Introduction:

Water is unique component of nature. The aquatic resources of the country are its national wealth and its sustained utilization for various purposes should be given top priority. The water is essential for life on the earth but due to rapid growth of population, urbanization and industrialization causes heavy and varied pollution which directly or indirectly affects on the living organisms. All over the country water resources are found in different stages of degradation. The process is more obvious in urban areas in last fifty years. The water bodies in urban centers are undergoing fast siltation apart from pollution and morphometric reduction due to encroachment and development activities. Pollution of water is responsible for a very large number of mortalities and incapacitations. Polluted state of water resources has led to a steady decline in fisheries and also affected the irrigation land. Availability of clean water is going to become the greater constraint for development tomorrow.

Micro-organisms are crucial to the functioning of the global ecosystem. These are major contributors to the bio-geo-chemical cycles and food change and energy flow I the bio sphere. The unequivocal relationship between man and plant is not an uncommon phenomena. Plants have been considerably hosting man and other animal world, since time immemorial in several ways.

Sindhudurg District (15° 7’ to 16” 40 N Latitudes and 73°019’E Longitudes) come under konkan zone of Maharashtra state. The district is wide spread having 5,207 sq. km. area. Average rainfall during the monsoon season range between 150-175” every year. Rainy months are characterized by high humidity and low sun sine hours. The district has 121 km. coastal area. There are 15 rivers in the district. In last four and a half years fresh water fishery yields 76.85metric tones of fishes. The water sources of the district are wells, borewells, ponds, lakes, reservoirs, rivers etc. The district has talukas namely Deogad, Dodamarg, Kankavli, Kudal, Malwan, Sawantwadi, Vaibhavwadi, and Vengurla. Some of the major water bodies of the district are Annapurna riverindeogad taluka, Tilariver in Dodamargtaluka, Osargoan Ghonsaro pond in Kankavlitadaluka, Bhangsal river in Kudaltaluka, Dhamapur lake in Malwantaluka, Palnekond reservoir in Sawantwaditaluka, Kokisare, Nadhavade pond in Vaibhavwaditaluka, and Vadkhol-Nissan pond in Vengurlataluka. These water bodies collect the water during monsoon period and remain filled with water throughout the year. Half of the district population is depended on these water bodies. These water bodies are being used for drinking, irrigation, fishing and for domestic uses.

The Limnological studies are of great importance both from the point of monitoring and maintaining a proper aquatic environment, as well as optimum utilization of the available and added nutrients for fish production. There is no work done on Limnological and ecological studies on the Palnekond water body, therefore the present work is considered for the study.