

STUDY ON BUTTERFLY FAUNA OF KARANJA (GHADGE) TAHSIL OF DISTRICT WARDHA (MAHARASHTRA)

Lokesh N Wankhade

Department of Zoology

Narayanrao Kale Smruti Model College, Karanja (Ghadge), District Wardha (Maharashtra), India.

Email: lokesh.wankhade@gmail.com

ABSTRACT: The fauna of butterfly species was studied from in and around area of Karanja (Ghadge) tahsil of Wardha District from period of July 2019 - June 2020. A total 41 species of butterflies belonging to 5 families were recorded. Maximum 18 species of butterflies were recorded from family Nymphalidae, followed by 10 species from family Lycaenidae, 7 species from family Pieridae and 3 species were recorded each from family Papilionidae and family Hesperidae. In the above study 2 species of butterfly recorded comes under Wild Life Protection Act 1972 of India. The butterfly species *Euchrysops cnejus* comes under Schedule II and *Euploea core* comes under Schedule IV of the Indian Wild Life Protection Act 1972.

KEYWORDS: Butterfly, Species, Karanja (Ghadge).

INTRODUCTION

Butterflies belongs to Class Insecta, Order Lepidoptera of Phylum Arthropoda, are known as important pollinating agent for various wild and crop plants. They help to pollinate more than 50 economically important plant crops¹. Butterflies are also known for good indicators of environmental changes as they are very sensitive to climate changes⁵. About 1,504 species of butterflies are found in India^{4,6,7}. In Madhya Pradesh and Vidarbha region of Maharashtra about 177 species of butterfly have been reported². Ganvir and Khaparde³ recorded 69 species of butterflies belonging to 47 genera and 5 families from Sakoli talula of Bhandara District of Maharashtra. Tiple⁹ have reported 167 species of butterflies belonging to 90 genera and 5 families form Vidarbha region of Maharashtra. Tiple¹⁰ recorded 114 species of butterflies belonging to 6 families from

Bor Wild Life Sanctuary, Wardha, Maharashtra, Central India. However not a single study has been carried out on butterfly fauna of Karanja (Ghadge), District Wardha.

The present study will give idea about list of butterfly species in Karanja (Ghadge), Tahsil, since there was no any published data on the fauna of butterflies in the area of Karanja (Ghadge) tahsil of Wardha District (Maharashtra).

MATERIALS AND METHODS

The present study has been carried out in Karanja (Ghadge) and nearby areas from period of July 2019- June 2020. The time selected for observation of butterflies is from 8:30 am to 12:00 pm and 4:00 pm to 6:00 pm. The butterflies observed in their natural habitat were recorded using photographic method by capturing the observed butterfly in a camera. The

photographs of butterflies captured were identified using various research papers and reference books and also with the help of taxonomy experts. The butterflies identified were arranged according to their family. The scientific name of the butterfly species was according to the Varshney¹¹ and Kunte⁵.



Fig.1 Google Map of Karanja (Ghadge) Tahsil of Wardha District, Maharashtra (India).

RESULTS AND DISCUSSION

During the diversity study of butterflies in Karanja (Ghadge) tahsil about 41 species of butterflies belonging to 5 families were recorded. Maximum 18 species of butterflies were recorded from family Nymphalidae, 10 species from family Lycaenidae, 7

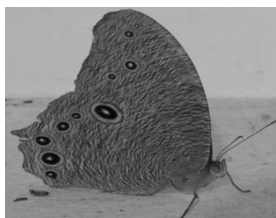
species were recorded from family Pieridae and 3 species were recorded each from family Papilionidae and family Hesperidae. In the above study 2 species of butterfly viz. *Euchrysops cnejus* and *Euploea core* come under Wild Life Protection Act 1972 of India were recorded. The butterfly species *Euchrysops cnejus* comes under Schedule II and *Euploea core* comes under Schedule IV of the Wild Life Protection Act 1972. (Table.1). Tiple (2011) have reported 14 species of butterflies under the protected category of the Wild Life protection Act 1972 form Vidarbha region of Maharashtra.

The abundance of butterfly species was recorded during rainy & Early winter season, there found decline in the number of butterflies from late winter to summer season. The reason of less occurrence of butterfly during summer season is due to non-availability of nectar and larval host plants and scarcity of water⁸. The maximum number of butterflies were recorded during the time of 8:00 am to 11.30 am. The butterfly species such as yellow pansy, Painted Lady, Common Sailor, Shot Silverline, Common Silverline, shot silverline, Common Wanderer were recorded rare, while the Common baron butterfly and Crimson tip butterfly was recorded as a very rare butterfly as compared to other recorded species in the present survey of Karanja (Ghadge).

ACKNOWLEDGMENTS

The author is very grateful to Dr. M. M. Rai, Honorary, Director, CSBR, RTM

Plate 1



1. Common Evening Brown
(*Melanitis leda*)



2. Chocolate Pansy
(*Junonia iphita*)



3. Lemon Pansy
(*Junonia lemonias*)



4. Tawny Coster
(*Acraea violae*)



5. Striped Tiger
(*Danaus genutia*)



6. Plain Tiger
(*Danaus chrysippus*)



7. Blue Tiger
(*Tirumala limniace*)



8. Common Indian Crow
(*Euploea core*)



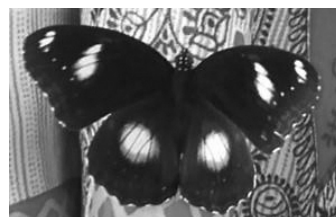
9. Yellow Pansy
(*Junonia hierta*)



10. Painted Lady
(*Vanessa cardui*)



11. Common Sailor
(*Neptis hylas*)

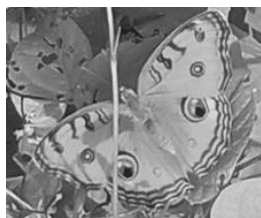


12. Great Eggfly
(*Hypolimnys bolina*)

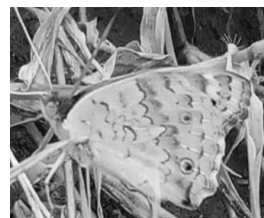
Plate 2



13. Common Leopard
(*Phalanta phalantha*)



14. Peacock Pansy
(*Junonia almana*)



15. Grey Pansy
(*Junonia atlites*)



16. Blue Pansy
(*Junonia orithya*)



17. Common Castor
(*Ariadne merione*)



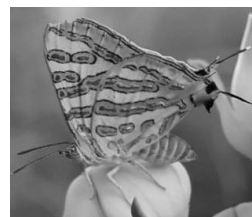
18. Common Baron
(*Euthalia aconthea*)



19. Common Cerulean
(*Jamides celeno*)



20. Common Silverline
(*Spindasis vulcanus*)



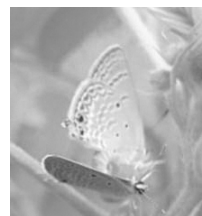
21. Shot Silverline
(*Spindasis ictis*)



22. Striped Pierrots
(*Tarucus nara*)



23. Slate Flash
(*Rapala manea*)



24. Gram Blue
(*Euchrysops cnejus*)

Plate 3



25. Large Oakblue
(*Arhopala amantes*)



26. Forget-me-not
(*Catochrysops strabo*)



27. Plains Cupid
(*Chilades pandava*)



28. Pale Grass Blue
(*Pseudozizeeria maha*)



29. Pioneer
(*Belenois aurota*)



30. Lemon Emigrant
(*Catopsila pomona*)



31. Mottled Emigrant
(*Catopsila pyranthe*)



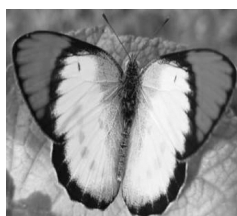
32. Common Gull
(*Cepora nerissa*)



33. Spotless Grass Yellow
(*Eurema laeta*)



34. Common Wanderer
(*Pareronia valeria*)



35. Crimson Tip
(*Colotis danae*)



36. Lime Butterfly
(*Papilio demoleus*)

Plate 4



37. Common Mormon
(*Papilio polytes*)



38. Spot Swordtail
(*Graphium nomius*)



39. Branded swift
(*Pelopidas mathias*)



40. Common Banded awl
(*Hasora chromus*)



41. Rice swift
(*Borbo cinnara*)

Table-1. List of butterfly's species recorded from Karanja (Ghadge) Tehsil,
District Wardha of Vidarbha region (Maharashtra)

| Sr. No. | Common Name | Scientific Name | Status | Recorded Months |
|---------------------------------|----------------------|---|--------|-----------------|
| Family: Nymphalidae (18) | | | | |
| 1. | Common Evening Brown | <i>Melanitis leda</i> (Linnaeus, 1758) | Common | Sept.-Dec. |
| 2. | Chocolate Pansy | <i>Junonia iphita</i> (Cramer, 1779) | Common | Sept.-Oct. |
| 3. | Lemon Pansy | <i>Junonia lemonias</i> (Linnaeus, 1758) | Common | Aug.-Sept. |
| 4. | Tawny Coster | <i>Acraea violae</i> (Fabricius, 1775) | Common | Dec.-May |
| 5. | Striped Tiger | <i>Danaus genutia</i> (Cramer, 1779) | Common | Oct.-Dec. |
| 6. | Plain Tiger | <i>Danaus chrysippus</i> (Linnaeus, 1758) | Common | Oct.-May |
| 7. | Blue Tiger | <i>Tirumala limniace</i> (Cramer, 1775) | Common | Sept.-Nov. |
| 8. | Common Crow | <i>Euploea core</i> (Cramer, 1780) * | Common | June-Sept. |
| 9. | Yellow Pansy | <i>Junonia hierta</i> (Fabricius, 1798) | Rare | July |
| 10. | Painted Lady | <i>Vanessa cardui</i> (Linnaeus, 1758) | Rare | May |
| 11. | Common Sailor | <i>Neptis hylas</i> (Linnaeus, 1758) | Rare | Aug. |
| 12. | Great Eggfly | <i>Hypolimnas bolina</i> (Linnaeus, 1758) | Common | Aug.-Oct. |
| 13. | Common Lepoard | <i>Phalanta phalantha</i> (Drury, 1773) | Common | Aug.-Oct. |

| | | | | |
|---------------------------------|-----------------------|---|-----------|-------------|
| 14. | Peacock Pansy | <i>Junonia almana</i> (Linnaeus, 1758) | Common | Aug.-Oct. |
| 15. | Grey Pansy | <i>Junonia atlites</i> (Linnaeus, 1763) | Common | Oct.-Nov. |
| 16. | Blue Pansy | <i>Junonia orithya</i> (Linnaeus, 1758) | Common | Oct.-Nov. |
| 17. | Common Castor | <i>Ariadne merione</i> (Cramer, 1777) | Common | Oct.-Nov. |
| 18. | Common Baron | <i>Euthalia aconthea</i> (Cramer, 1777) | Very Rare | Aug. |
| Family: Lycaenidae (10) | | | | |
| 19. | Common Cerulean | <i>Jamides celeno</i> (Cramer, 1775) | Common | May-July |
| 20. | Common Silverline | <i>Spindasis vulcanus</i> (Fabricius, 1775) | Rare | Aug. |
| 21. | Shot Silverline | <i>Spindasis ictis</i> (Hewitson, 1865) | Rare | May |
| 22. | Striped Pierrot | <i>Tarucus nara</i> (Kollar, 1848) | Common | Aug.-Oct. |
| 23. | Slate Flash | <i>Rapala manea</i> (Hewitson, 1863) | Common | Dec.- Jan. |
| 24. | Gram Blue | <i>Euchrysops cnejus</i> (Fabricius, 1798) * | Common | Aug.-Oct. |
| 25. | Large Oakblue | <i>Arhopala amantes</i> (Hewitson, 1862) | Common | June-July |
| 26. | Forget-me-not | <i>Catochrysops strabo</i> (Fabricius, 1793) | Common | Oct.-Dec. |
| 27. | Plains Cupid | <i>Chilades pandava</i> (Horsfield, 1829) | Common | Aug.-Dec. |
| 28. | Pale Grass Blue | <i>Pseudozizeeria maha</i> (Kollar, 1844) | Common | Aug. -Oct. |
| Family: Pieridae (7) | | | | |
| 29. | Pioneer | <i>Belenois aurota</i> (Fabricius, 1793) | Common | Oct.- May |
| 30. | Lemon Emigrant | <i>Catopsilia pomona</i> (Fabricius, 1775) | Common | May - Oct. |
| 31. | Mottled Emigrant | <i>Catopsilia pyranthe</i> (Linnaeus, 1758) | Common | Mar.-April |
| 32. | Common Gull | <i>Cepora nerissa</i> (Fabricius, 1775) | Common | Aug.- Nov. |
| 33. | Spotless Grass Yellow | <i>Eurema laeta</i> (Boisduval, 1836) | Common | May-July |
| 34. | Common Wanderer | <i>Pareronia valeria</i> (Cramer, 1776) | Rare | Aug. |
| 35. | Crimson tip | <i>Colotis danae</i> (Fabricius, 1775) | Very Rare | Aug. |
| Family: Papilionidae (3) | | | | |
| 36. | Lime Butterfly | <i>Papilio demoleus</i> (Linnaeus, 1758) | Common | July-Aug. |
| 37. | Common Mormon | <i>Papilio polytes</i> (Linnaeus, 1758) | Common | Aug.-Oct. |
| 38. | Spot Swordtail | <i>Graphium nomius</i> (Esper, 1793) | Common | July |
| Family: Hesperidae (3) | | | | |
| 39. | Small Branded swift | <i>Pelopidas mathias</i> (Fabricius, 1798) | Common | Aug.-Sept. |
| 40. | Common banded awl | <i>Hasora chromus</i> (Cramer, 1782) | Common | Sept.- Oct. |
| 41. | Rice Swift | <i>Borbo cinnara</i> (Wallace, 1866) | Common | Sept.-Dec. |

*Protected under Indian Wild Life Protection Act 1972

Nagpur University, Nagpur for his valuable help during the research.

The author would like to thank to Dr. Ashish Tiple, Assistant Professor & Head, Department of Zoology Vidhya Vikas Mahavidhyalaya, Seloo, District Wardha for his valuable taxonomical help during identification of butterfly species.

The author would also like to thanks to Ku. Prajakta Tandale, Mr. Tushar Makh, Mr. Bhushan Ughade, and Mr. Gopal Sonare for their valuable help during field survey.

REFERENCES

1. Borges, R.M., V. Gowda and M. Zacharias, 2003. Butterfly pollination and high contrast visual signals in a low density distylous plant. *Oecologia*, 136: 571-573
2. D' Abreau, E.A., 1931. The Central Provinces Butterfly List. Records of the Nagpur Museum Number VII. Government Printing Press, Nagpur City., pp. 1-39.
3. Ganvir, D.R and K.P. Khaparde, 2018. Seasonal Diversity and Status of Butterfly Fauna in Sakoli Taluka of Bhandara District, Maharashtra, India. *International Journal of Life Science and Scientific Research*, 4(4): 1905-1914.
4. Gaonkar, H., 1996. Butterflies of Western Ghats with notes on those of Srilanka. A report to the Center of Ecological Sciences, Indian Institute of Science, Bangalore, Zoological Museum, Copenhagen and Natural History Museum, London., pp. 89.
5. Kunte, K.J., 2000 Butterflies of Peninsular India. University Press (India) Limited., pp. 254.
6. Kunte, K., 2009. Occurrence of *Elymnias obnubila* Marsall and de Niceville, 1883 (Lepidoptera: Nymphalidae: Satyrinae) in southern Mizoram: Range extension of the species and addition to the Indian butterfly fauna. *Journal of Threatened Taxa*., 1(11): 567-568.
7. Smetacek, P., 1992. Record of *Plebejus eversmanni* (Stgr.) from India. *Journal of the Bombay Natural History Society*, 89: 385-386.
8. Tiple, A.D and A.M. Khurad, 2009. Butterfly species diversity, habitats and seasonal distribution in and around Nagpur city, Central India. *World Journal of Zoology*, 4(3): 153-162.
9. Tiple, A.D., 2011. Butterflies of Vidarbha Region, Maharashtra State, Central India. *Journal of Threatened Taxa*., 3(1): 1469-1477.
10. Tiple, A.D., 2018. Butterflies (Lepidoptera Rhopalocera) of the Bor Wildlife Sanctuary, Wardha, Maharashtra, Central India. *Biodiversity Journal*, 9 (3): 171-180.
11. Varshney, R.K., 1983. Index Rhopalocera Indica. Part II. Common name of Butterflies from India and neighbouring countries. Records of the Zoological Survey of India. Occasional paper., 47: 1-49.