

Research Article

**DIVERSITY OF BUTTERFLIES AT AMALNER,
DIST- JALGOAN (M.S.), INDIA**

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ABSTRACT

The Lepidoptera is one of the most important insect orders. During this study 21 species of butterflies belonging 18 genera and 3 families as Nymphalidae, Pieridae and Papilionidae were recorded. Butterflies were observed from different parts of Amalner during July, 2013 to February, 2014 to determine their diversity. The aim of this paper is to summarize the conservation biology of lepidopteran species.

Keywords: *Butterfly Diversity, Lepidoptera, Amalner and North Maharashtra*

INTRODUCTION

Amalner is located at 18°56'N 75°20'E/18.93°N 75.33°E/18.93;75.33 in Jalgaon district of North Maharashtra, India, situated on the bank of the Bori River. Amalner is well known centre for education, industrialization, as a holly place and the oldest Pratap National Philosophical Centre of North Maharashtra University.

Butterflies are found everywhere and one of the most popular and easily recognized groups of insects valued for their beauty due to presence of scales. Butterflies play predominant roles in most ecosystem processes as food for other organisms and majority of them are pests as well as form an important component of biodiversity.

Butterflies are also called the 'Beauty of the Insect World' (Duncan, 1934) and India is known as the heaven of butterflies. Some larvae (caterpillar) are useful for weed control as a biological agent in place of herbicides, while adults are nature's sensitive indicators and some species work as the flower pollinators (Gunasekaran and Balasubramanian, 2010). The order Lepidoptera consists of 2,55,000-2,65,000 recognized species worldwide and only about 7.5% of them are butterflies (Regina, 2009; Jaret and Doug, 2014). Approximately 1,800 species and sub-species of butterflies are found in India (Kunte *et al.*, 2014). The North Maharashtra region of India is rich in diversity of butterflies and other insects, due to vegetative richness. Miger work has been done on butterflies in North Maharashtra; hence an attempt is made to enlist the butterfly species of Amalner.

MATERIALS AND METHODS

The present study was conducted at Amalner located in the Jalgaon district. Butterflies from different places were observed at and around Amalner during July, 2013 to February, 2014 to determine their diversity. Photographs of the butterflies were taken from campus of Pratap National Philosophical Centre, agricultural fields near Dhar, Marvad road as well as Pratap college campus with the help of digital camera Nikon (D3100) and they were released in the nature. Classification was done in the light of available literature (Mani, 1974), using the standard keys and descriptive catalogue of Swallowtail Butterflies (Akinori *et al.*, 2004) as well as different websites from the internet. Survey was conducted between 09:00am to 5:00pm the active biological hours for butterflies.

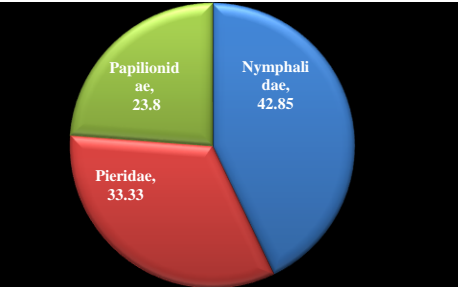
RESULTS AND DISCUSSION

Authors have recorded 21 species of butterflies belonging to 03 families and 18 genera. Among the collected species, family Nymphalidae was the most dominant constituting 42.85% followed by family Pieridae constituting 33.33% and family Papilionidae constituting 23.80% of the total species from the Amalner region (Jalgaon) during period July, 2013 to February, 2014.

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Table 1: Familywise number of genera and species percentage of butterflies

Family	Genera	No. of species	%
Nymphalidae	07	09	42.85
Pieridae	06	07	33.33
Papilionidae	05	05	23.80
Total	18	21	



Kumar (2013) recorded 68 species number of species belonged to family Pieridae (45) followed by Nymphalidae (39), Papilionidae (15), Danaidae (13), Lycaenidae (8), Satyridae (7), Noctuidae (5), Hoemetidae (3), Melanites and Hesperidae (2 each) and Eupterolidae (1) from three study sites Jhagadia, Ankleshwar, District-Bharuch, Gujarat during the study period. Majumder *et al.*, (2012) surveyed 59 species of butterfly belonging to 48 genera and 5 families from the four habitats at Trishna Wildlife Sanctuary (TWS), Tripura. Tiple *et al.*, (2007) recorded 52 species of butterflies belonging to Hesperidae, Papilionidae, Pieridae, Lycaenidae and Nymphalidae families from the Sant Gadge Baba Amravati University campus. Vaghela *et al.*, (2013) recorded 27 species belonging to 21 genera and 04 families at the study site and family Nymphalidae was found to be dominant, which constituted 55.56 % besides family Pieridae constituted 22.22 %, Papilionidae 14.81 % and Lycaenidae constituted 7.41% from Mangrol region of Kathiawar Peninsula, India. Raut and Pendharkar (2010) surveyed 53 species of butterflies belonging to 5 families during the study. Nymphalidae was the richest family with 23 species constituted 43 % followed by Pieridae (13 species, 25 %), Lycaenidae (10 species; 19 %), Papilionidae (5 species; 9 %) and Hesperidae (2 species; 4 %) from Maharashtra Nature Park, Mumbai, Maharashtra, India. Smetacek (2012) listed 243 species of butterflies recorded from Jones Estate, Uttarakhand between 1951 and 2010. Kunte *et al.*, (2012) reported 298 butterfly species from the Garo Hills of Meghalaya, northeastern India: their diversity and conservation during period 2008 to 2010. The aim of present work is to assess the variety and abundance of the butterflies inhabiting Amalner region. Knowledge of the butterflies and their distribution is useful for designing and implementing conservation strategies.

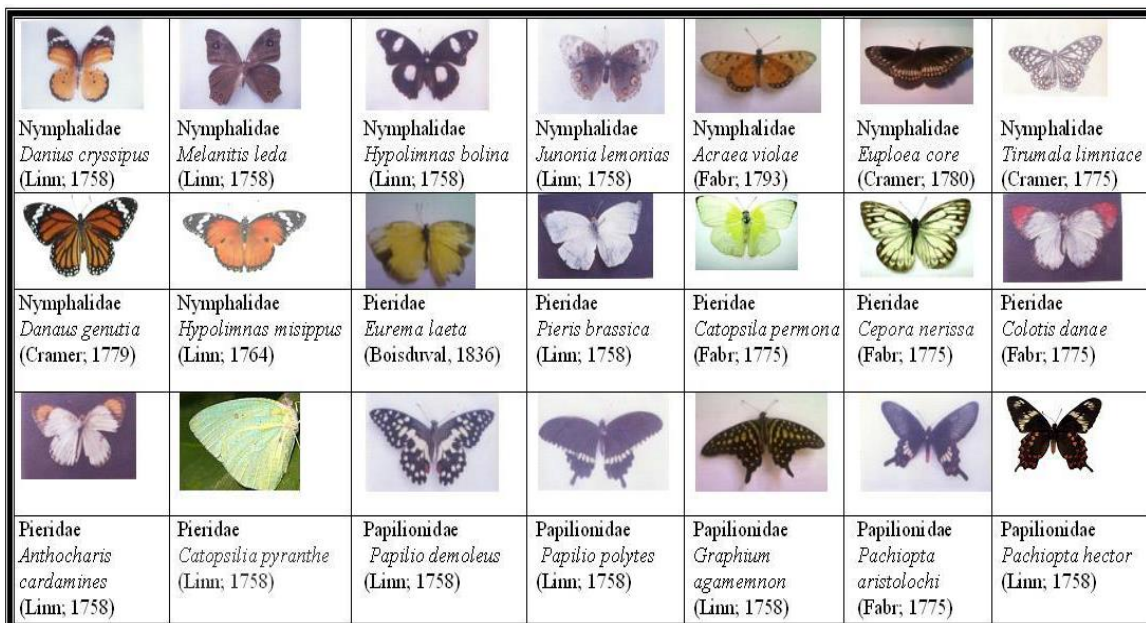


Image 1: Recorded butterfly species from Amalner (Jalgaon)

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Conclusion

The data revealed knowledge of butterfly diversity of Amalner (Jalgaon). Destruction, degradation of nature and unwise use of pesticides are the most worrying causes of butterfly species extinction; hence conservation of the natural habitats is very essential for the existence of species of butterflies and need to increase butterfly diversity. It provides useful information about their diversity as well as baseline data for upcoming researchers and gives wide scope for further study in the said area.

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