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STUDY OF FISH FAUNAL DIVERSITY OF OZAT-II DAM, GUJARAT

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ABSTRACT : The present study deals with fish diversity of Ozat-II dam, Gujarat. Sampling was done every one month interval during January 2019 to February 2020. Total 27 species from 7 orders, 12 families and 18 genera were recorded during the present study. The range of different physico-chemical parameters were observed such as water temperature 18.8 – 30°C; pH 7.2 - 8.5; Dissolved Oxygen 5.1 – 11.3mg/l; Total alkalinity 78 – 119 mg/l; Total hardness 76 – 147 mg/l. Dominant family Cyprinidae (12 species and 07 genera), followed by Siluridae (three species and two genera), Bagridae and Channidae (Two species and one genera) and other families Claridea, Heteropneustidae, Cichilidae, Ambassidae, Notopteridae, Belonidae, Mastacembelidae and Poecilidae contributed (single species with single genus). Out of 27 fish species 23 species least concern, one species under not evaluated and 3 species near threaten. During month of December (post monsoon) highest fish diversity was found. This is first ever study on the fish diversity and would help in explore the fish fauna of Ozat-II dam in Gujarat.

Key words : Ozat-II dam, fish diversity, seasonal variation, physico-chemical parameters, diversity indices.

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INTRODUCTION

Fishes are amongst the most miraculously beautiful of all creations, exquisite in colour, diverse in shape and form, lively and graceful in movement and fascinating in their behavior. Fishes constitute economically vary important group of animals. The nutritional and medicinal value of fishes has already been recognized (Jhingran, 1982). India is having rich source of inland water bodies in the form of rivers, lake and reservoir.

India is having rich source of inland water bodies in the form of rivers, lakes and reservoirs. The reservoir is constructed by impounding the river system. The reservoirs are constructed for effective utilization of water for irrigation, drinking, power generation and flood control. Reservoir fishery in India is also important from socio-economic point of view, as it has the potential of providing employment about two million peoples. The total area under the reservoir in India is 3.15 million hectare. This includes 19,000 small reservoirs with the total water spread area of 14,85,557 hectare and about 180 medium and 56 large reservoirs of 5,57,541 hectare and 11,40,268 hectare area, respectively (Desai, 2006). A number of large artificially constructed fish water impoundments have come into existence in India, especially during last four decades, adding considerably to the already existing rich water potential for the development of the country's fishery resources fish fauna of various reservoirs has been reported (Sharma *et al*, 2004).

Reservoirs form the most important component of inland fishery resources of India with immense potential to enhance the country's inland fish production (Nath, 2003). In spite of this fact, reservoir fish production has been treated as a by-product and reservoir fisheries have not made significant progress in the country (Vass and Sugunan, 2009). However, the majority of managers of the water and power projects in the country have now realized the importance of overall reservoir management. Unlike rivers, which are under increasing threat of environmental degradation, reservoirs offer ample scope for fish yield optimization through effective management (Vass, 2009).

Biodiversity is simplest level refers to the "variety and abundance of life in a given area". Biodiversity is manifested at all levels of bio-organization from cell to ecosystem and refers to enumerable kinds of living organisms inhabiting terrestrial, marine and freshwater