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Chapter 5

Studies on Quantitative Analysis of the Survival Rate of *Carassius auratus*

Pradip Kumar Prusty, Yashaswi Nayak, Leepsa Priyadarshini, Gagan Kumar Panigrahi

School of Applied Sciences, Centurion University of Technology and Management, Odisha, India.

Abstract

In the present study, the impact of different sources of water on the survival rate of goldfish was investigated. For this aim, three different sources of water that is tap water, river water and underground water were used. The test consisted of analysis of the three different sources of water by taking certain water parameters which includes pH, conductivity, temperature, hardness, Dissolved oxygen and Turbidity. After analysis of water, water from three different sources was taken in three different containers. Then the goldfishes were allowed into the three different containers followed by feeding and change of water at regular intervals. The survival rate of the goldfish is then observed for about 27 days. Significant differences were found in the survival of the goldfish in three sources of water. The survival rate of goldfish was found to be more in river water as compared to tap and underground water.

Keywords: Goldfish, survival, physico-chemical analysis, growth, feeding.

Introduction

The most popular pet fish that is goldfish and human communities in the world dates back to 1600 years (Huang *et al.*,1997).Millions of fish and goldfish are sold to the public, zoos and pet stores (Stone *et al.*,2002). In 1997 Goldfish *Carassius auratus* was the third most popular imported species of fish into the United States (Chapman and Fitz-Coy, 1997). Gold fish *Carassius auratus* is a fresh water ornamental fish. It is among one of the most commonly kept aquarium pet fish. It possesses elongated and stocky body. Gold fish are among one of the earliest fish to be domesticated as pets, and the well-known bright gold color is not possessed by all individuals. Color in wild populations may vary from gold to olive green or even creamy white. Gold fish obtains its gold color after few months of hatching,