

Bugs & ALL

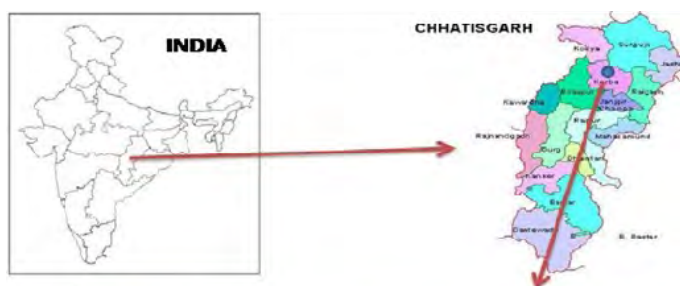
Newsletter of the
Invertebrate Conservation & Information Network of South Asia (ICINSA)

BUTTERFLIES

Rapid Assessment around Korba town, Chhattisgarh, India

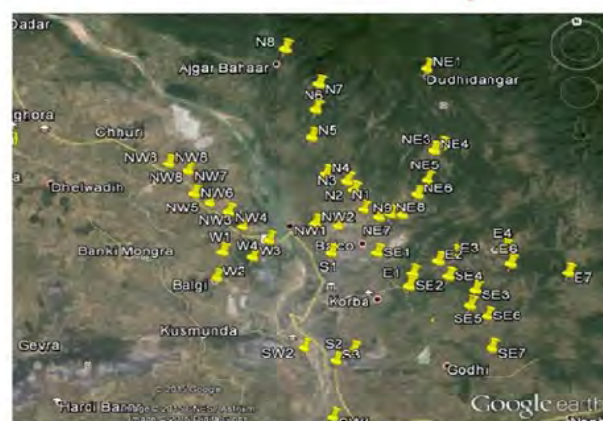
Introduction

As the world move towards rapid urbanization causing shrinkage in green cover, it becomes equally important to know which species of fauna and flora are important and can survive in today rapidly changing environment. Butterflies are known to act as biodiversity indicators as well as nature's gardeners (Nair et al., 2014). The natural vegetation and seasonal flowering plantations in the area provide a potential habitat for butterflies as they are devoid of any developmental activity and pollution (Kaneria et al., 2013). Lots of studies were carried out by researchers and entomologist to know the diversity of butterfly in different areas of Chhattisgarh and Madhya Pradesh (Singh 1977; Gupta & Shukla 1987; Chandra et. al., 2000a, b & 2002; Chandra 2006). Chandra et al. (2007) provided a checklist of 174 species/ subspecies from Central India, of which 153 and 113 butterflies species from Madhya Pradesh and Chhattisgarh, respectively. Two more butterflies were also added to the above mentioned checklist of Chhattisgarh (Sharma & Chandra, 2009) but present study only deals with the list of butterflies occur in and around Korba industrial area of Chattisgarh. Further the study areas are restricted to 10km away from the industrial areas.



Study area

Korba is located at $82^{\circ}42'30''E$ longitude and $22^{\circ}21'N$ latitude in the eastern part of Chhattisgarh State. Korba is the power capital of Chhattisgarh State. It is surrounded by the districts Korea, Surguja, Bilaspur, Janjgir-Champa. It is on the left bank of



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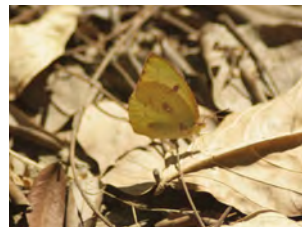
Butterflies found around Korba town, Chhattisgarh



Baronet (*Euthalia nais*)



Chocolate Pansy (*Junonia iphita*)



Common Grass Yellow (*Eurema hecabe*)



Common Pierrot (*Castalius rosimon*)



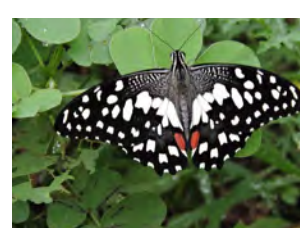
Common Crow (*Euploea core*)



Peacock Pansy (*Junonia almana*)



Common Emigrant (*Catopsilia pomona*)



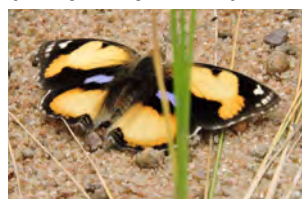
Lime Butterfly (*Papilio demoleus*)



Grey Pansy (*Junonia atlites*)



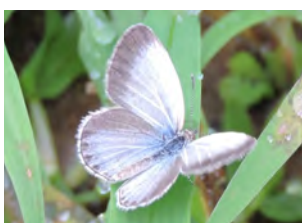
Painted Lady (*Vanessa cardui*)



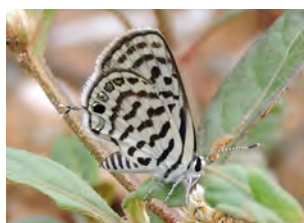
Yellow Pansy (*Junonia hierta*)



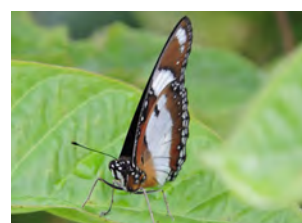
Grey Count (*Cynitia lepidea*)



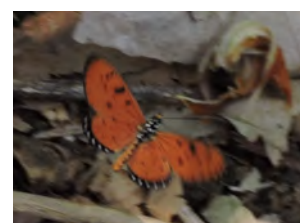
Plains Cupid (*Chilades pandava*)



Striped Pierrot (*Tarucus nara*)



Dianaid Eggfly (*Hypolimnas misippus*)



Tawny Coster (*Acraea violae*)



Twany Rajah (*Charaxes bernardus*)



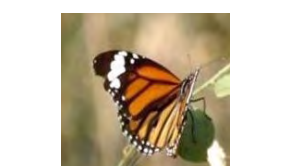
Zebra Blue (*Tarucus plinius*)



Plain Tiger (*Danaus chrysippus*)



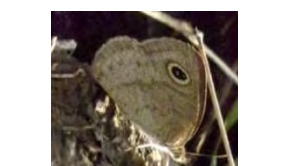
Blue Pansy (*Junonia orithiya*)



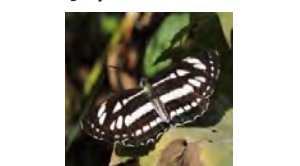
Striped Tiger (*Danaus genutia*)



Lemon Pansy (*Junonia lemonias*)



Common Five-ring (*Ypthima baldus*)



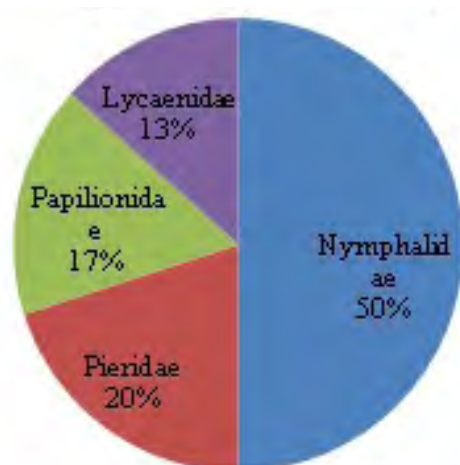
Common Sailer (*Neptis hylas*)



the Hasdeo River which is a major tributary of Mahanadi River. Ahiran is another river in the area that joins Hasdeo River.

Methodology

Fifty one (51) transects were identified and taken up for the survey, to know the distribution and presence of butterflies around Korba town. All the transects were laid about 20km away from Korba town. Transect and point count methods were carried out to find out presence of butterflies. Survey was carried out from March 2015 to January 2016. Transect walks were carried out during morning (9hr-12hr) and also in the evening (16hr to 17hr). Various habitats were surveyed which include forested areas (its every green forest, and dominated by teak plantations which is done by the forest department), residential area,



Percentage of family of butterfly

industrial area, wetlands (Near Jagara village, Bulsindhin village, near Hansdev river in South-west directions from the BALCO residential campus), total 3 wetlands were covered which are small village ponds only and area of the wetlands are 1-3 km² only), grasslands, Hansdeo river bank (1-2 km²). Butterflies were identified using binoculars (8x40) photographed for record. Identification was carried out with the help of field guides (Singh, 2011; Wynter-blyth, 2009 and Parasharya and Jani, 2007). The survey was

carried out in all the directions from the town to know the impact of industries on presence of butterflies. Butterflies which were present in all the directions were considered as “very common species”.

Results and discussion

This study records 31 butterfly species from Korba town, belonging to Nymphalidae (17 species), Pieridae (5 species), Papilionidae (4 species) and Lycaenidae (5 Species), respectively (Table 1). Common crow (*Euploea core*), Danaid egg fly (*Hypolimnas misippus*), Plain Tiger (*Danaus chrysippus*) were found all over the area. Presence of flowering plants within the industrial campus as well as in the forest attributed to presence of high number of Nymphalidae species. Monitoring species diversity in combination with alterations in habitat can provide greater insight into the ecological requirements for such semi-urban



Table 1: A list of some butterflies found around Korba town, Chhattisgarh.

Number	Family	Scientific name	Name of Butterfly	Status
1	Nymphalidae	<i>Acraea violae</i>	Tawny Coster	VC
2		<i>Charaxes bernardus</i>	Tawny Rajah	NC
3		<i>Cynitia lepidea</i>	Grey Count	NC
4		<i>Danaus chrysippus</i>	Plain Tiger	VC
5		<i>Danaus genutia</i>	Striped tiger	VC
6		<i>Euploea core</i>	Common crow	VC
7		<i>Euthalia nais</i>	Baronet	VC
8		<i>Hypolimnas misippus</i>	Danaid Eggfly	VC
9		<i>Junonia almana</i>	Peacock Pansy	NC
10		<i>Junonia atlites</i>	Grey Pansy	NC
11		<i>Junonia hierta</i>	Yellow pansy	NC
12		<i>Junonia iphita</i>	Chocolate Pansy	C
13		<i>Junonia lemonias</i>	Lemon Pansy	NC
14		<i>Junonia orithiya</i>	Blue Pansy	NC
15		<i>Neptis hylas</i>	Common Sailer	NC
16		<i>Vanessa cardui</i>	Painted Lady	NC
17		<i>Ypthima baldus</i>	Common Five-ring	NC
18	Pieridae	<i>Catopsilia pyranthe</i>	Mottled Emigrant	C
19		<i>Delias eucharis</i>	Common Jezebel	VC
20		<i>Eurema hecabe</i>	Common Grass Yellow	VC
21		<i>Ixias marianne</i>	White Orange-tip	C
22		<i>Ixias pyrene</i>	Yellow Orange-tip	C
23	Papilionidae	<i>Graphium agamemnon</i>	Tailed jay	C
24		<i>Graphium doson</i>	Common Jay	VC
25		<i>Pachliopta aristolochiae</i>	Common Rose	NC
26		<i>Papilio demoleus</i>	Lime Butterfly	VC
27	Lycaenidae	<i>Castalius rosimon</i>	Common Pierrot	C
28		<i>Chilades pandava</i>	Plains Cupid	C
29		<i>Chilades trochylus</i>	Grass jewel	C
30		<i>Tarucus plinius</i>	Zebra Blue	C
31		<i>Tarucus nara</i>	Striped Pierrot	C

VC = Very Common; C= Common; NC= Not Common

butterfly populations and enable us to conserve and manage the habitats (Chakraborty and Partha, 2016). A detailed study of butterfly in the region can throw more light on ecology of semi-urban habitats.



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Jagruti Y Rathod¹, Tejas R. Patel², Amita A. Sankhwal³ & Jayendra Lakhmapurkar⁴

¹⁻⁴Gujarat Ecology Society, 3rd Floor, Synergy House, Subhanpura, Vadodara, Gujarat, India. E-mail: ¹rathod21@gmail.com (Corresponding author), ²tejas20p@gmail.com, ³ami.sankhwal@gmail.com, ⁴jjlakh@gmail.com

Citation: Jagruti Y Rathod, Tejas R. Patel, Amita A. Sankhwal & Jayendra Lakhmapurkar (2017). Rapid assessment of butterflies around Korba town, Chhattisgarh, India. *Bugs R All*#161. In: *Zoo's Print* 32(9): 8-12.