

**“COMPARATIVE STUDY OF PHYSICAL, CHEMICAL AND
BIOLOGICAL PARAMETERS OF TWO FRESH WATER PONDS
AT GHUGUS UNDER THE BIOTIC STRESS”**

L. S. Durge¹, Dr. R. N. Chauhan²

¹ Department of Zoology, Dr. Ambedkar College of Arts, Commerce and Science, Chandrapur, Maharashtra, India.

² Mahatma Gandhi College, Armori, district Gadchiroli, Maharashtra, India.

Abstract- It is well known that water is a most important life survival element for all the living organisms, but because of the fast growing population along with urbanization, the surface water bodies are getting more and more polluted. That's why for the maintenance of the water quality of any water body either lotic or lentic, the periodical assessment of physical, chemical and biological properties of those water bodies becomes necessary. The present work is carried out considering the physical, chemical and biological characteristics of the two fresh water ponds of Ghugus by analyzing the above said characteristics with the periodic variations. The present study is also an overlooked aspect for the management of the fresh water bodies.


The present study carries the preliminary observations of physico-chemical and biological characteristics of the two fresh water ponds i. e. Anuradha Talkies pond and a Malgajari pond of Ghugus. Both the ponds are biotically affected by the various anthropogenic activities. In the present investigation, the water parameters were compared with the standard water quality. Different Parameters like Temperature, pH, DO, CO₂, BOD, COD, EC, TDS, Chloride, Alkalinity, Total Hardness, Calcium, Calcium Hardness, Magnesium, Magnesium Hardness, Fluoride, were analyzed. From the result it becomes clear that both the ponds are in a polluted condition. Therefore the water of these two ponds is not directly safe for the human use and hence more attention is necessary for the sustainability of these waters.

Keywords: Water characteristics, Environment, Surface water, Quality, Pond, Pollution.

I. INTRODUCTION

As compared to marine and terrestrial habitats, fresh water occupies a very small area of the earth surface, but it is very much important to all the living beings. For domestic and industrial use fresh water is cheapest and suitable source. As a consequence of population growth, agriculture, industrial development and building construction the increased demand of water has forced the persons engaged in environmental studies to determine physical, chemical and biological characteristics of natural as well as manmade water bodies (Regina and Nabi 2003). Though there are considerable regional differences in the types and methods of formation, the ponds




 Principal
 Mahatma Gandhi Arts,
 Science & Late
 N. P. Commerce College,
 Armori, Dist - Gadchiroli