INTRODUCTION

Biodiversity and natural resources form the root of all living system. India is fortunate enough to be ranked sixth among the twelve mega biodiversity country (Singh, 2004). Its biological resources include 50,000 species of plants and 81,000 species of animals including ones belonging to lower phylum. The biodiversity of our country is severely threatened and some species, which are abundantly found, have now become rare and some have become extinct.

Study of moth:

An insect, especially moths played an important role in earth ecosystems and has effect on the environment. Recent recorded report is over 1, 27,000 species of moths found all over the world and over 12,000 species found in India (Alfred et. al. 1998). Human activity causes threaten to the moth diversity. Now a day’s moths are major agricultural pest in many parts of the world. More then half of the moth species found in grassland, agricultural and forest ecosystem. Light trapping of lepidopteron has been carried out widely in temperate and tropical regions throughout the world.

The long- term status of insect faunas in Baramati region has attracted minimal research. Time frames and processes of change are poorly understood and has received scant investigation. While some fragmentary evidence of declining insect trends has been noted (White, 1987), these are merely a pointer to faunal history over recent time. The present study attempts to quantify change in faunal elements of Baramati region that have been affecting on moth diversity. All insects show the interaction with their ecosystem. The primary insect taxon, lepidoptera (notably moths) is a dominant herbivore group, and adults are readily sampled. The numerous difficulties in quantifying moth dynamics across species phenologies have tended, however, to hinder precise faunal monitoring, and thereby the recording of long-term changes in abundance. Light-trapping measures are dependent on moth behaviour and local flight variables (see Southwood, 1978; Bowden, 1982), and such data have two numericalweaknesses: catches are not unit-area samples; and sampling bias is always present and seldom constant.

Information about Baramati Region:

The information of Baramati region and their various details of study area such as topography, geology, rainfall, climate, temperature, humidity etc. have immense importance. Hence, all such details of BaramatiTahsil are briefly given below:
Topography:

Baramati is one of the fourteen Tahsils in Pune District of Maharashtra State. It lies between 18°3’ N to 18°12’ N latitude and 74°13’ E to 74°40’ E longitude; 548 m above mean sea level. It is situated on the bank of Karhariver and is 112 km south east of Pune. The total geographical area of 117 villages of the Tahsil is 1,38,247 hectors. Baramati Tahsil is surrounded by Purandar to west, Indapur to east, Daund to north and Phaltan to south. It is divided in to two physiographic regions according to altitude. The first one is the hilly track contour, having altitude from 580 to 720 meters. The other one is gently sloping belt along Nira and its tributary Karha.

Geology:

The study area is a part of Deccan plateau and hence the rock formation is associated with basaltic lava. There are two main types of traps viz. massive and geolithic. The first one is a major type.

Rivers & Rainfall

Both the rivers of this Tahsil are flowing in south east direction. The water for irrigation is provided by ‘Veer Dam’. The Nira canal flows along the south boundary while Karha flows through its middle region. Baramati Tahsil comes under rain shadow and hence the average annual rainfall is only 530 mm, which is very irregular and uncertain. The rainfall shows marked variation from year to year and locality to locality. The rains are received mainly from the south-west monsoon, during August to October. The variation in rainfall, in this tahsil for last six years indicates great fluctuations.

Temperature & Humidity:

The average minimum and maximum temperature during last six years indicated meager increase in both. The hot and dry climate of Baramati is characterized by hot and dry summer (March to mid June), moist and hot monsoon (July to mid September) and almost dry winter (November to mid February). Maximum temperature in summer is 44°C, while minimum temperature in winter is 19°C. The mean daily temperature is above 22°C throughout the year. The percentage relative humidity ranges from 35 to 45% in summer, while during monsoon it is more than 50 percent, indicating dry nature of the climate. For the last six years (2003-2008), the relative humidity remained between 50 to 64 percent.