> (Lacepede)	Tongue sole	Nakumeen (Nedi arul - Pulicat)	175
16	Rajiformes	Salachii	Dasyatis	Dasyatidae	<i>Dasyatis Imbricata</i> (Bloch & Schneider)	Stingrays	Thirukai (Sembaduka - Pulicat)	270
17	Clupiformes	Clupeoidei	Nematalosa	Dorosomidae	<i>Nematalosa nasus</i> (Bloch)	Long ray pony bream	Mathu kendi	125
18	Clupiformes	Clupeoidei	Thrissocles	Engraulidae	Thrissocles dussumieri (Val)	Anchovies	Porrava	190
19	Clupiformes	Clupeoidei	Thrissocles	Engraulidae	Thrissocles malabarica (Bloch)	Anchovies	Porrava	175
20	Beloniformes	Exocoetoidei	Exocetus	Exocoetidae	<i>Exocetus volitans</i> (Linnaeus)	Flying fish	Baravai Khola	195
21	Perciformes	Percoidei	Gerres	Gerridae	<i>Gerres oblongus</i> (Cuvier)	Silver biddy	Oodaham / OODan (Matiyan)	155
22	Perciformes	Gobioidae	Gobius	Gobiidae	<i>Gobius microlepis</i> (Bleeker)	Goby Gobies (Mudskipper)	Natchi Kuli ?Pulicat	150
23	Beloniformes	Exocoetoidei	Hemirhamphus	Hemirhamphidae	<i>Hemirhamphus marginatus</i> (Forskal)	Half – beaks	Oosikola Meen	134
24	Perciformes	Percoidei	Leiognathus	Leiognathidae	<i>Leiognathus splendens</i> (Cuvier)	Penyfish / Silver bellies	Thathikaral Meen	95
25	Perciformes	Percoidei	Leiognathus	Leiognathidae	<i>Leiognathus equatus</i> (Forskal)	Silver bellies	Varikaral Meen	125
26	Perciformes	Percoidei	Leiognathus	Leiognathidae	<i>Leiognathus splendens</i> (Cuvier)	Pony fish / Silver bellies	Kazhikaral Meen	75
27	Perciformes	Percoidei	Lutianus	Lutianidae	<i>Lutianus argentimaculatus</i> (Forskal)	Red snapper	Parithivela meen	121
28	Mugiliformes	Nil	Liza	Mugilidae	<i>Liza macrolepis</i> (Smith)	Grey - Mullet (Broneo grey Mullet)	Madavai / Kendai	128
29	Mugiliformes	Nil	Liza	Mugilidae	<i>Liza parsia</i> (Hamilton – Buchanan)	Grey – Mullet (Gold-spot Grey Mullet)	Madavai / Kendai	160
30	Perciformes	Percoidei	Upeneus	Mullidae	<i>Upeneus vittatus</i> (Forskal)	Goat fish	Navarai ?Pulicat	120
31	Anguilliformes	Anguilloidei	Muraenesox	Muraenesocidae	<i>Muraenesox cinereus</i> (Forskal)	Silver conger eel	Vilangu Meen -Pulicat	655
32	Mollusca	Cephalopoda	Octopus	Octopodidae	<i>Octopus indicus</i> (Rabson)	Octopus	Paikanavai Meen	140
33	Mollusca	Gastropoda	Oliva	Olividae	<i>Oliva gibbosa</i> (Born)	Cones	Sippy Sangu	70
34	Crustacea	Nil	Penaeus	Penaeidae	<i>Penaeus japonicus</i> (Boat)	penaeid prawns Kuruma shrimp	Kathamba eral	125
35	Crustacea	Nil	Penaeus	Penaeidae	<i>Penaeus monodon</i> (Fabricius)	Giant tiger shrimp	Kathamba eral;	170
36	Crustacea	Nil	Penaeus	Penaeidae	<i>Penaeus indicus</i> (H.M. Eduards)	White Shrimp	Vellai eral	125
37	Crustacea	Nil	Metapenaeus	Penaeidae	<i>Metapenaeus S</i>	Prawn	Vallichala eral	135
38	Crustacea	Nil	Penaeus	Penaeidae	<i>Penaeus monodon</i> (Fabricius)	Giant tiger shrimp	Kathamba eral;	160
39	Perciformes	Cottoidei	Platycephalus	Platycephalidae	<i>Platycephalus macracanthus</i> (Bleeker)	Large spined flat head	Oodupathi - Pulicat	220
40	Perciformes	Cottoidei	Platycephalus	Platycephalidae	<i>Platycephalus indicus</i> (Linnaeus)	Indian Flathead	Oodupathi – Pulicat	152
41	Perciformes	Percoidei	Pomadasys	Pomadasytidae	<i>Pomadasys hasta</i> (Bloch)	Silver - Grunter	Sori Meen (Kathala Meen-	180

							Pulicat)	
42	Plecronectiformes	Nil	Psettodes	Psettidae	<i>Psettodes erumei</i> (Bloch)	Indian halibuts	Erumai Naku Meen (Palaran meen – Pulicat)	130
43	Perciformes	Percoidei	Scarus	Scaridae	<i>Scarus spinidens</i> (Quoy & Gaimard)	Parrotfish	Killi Meen (Kozhi Meen – Pulicat)	150
44	Perciformes	Percoidei	Scarus	Scaridae	<i>Scarus fasciatus</i> (Cuvier & Valenciennes)	Parrot - fish	Killi Meen	240
45	Scatophagus	Percoidei	Scatophagus	Scatophagidae	<i>Scatophagus argus</i> (Linnaeus)	Spotted Butter fish	Palsathai (Sipili – Pulicat)	150
46	Perciformes	Percoidei	Johnius	Sciaenidae	Johnius dussumieri (Cuvier)	Jewfish or Croakers	Panna fish	150
47	Perciformes	Scombroidei	Rastrelliger	Scombridae	Rastrelliger kanagurta (Cuvier)	Mackerel	Kanankeluthi	190
48	Perciformes	Scombridi ei	Scomberomorus	Scomridae	<i>Scomberomorus guttatus</i> (Bloch & Schneider)	Seer fish	Seela Meen / Vanjaram	187
49	Perciformes	Cottoidei	Pterois	Scorbaenidae	Pterois zebra (Quoy and Gaimard)	Scorbian fish or Zebra fish	Dhumbi	155
50	Perciformes	Cottoidei	Pterois	Scorpaenidae	<i>Pterois Russellii</i> (Bennett)	Scorpion fish	Saal Meen (Thumbi Meen - Pulicat)	185
51	Crustacea	Nil	Thenus	Scyllariidae	<i>Thenus orientalis</i> (Lund)	Mud lobster	Kal eral / Madaku eral	70mm
52	Crustacea	Nil	Thenus	Scyllaridae	<i>Thenus Orientalis</i> (Lund)	Mud lobster	; Kal eral / Madaku eral	170
53	Perciformes	Percoidei	Epinephelus	Serranidae	<i>Epinephelus merra</i> (Bloch)	Rockcod / Grouper	Pulli Kalava - Pulicat	150
54	Perciformes	Siganoidei	Siganus	Siganidae	<i>Siganus oramin</i> (Bloch & Schneider)	Rabbit fish - White spotted spine foot	Ooara Meen	123
55	Perciformes	Percoidei	Sillago	Sillaginidae	<i>Sillago sihama</i> (Forskal)	Silver whiting	Kellangan	165
56	Pleuronectiformes	Nil	Zebrias	Soleidae	<i>Zebrias quaggia</i> (Kaup)	Zebra sole	Vari Naaku Meen	95
57	Crustacea	Stomatopoda	Squilla	Squillidae	<i>Squilla nepha</i> (Larveille)	Stomato pod	Kadal Poochi	148
58	Perciformes	Stromateoid ei	Pampus	Stromateidae	<i>Pampus argenteus</i> (Euphrasen)	Silver pomfret	Vallai Movan / Vavaal	145
59	Syngnathiformes	Syngnathoid ei	Hippocampus	Syngnathidae	<i>Hippocampus Kuda</i> (Bleeker)	Sea – horse	Kadal Kuthirai	100
60	Scopeliformes	Nil	Saurida	Synodontidae	<i>Saurida tumbil</i> (Bloch)	Lizard fish	Thumibili	225
61	Scopeliformes		Saurida	Synodontidae	<i>Saurida tumbil</i> (Bloch)	Lizard fish	Thumibili	265
62	Echinodermata		Salmacis	Temnopleuridae	<i>Salmacis S (-)</i>	Sea Urchin	Kadal Poochi	40
63	Tetradentiformes	Tetradontoi dei	Tetradon	Tetradontidae	<i>Tetradon leopardus</i> (Day)	Banded Leopard Blow - fish	Kattai Thumbi Meen - Pulicat	310
64	Tetradontiformes	Tetradontoi dei	Tetradon	Tetradontidae	<i>Tetradon immaculatus</i> (Bloch)	Blow fish	Pethai Meen / Pelasi Meen	148
65	Tetradontiformes	Tetradontoi dei	Tetradon	Tetradontidae	<i>Tetradon leopardus</i> (Day)	Blow fish / Puffer fish	; Pethai Meen / Pelasi Meen	170
66	Torpediniformes	Nil	Narcine	Torpedinidae	Narcine brunnea (Annandale)	Brown electric rays	Themelai	210
67	Perciformes	Trichiuroidei	Trichiurus	Trichiuridae	<i>Trichiurus savala</i> (Cuvier)	Ribbonfish	Savalai fish	165
68	Perciformes	Tetradontoi dei	Trichiurus	Trichiuridae	<i>Trichiurus lepturus</i> (Forskal)	Ribbon fish - Large headed ribbon fish	Vazhi Meen	515
69	Perciformes	Tetradontoi dei	Trichiurus	Trichiuridae	<i>Trichiurus lepturus</i> (Forskal)	Ribbon fish - Large headed ribbon fish	Vazhi Meen	635
70	Mollusca	Gastropoda	Trochus	Trochidae	<i>Trochus niloticus</i>	Topshell	Chipi	80

10.5 Post Tsunami period

The number of species belonging to the following groups, namely Fishes, Prawns, Molluscan species are given in Table 3. A total number of 70 species were recorded . These species belonged to about 47 different families. The family of Caangidae was represented by seven different genus. Similarly, the family of *Leiognathidae* was represented by a total of three species and the family of Clupeidar, Cynoglossidae, and Trichiuridae were represented by two genus each. It is significant to note that the *Penaeidae* (Prawns) was represented by a total of five species. It may be pointed out the total number of fish species is lesser than previous records.

Pulicat Lake species. (Table 4)

That there is a reduction in the number of resident species in Pulicat Lake is evident during the post Tsunami period. The total number of species was reduced to a mere 17 species, which were represented by a total of 14 different families. Only the family *Carangidae* was represented by two genus.

Finfish and shellfish species in the Pulicat Lake during post-tsunami period Sorted – Family wise

Table - 4

Sl. No.	Order	Suborder	Genus	Family	Scientific Name	Local English name	Local Tamil Name	Size in mm
1	Perciformes	Percoidei	Blennius	Blenniidae	<i>Blennius edentulus</i> (Bloch & Schneider)	Smooth- lipped blenny		225
2	Perciformes	Percoidei	Carangoides	Carangidae	<i>Carangoides malabaricus</i> (Bloch)	Malabar traevally	Parai	170
3	Perciformes	Percoidei	Chorinemus	Carangidae	<i>Chorinemus lysan</i> (Forskål)	Leather Skin Fish	Katta	175
4	Mollusca		Sepia	Cephalopoda	<i>Sepia aculeata</i> (Orbigny)	Cuttle fish	Kadama, Ottu- Kanavai	120
5	Perciformes	Percoidei	Etroplus	Cichlidae	<i>Etroplus suratensis</i> (Bloch)	Branded Etroplus Pearl spot	Pattai fish	125
6	Clupeiformes	Clupeoidei	Pellona	Clupeidae	<i>Pellona filigera</i> (Val)	Jeweled shad	Venganam fish	172
7	Pleuronectiformes	nil	Cynoglossus	Cynoglossidae	Cynoglossus bilineatus (Lacepede)	Four lined Tongue sole	Nakku meen	130
8	Pleuronectiformes	nil	Cynoglossus	Cynoglossidae	<i>Cynoglossus macrostomus</i> (Norman)	Indian tongue sole	Nakku meen	130
9	Clupeiformes	Clupeoidei	Nematalosa	Dorosomidae	<i>Nematalosa nasus</i> (Bloch)	Long ray / bony bream	Choodai meen	120
10	Perciformes	Percoidei	Epinephelus	Epinephelidie	<i>Epinephelus tauvina</i> (Val)	Brown spotted grouper	Pulli kalavai meen	185
11	Beloniformes	Exocoetoidae	Hemirhamphus	Hemirhamphidae	<i>Hemirhamphus georgii</i> (Val)	Long - Billed Half beaks	Usikola	240
12	Perciformes	Percoidei	Lactarius	Lactariidae	<i>Lactarius lactarius</i> (schneider)	White fish	Suthumpu meen	127
13	Perciformes	Percoidei	Lethrenus	Lethrinidae	<i>Lethrinus miniatus</i> (Herre & Montalban)	Long nosed Pig face bream	Vilai meen	107

14	Perciformes	Percoidei	Lethrenus	Lethrinidae	<i>Lethrinus nebulosus</i> (Forskal)	Pig face bream	Vilai meen	115
15	Perciformes	Percoidei	Sillago	Sillaginidae	<i>Sillago sihama</i> (Forskal)	Silver whiting	Kilangan meen	140
16	Scopeliformes	nil	Saurida	Synodontidae	<i>Saurida tumbil</i> (Bloch)	Lissad fish	Thumblie meen	92
17	Perciformes	Percoidei	Therapon	Theraponidae	<i>Therapon puta</i> (Cuvier)	Banded grunter	Keechan meen	135

Post Tsunami period

Coastal inshore water species. (Table 5)

Like the reduction in fish species in the Pulicat Lake there was also a similar reduction in the number of species present in the coastal zone inshore water. The total number of species was merely 32, belonging to about 23 different families. The family *Carangidae* was represented by three different genus while the family of *Thrissocies, Engraulidae, Leiognathidae, Mugilidae, Mullidae, Sciaenidae and Rorpedinidar* were represented by two genus each

Finfish and shellfish species in the Coromandel Coast - Pulicat Region during Post-tsunami period – (Sorted – Family wise)

Table - 5

Sl. No.	Order	Suborder	Genus	Family	Scientific Name	Local English name	Local Tamil Name	Size in mm
1	Perciformes	Percoidei	Chorinemus	Carangidae	<i>Chorinemus lysan</i> (Forskal)	Leather Skin Fish	Katta	117
2	Perciformes	Percoidei	Decapterus	Carangidae	<i>Decapterus russelli</i> (Ruppell)	Horse Mackerel Ruscell's Scad	Killichai / Parai	170
3	Perciformes	Percoidei	Chorinemus	Carangidae	<i>Chorinemus lysan</i> (Forskal)	Leather Skin Fish	Katta	275
4	Lamniformes	Lamnoidei	Carcharhinus	Carcharhinidae	<i>Carcharhinus limbatus</i> (Val)	Black Tip Shark / Grey Shark	Kundan Sorrah	355
5	Catostylidae	nil	Cambionella	Catostylidae	<i>Cambionella stuhmanni</i> (Chun)	Round Jelly Fish	Muttai Chori Meen	150
6	Clupeiformes	Clupeoidei	Sardinella	Clupeidae	<i>Sardinella fimbriata</i> (Valenciennes)	Fringe scale sardine	Chalai Meen	110
7	Perciformes	Percoidei	Drepane	Drepanidae	<i>Drepane punctatus</i> (Linnaeus)	Spotted Bat Fish	Pulli Pasanthi	125
8	Clupeiformes	Clupeoidei	Dussumieri	Dussumieriidae	<i>Dussumieri acuta</i> (val)	Common sprat	Chalai Meen	82
9	Clupeiformes	Clupeoidei	Thrissoctes	Engraulidae	<i>Thrissoctes mystax</i> (Bloch & Schneider)		Poruva Meen	170
10	Clupeiformes	Clupeoidei	Thrissoctes	Engraulidae	<i>Thrissoctes dussumieri</i> (Val)	Dussumierus anchovy	Puruva	155
11	Perciformes	Percoidei	Gerres	Gerridae	<i>Gerres filamentosus</i> (Cuvier)	Long rayed silver biddy	Oodan fish-Pulicat, Oodakum fish	115
12	Perciformes	Percoidei	Holocentrus	Holocentridae	<i>Holocentrus rubrum</i> (Forskal)	soldier fish / Red fish	Sankara meen	235
13	Perciformes	Percoidei	Leiognathus	Leiognathidae	<i>Leiognathus dussumieri</i> (Val)	Pony fish	Karal meen	105
14	Perciformes	Percoidei	Leiognathus	Leiognathidae	<i>Leiognathus bindus</i> (Val)	Orange finned pony fish	Thattai Karal	112
15	Perciformes	Percoidei	Leiognathus	Leiognathidae	<i>Leiognathus splendens</i> (Cuvier)	Pony fish	Karal meen	95
16	Perciformes	Percoidei	Lutjanus	Lutianidae	<i>Lutjanus kasmira</i> (Forskal)	Red snapper	Paruthivalai meen	120

17	Mugiliformes	nil	Liza	Mugilidae	Liza macrolepis(Smith)	Grey mullet	Madavai, manalai, Chalapulicat name	135
18	Mugiliformes	nil	Liza	Mugilidae	Liza macrolepis(Smith)	Grey mullet	Chalai Meen	177
19	Perciformes	Percoidei	Upeneus	Mullidae	Upeneus vittatus (Forskal)	Goat fish	Nagarai Meen	120
20	Perciformes	Percoidei	Upeneus	Mullidae	Upeneus Sulphureus Cuvier	Yellow goat fish	Nagarai Meen	145
21	Anguilliformes	Angulloidei	Muraenesox	Muraenesocidae	Muraenesox cinereus (Forskal)	Silver-Conger eels	Kadal vilangu meen	690
22	Mollusca	Cephalopoda	Octopus	Octopodidae	Octopus indicus (Rabson)	Octopus	Palkanavai	85
23	Cypriniformes	Cyprinidei	Plotosus	Plotosidae	Plotosus anguillaris (Bloch)	Striped Catfish- eels	Kelthi	375
24	Perciformes	Percoidei	Sciaena	Sciaenidae	Johnius dussumieri (Val)	Silver Jew fish / Croakers	Panna / Kathalai	180
25	Perciformes	Percoidei	Sciaena	Sciaenidae	Johnius dussumieri (Cuvier)	Dussumier's silver Jew fish	Vari Kathalai	205
26	Perciformes	Percoidei	Rastrelliger	Scombridae	Rastrelliger Canagurta (cuvier)	Mackerel	Kanankelithi	215
27	Mugiliformes	nil	Sphyraena	Sphyraenidae	Sphyraena bleeker (Bleeker)	Short jawed sea pike / barracuda	Ooli meen	260
28	Perciformes	Stromateoidei	Stromateus	Stromateidae	Stromateus argenteus (Euphrasen)	Silver Pomfret	Vaval	145
29	Cypriniformes	Cyprinidei	Tachysurus	Tachysuridae	Tachysurus dussumieri (Curuval)	Dussumier's cat-fish	Keluthy	170
30	Torpediniformes	nil	Rhinobatos	Torpedinidae	Rhinobatos dipterygia (Bloch & schneider)	Electric Ray	Thiurkai	190
31	Torpediniformes	nil	Narcine	Torpedinidae	Narcinetimlei (Bloch & schneider)	Spotted electric ray	Thirukkai	345
32	Perciformes	Percoidei	Trichiurus	Trichiuridae	Trichiurus savala Cuvier	Ribbon fish	Valai meen	285

10.6 Impact of Tsunami on fish distribution

In order to assess the impact of Tsunami on the distribution of fishes in the Pulicat Lake and the coastal zone, the number of species that are common to both the periods were assessed and the results are tabulated in **Table 6**. It is evident there is a mix of fish species due to the impact of Tsunami. For instance, the species that were present during the pre Tsunami period were not present during the Post Tsunami period for eg. The family *Dorosomidae* which was represented only in the lake during the pre Tsunami period was also collected in the coastal inshore waters. On the contrary members of the family *Engraulidae* which was present only in the sea during the pre tsunami period was collected both from the lake habitat as well as from the open sea coast.

Table – 6 : A Comparative account

Family Name	Post Tsunami Sea		Post Tsunami Lake		Pre Tsunami Sea		Pre Tsunami Lake	
	Genus	Species	Genus	Species	Genus	Species	Genus	Species
Arcidae					1	1		
Astropectinidae					1	1		
Auguillidae							1	1
Belonidae							1	1
Blennidae				1 1				
Carangidae	2	2	2	2	5	7	2	2
Carcharhinidae	1	1						
Catostylidae	1	1						
Catostylidae	1	1						
Cephalopoda			1 1					
Chanidae							1	1
Chirocentridae					1	1		
Cichlidae			1 1				2	2
Clupeidae	1	1						
Clupeidae			1 1	1	1	2	1	1
Cobiidae							1	1
Cobittidae							1	1
Conidae					1	1		
Cynoglossidae			1 2		1	2	1	1
Dasyatidae					1	1		
Dorosomidae			1 1		1	1	1	1
Drepanidae	1	1						
Dussumieridae	1	1						
Elopidae							1	1
Engraulidae	1	2			1	2	1	1
Epinephelidae			1 1					
Exocoetidae					1	1		
Gerridae	1	1			1	1	1	1
Gobiidae					1	1		
Hemirhamphidae			1 1		1	1		
Holocentridae	1	1						
Lactariidae			1 1					
Leiognathidae	1	3			1	2	1	2
Lethrinidae			1 2				1	1
Lutianidae	1	1			1	1	1	2
Mugilidae	1	1			1	2	1	1
Mullidae	1	2			1	1		
Muraenesocidae	1	1			1	1		

Nemipteridae							1	1
Octopodidae	1	1			1	1		
Oliva					1	1		
Penaeidae					2	4		
Platycephalidae					1	2	1	1
Plotosidae	1	1					1	1
Pomadasytidae					1	1	1	1
Psettodidae					1	1		
Scaridae					1	2	1	1
Scatophagidae					1	1		
Sciaenidae	2	2						
Sciaenidae					1	1		
Scombridae	1	1						
Scombridae					2	2		
Scorpaenidae					1	2		
Scyllariidae					1	1		
Serranidae					1	1		
Siganidae					1	1	1	2
Sillaginidae			1	1	1	1		
Soleidae					1	1		
Sphyraenidae	1	1						
Squillidae					1	1		
Stromateidae	1	1			1	1		
Synodontidae			1	1	1	1		
Tachysuridae	1	1					1	1
Temnopleuridae					1	1		
Tetradontidae					1	2		
Theraponidae			1	1			1	1
Tirchiuridae					1	2		
Torpedinidae	2	2			1	1		
Triacanthidae							1	1
Trichiuridae	1	1						
Trochidae					1	1		

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