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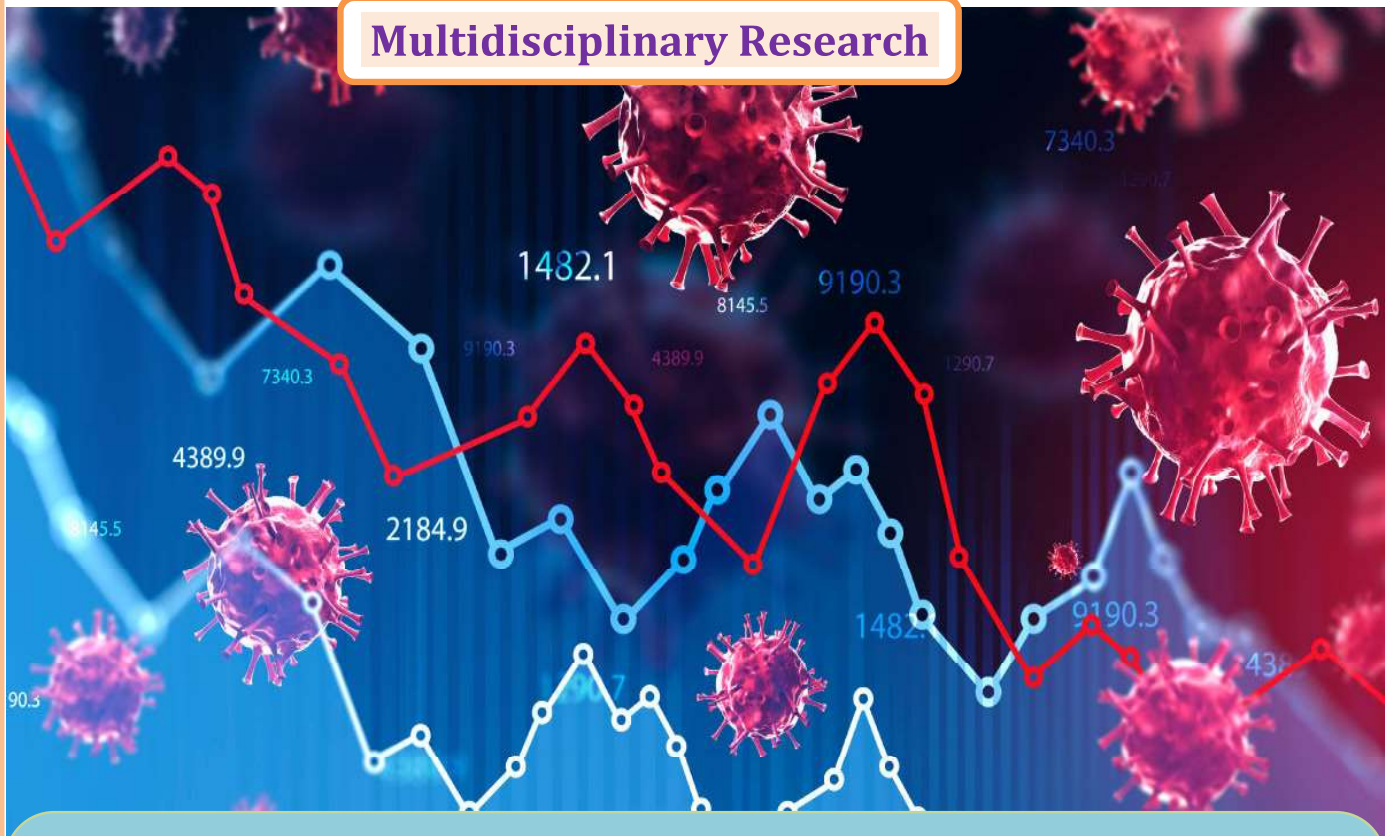
# RESEARCH JOURNEY

International E-Research Journal

PEER REFREED & INDEXED JOURNAL

December 2020 Special Issue 256 (C)

Multidisciplinary Research



**Guest Editor -**  
**Prof. Dr. Rajani Shikhare,**  
 Principal,  
 R. B. Attal College, Georai  
 Dist. - Beed.

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**Dr. B. D. Rupnar,**  
**Dr. P. P. Pangrikar**  
**Mr. S.S. Nagare**  
**Mr. Ranjeet Pagore,**

**Chief Editor : Dr. Dhanraj T. Dhangar**



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## **Biodiversity of Butterflies Around Georai Region**

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### **Abstract:**

*The Butterflies belong to order Lepidoptera. It is one of the mega orders of class insect, which occur throughout the world. Butterflies are visible and colourful insects. Due to their attractiveness they have acquired a niche in the prose and poetry of various cultures. Therefore, they have made excellent subject for natural history observations and scientific studies. Due to increasing population, man has exploited and destroyed Wildlife habitats. Habitats are reduced due to urbanization, industrialization, agricultural development, vegetation manipulation, shifting cultivation. Natural habitats such as forests, grassland, deserts, wetlands, mangroves etc. are under tremendous pressure due to increasing activities of human beings. Butterflies pollinate the crop plants grown worldwide for food, beverages, fibers, condiments, spices and medicines. The paper reveal the species of Butterflies around the Georai region.*

**Keywords:** Butterflies, Pollinators, Georai region

### **Material And Methods:**

Studies on species diversity and distribution patterns of Butterflies from Georai as a part of present study was carried out during August 2017 to July 2019. The study area was fully explored and then probable areas were decided. Butterflies are seasonal in their occurrence. They are common for only a few months and rare or absent in others. To study the seasonal patterns/diversity in Butterfly abundance, the entire year was divided into three seasons. The three seasons of the year are pre-monsoon i.e. from February to May, monsoon i.e. from June to September and post-monsoon i.e. from October to January. From each study area Taluka five sites were selected. The survey was also conducted around Georai Region namely Ravaki, Devaki, Kolher, Dhondrai, Ranmala and R. B. Attal College Campus. The study area was visited twice in each season during the two years i.e. 2017-2018 and 2018-2019. In the said investigation the selected sites were surveyed mainly between 07.30hrs to 12.30hrs and butterflies were identified / captured for their systematic and diversity studies by adopting following material and methods:

#### **Material**

##### **Insect Net**

Insect net was used for collection of Butterflies from the field. It contains aluminum handle, nearly 18 inch in length, having a circular metal ring 9 inch in diameter and collecting bag of 30 inch in depth made up of ordinary nylon mosquito netting cloth, which was attached to the metal ring.

##### **Insect Boxes**

The standard insect boxes in varying sizes were used for preserving Butterflies. The insect boxes consist of basal wooden portion covered with soft wood for pinning the insects and upper side is perforated by glass; rests of the sides are made from wooden material.

### **Spreading Board**

Spreading Board was used for pinning the Butterflies.

### **Oven**

Oven was used for drying the insects.

### **Butter Paper Envelopes**

Butter Paper Envelopes were found to be very convenient for storing the preserved Butterflies. The Butter paper envelopes in size 4" X 5" indicate information about name of field collector, place, locality, date and time of collection. These envelopes were kept in transparent plastic boxes along with naphthalene balls to protect preserved butterflies from ants.

Besides the above material, magnifying glass was used to observe the identification marks on upper and lower side of the fore wing and hind wing. Insect pins were used to pin the butterflies. Brushes were used for careful handling of the butterflies.

### **Methods**

#### **Butterfly Species Diversity**

During field trips the Butterfly diversity was studied from each area with the help of following methods:-

1. Observation and identification
2. Capture and release method
3. Collection and preservation method.

#### **Observation And Identification**

During field visits, observations were done by walking in different areas e.g. fields, road side, gardens, streams, Ghats, grass land, hill side, forest, nursery gardens and public gardens. Approximately half to one km walk in one direction and different directions. Observations were made at a distance of a meter or two. Identification was made by observing morphological features. Unidentified species were photographed and later identified with the help of identification keys.

#### **Capture And Release Method**

Butterflies difficult to identify by visual observation so they were captured with the help of insect net carefully, transferred to plastic transparent box and then identified with the help of various field guides and pertinent literature. On identification, Butterflies were released in the same environment

#### **Collection And Preservation Method**

Butterfly specimens were collected from study area with the help of insect collecting net. As a conservation policy, collection of Butterflies which are included in Schedule I, II and IV, was avoided. The collected species were killed by using insect killing jar and further these species were pinned by insect pins using spreading board. The pinned insects were dried in oven at 60° Celsius. The dried Butterflies were kept in the insect boxes and butter paper envelopes.

The preserved specimens were morphologically studied noting their size, shape and colour patches and markings on wings.

### **Result And Discussion:**

Butterflies are now studied as living ecological components. The 3 families of butterflies recorded in Georai region. A complete checklist of butterflies is mentioned below.

About 105 species of swallowtails (papilios) out of the world 700 are found in India among them 19 species are present in Penninsular India. 08 species have been reported from our study



area, during our study period. In July to August the rainfall is more in three years. In these three months shrubs are growing abundantly which is source of food for Butterflies. Due to favorable conditions like suitable temperature, humidity and rainfall the density of Butterflies are seen more in every study area. In November, December and later on the numbers of Butterflies are decline due to decrease the food sources.

Sr. No.	Family/ Genus	No. Of Species Found			Locality
		Pre Monsoon	Monsoon	Post Monsoon	
<b>1</b>	<b>FAMILY: PAPILIONIDAE</b>				<b>Ravaki, Devaki, Kolher, Dhondrai, Ranmala and R. B. Attal College Campus</b>
	Common Rose – Atrophaneura aristolochiae (Fab.)	13	25	20	
	Common Monom – Papilio polytes (Linnaeus)	14	27	19	
	Lime Butterfly – Papilio demoleus (Linnaeus)	12	20	24	
	<b>FAMILY: PIERIDAE</b>				
	Common Grass Yellow – Eurema hecabe (Linnaeus)	10	18	14	
	Common Emigrant – Catopsilia pomona (Fab.)	07	15	14	
	<b>FAMILY: NYMPHALIDS</b>				
	Common Evening Brown - Melanitis leda (Linnaeus)	16	16	16	
	Great Eggfly – Hypolimnastolus (Linnaeus)	14	19	17	
	Joker Byblia lithyia (Drury)	12	15	15	

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