

Population Dynamics of *Silurotaenia Spp.* in *Mystus Seenghala* From Baramati Tehsil, Pune District (M.S.) India

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Abstract

The present Study deals with the population dynamics of *Silurotaenia Spp.* in *Mystus Seenghala* from different places of Baramati tehsil, Pune district during January 2018 to December 2018. Total 70 *Silurotaenia Spp.* were recovered from 330 fishes. This report shows the percentage of incidence, intensity, density and index of infection. The high infection occurs in summer especially in the month of March to May, while low infection occur in winter followed by autumn and very less in rainy season. The present study indicates the seasonal infection of *Silurotaenia Spp.* in *Mystus Seenghala*.

Index Terms Cestode, *Mystus Seenghala*, *Silurotaenia Spp.*, Population dynamics.

Introduction

Parasitology is one of the highly advanced branch of zoology. Parasitism is an ecological relationship between two different populations. Noble and Noble, 1976 stated that parasitism is a relationship of two organisms of different species, in which one is benefited and other harmed. The parasite is benefited and host is suffers.

Because of seasonal environmental conditions and host population differences, parasite fish populations are known to vary. (Dogiel, 1961; Wisniewski, 1958 and Kennedy, 1978). For most of the fish parasites it is difficult to know, whether differences such as the parasites prevalence, intensity, density and index of infections, are due to the atmospheric factors or due to variations in species of host, composition and their density (Koskivara et. al., 1991)

Helminths are members of a complex biota, a better knowledge of their population structure and behaviour has led to the development of population dynamics and community structure as key fields of animal helminthology.

Austria, Bulgaria, France, Germany, Japan, the United Kingdom, and Russia have rich knowledge on the population dynamics of vertebrate helminth parasites.. Cole, 1954; Dobson, 1961 & amp; 1965; Dogiel et al., 1954; Johnson, 1964; Anderson, 1974; Kennedy, 1975; and Moller et al., 1995 are among the authors who have made significant contributions to this area of research on the population dynamics of helminth parasites in vertebrates..

In India, many researchers studied the population dynamics of helminth parasites from vertebrates. Population investigation can provide data for the prediction of integrated methods to achieve the regulation of numbers of harmful parasites, because it has been stated that a single method of control or coordinated activities are of little value, since they enhance the infection (Kennedy, 1975,1978). Seasonal fluctuations, locality, age, size and sex of the host also determine the parasitic community diversity and burden. Seasonal changes in water, such as temperature, pH, and conductivity, affect the occurrence of parasites of an aquatic host, according to Dogiel et al., 1961.

Materials And Method

The freshwater fishes were collected from the different places of Baramati region. The fishes were dissected; the various organs of the viscera such as stomach and intestine are collected; all these was kept in separate Petri dishes containing normal saline water. The organs were teased with needle and observed under the microscope and after the examination of infected and un-infected intestine of the collected fishes; the data was recorded. After the separating and counting the population of different cestode parasites from different fishes, the parasites were preserved in sample bottles. Some of those were used for the taxonomic study.