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ON SOME NEW RECORDS OF FISHES FROM THE PULICAT LAKE, EAST COAST OF INDIA

By

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INTRODUCTION

The importance of the study of the fish fauna of any area needs no emphasis as it would envisage the beneficial or adverse effect of the uneconomic species in their trophic relationship with their counterparts. The Pulicat lake is one of the coastal brackish water lagoons lying on the east coast of India, towards the south spreading over an area of about 460 sq. km. (Chacko *et al.* 1953). The northern half of the lake is broad and shallow while the southern half is narrow, communicating with the Bay of Bengal directly.

Apart from some observations made on the fish fauna of the Pulicat lake by Chacko *et al.* (1953), no subsequent investigations seem to have been made so far. They recorded sixty five fishes from the lake.

The object of the present report is to determine the present status of the fish fauna reported by earlier workers and to contribute additional notes on the fish fauna collected during the years 1965 and 1966.

The material for the present study was drawn from the catches made by the commercial and departmental gears. The identifications were based on Day (1878), Smith (1949), Koumans (1953), Munro (1955), George (1958) and Misra (1959).

Altogether eighty one species of fishes were recorded from the lake for the first time.

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LIST OF NEW FISHES RECORDED FROM THE PULICAT LAKE

1. *Anchoviella baganensis* (Hardenberg)
2. *Anchoviella heteroloba* (Rüppell)
3. *Kowala coval* (Cuvier)
4. *Thrissocles dussumieri* (Valenciennes)
5. *Thrissocles malabaricus* (Bloch)
6. *Thrissocles purava* (Hamilton)
7. *Notopterus notopterus* (Pallas)
8. *Saurida tumbil* (Bloch)
9. *Oxygaster clupeoides* (Bloch)
10. *Puntius sophore* (Hamilton)
11. *Plotosus anguillaris* (Bloch)
12. *Pseudeutropius atherinoides* (Bloch)
13. *Anguilla bengalensis* (Gray and Hardwicke)
14. *Thyrsoidea macrura* (Bleeker)
15. *Muraenesox cinereus* (Forskal)
16. *Strongylura crocodilus* (Le sueur)
17. *Parexocoetus brachypterus* (Richardson)
18. *Syngnathus cyanospilos* Bleeker
19. *Sphyraena obtusata* Cuvier
20. *Sphyraena jello* Cuvier
21. *Atherina melanostigma* Day
22. *Amphipnous cuchia* (Hamilton)
23. *Ambassis urotaenia* Bleeker
24. *Epinephelus lanceolatus* (Bloch)
25. *Serranus tumilabris* Cuvier and Valenciennes
26. *Pelates quadrilineatus* (Bloch)
27 *Alectis indicus* (Rüppell)
28. *Caranx carangus* (Bloch)
29. *Caranx ire* Valenciennes
30. *Citula armata* (Forskal)
31. *Scomberoides tala* (Cuvier)
32. *Scomberoides lysan* (Forskal)
33. *Trachinotus blochii* (Lacépède)
34. *Lutianus vitta* (Quoy and Gaimard)
35. *Nemipterus tolu* (Valenciennes)
36. *Leiognathus blochii* (Valenciennes)
37. *Leiognathus equula* (Forskal)
38. *Leiognathus insidiator* (Bloch)
39. *Pomadasys maculatus* (Bloch)
40. *Plectorhynchus niger* (Cuvier)
41. *Pseudosciaena diacanthus* (Lacépède)

42. *Sciaena dussumieri* (Valenciennes)
43. *Sciaena russellii* (Cuvier)
44. *Platyglossus dussumieri* (Cuvier and Valenciennes)
45. *Pseudoscarus ghobam* (Forskal)
46. *Parupeneus indicus* (Shaw)
47 *Upeneus tragula* Richardson
48. *Monodactylus argenteus* (Linnaeus)
49. *Sparus berda* Forskal
50. *Ephippus orbis* (Bloch)
51. *Platax pinnatus* (Linnaeus)
52. *Drepane punctata* (Linnaeus)
53. *Tilapia mossambica* (Peters)
54. *Siganus javus* (Linnaeus)
55. *Siganus oramin* (Bloch and Schneider)
56. *Siganus spinus* (Linnaeus)
57. *Acanthurus bleekeri* Günther
58. *Perionobutis koilomatodon* (Bleeker)
59. *Acentrogobius cyanosmos* (Bleeker)
60. *Acentrogobius ornatus* (Rüppell)
61. *Acentrogobius reichei* (Bleeker)
62. *Acentrogobius viridipunctatus* (Cuvier and Valenciennes)
63. *Ctenogobius criniger* (Cuvier and Valenciennes)
64. *Glossogobius biocellatus* (Cuvier and Valenciennes)
65. *Glossogobius giuris* (Hamilton)
66. *Gobius madraspatensis* Day
67. *Oligolepis acutipinnis* (Cuvier and Valenciennes)
68. *Oxyurichthys tentacularis* (Cuvier and Valenciennes)
69. *Pseudapocryptes lanceolatus* (Bloch and Schneider)
70. *Platycephalus scaber* (Linnaeus)
71. *Gymnapistes niger* (Cuvier and Valenciennes)
72. *Pterois volitans* (Linnaeus)
73. *Minous monodactylus* (Bloch and Schneider)
74. *Brachirus orientalis* (Bloch and Schneider)
75. *Cynoglossus puncticeps* (Richardson)
76. *Cynoglossus semifasciatus* Day
77 *Macrognathus aculeatum* (Bloch)
78. *Arothron immaculatus* (Bloch and Schneider)
79. *Chelonodon patoca* (Hamilton)
80. *Gastrophysus lunaris* (Bloch)
81. *Torquigener oblongus* (Bloch)

REMARKS

In addition forty nine species of fishes out of the sixty five species of fishes reported by the previous workers were also recorded. Chacko *et al.* (1953) listed twenty three species of fishes as commercially important. From the present new records *Kowala coval* (Cuvier), *Thrissocles purava* (Hamilton), *Strongylura crocodilus* (Le sueur), *Epinephelus lanceolatus* (Bloch), *Citula armata* (Forskal) *Pomadasys maculatus* (Bloch), *Pseudosciaena diacanthus* (Lacépède), *Sparus berda* Forskal and *Siganus javus* (Linnaeus) were found economically important, thus raising the number of food fishes of both economic and commercial value to thirty two. Some of them like *S. crocodilus, P. maculatus, P. diacanthus* etc. showed seasonal abundance, while others were available throughout the year.

Out of the eighty one species newly recorded, seven species were of freshwater origin while the remaining seventy four were from brackish water. The freshwater species were observed during the rainy season only, when the streams swell and enter the lake, incidentally draining some of the freshwater forms. They were confined in distribution to the northern region of the lake. The majority of the salt water species were widely distributed in the lake and appeared to tolerate wide fluctuations in environmental conditions while a few were purely marine and were observed to enter the lake temporarily. It may be noted that the majority of the brackish water species are also known from the sea, confirming the theory that the majority of the brackish water fishes in open estuarine areas are of marine origin. However, the number of individual species is more towards the confluence of the lake with the sea than farther away from the confluence presumably due to divergent environmental parameters. Strictly marine species were always found nearer the confluence while the brackish water species were distributed all over the lake.

From the present study it is apparent that the majority of fishes known from the lake are of marine origin. It is also clear that a few species maintain large populations while the role of other uneconomic species is yet to be established; whether they form the prey or the predator is of significance to the commercially exploited populations. A detailed study of the food and feeding habits of important fishes of the lake is underway.

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