



New records of butterflies (Lepidoptera: Hesperiiidae) in baster District (C.G), India

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ABSTRACT

The present study has been made for the diversity of butterflies in Bastar District (C.G). Survey for butterflies was made during September 2012 to August 2013. During present studies 7 species of butterflies, all belonging to family Hesperiiidae, were recorded for the first time from Kanger valley National Park and Machkot region in Bastar district of Chhattisgarh. Studies on butterflies can give valuable information on their population dynamics.

Key words: Kanger valley, Machkot, Butterflies Diversity, New records.

INTRODUCTION

Lepidoptera is one of the most widespread and widely recognized order of insect in world According to recent estimation Lepidoptera consists of 1, 74,250 species arranged in 46 super families, divided into 126 families (Mallet 2007), Butterflies are estimated to be comprised of approximately 17,950 species (Copinear 2008) Indian region hosts 1641 species of butterflies representing 9.50% of the total world's population (Varshney 2006).

Butterflies act as environmental indicators because they are very sensitive and responsive to change in the habitat. The response is observed mostly in the form of change in their morphology which may or may not be associated genetically. The quick response to the change in habitat is possible due to short and rapid life cycle, as compared to many other higher animals.

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The faster life cycle enables them to generate types more suitable to the changing/changed habitat or the environment. Butterfly population may indicate also the change in the diversity of plants.

Forsayeth (1884), Swinhoe (1886), De Niceville (1890) Betham (1890, 1891), and Witt (1909), have made initial studies on the butterflies of central India. After them Evans (1932), Talbot (1939, 1947) and Winter Blyth (1957) made significant contribution through adding several new species of butterflies from Madhya Pradesh and Chhattisgarh in their books. In recent years several workers have studied butterflies from some districts and protected areas of Madhya Pradesh and Chhattisgarh (Singh 1977, Gupta and Shukla 1987, Chaudhary 1995, Chandra et al. 2000a, 2000b, & 2002, Singh and Chandra 2002, Siddiqui & Singh 2004, Anand KR. Thakur and Nanda Ghosh, 2014; Chandra 2006). Chandra et al.; (2007) published a checklist at 174 species of which 153 were from Madhya Pradesh and 113 butterflies were from Chhattisgarh. Two more butterflies were also added to the above mentioned check list of butterflies of Chhattisgarh by Sharma and Chandra (2009). Tiple and Ghorpade (2012) published a check list of 104 butterflies from Achanakmar and Amarkantak Biosphere Reserve located Chhattisgarh and Madhya Pradesh.

Although much work has been done on the butterflies but still several parts of our country require

investigation on the distribution of butterflies. The present study has been made, therefore, to investigate and document the species of the butterflies of the study area and to report the presence of species not reported, so far, from the area.

MATERIALS AND METHODS

Study site

Chhattisgarh lies between latitude 170.46' to 240.8'N latitude and 800.15 to 840.24 E longitudes. The Geographical area of the state is 135191 Sq. km, divided into 27 districts. Bastar is one of the 27 district is situated in southern part of the state. Before 1999 the whole Bastar plateau was under one administrative district, called Bastar. Now it is divided into seven districts, namely Kanker, Kondagaon, Narayanpur, Bijapur, Sukma and Bastar districts.

Bastar district lies between latitude 18°41' to 19°33' N and longitude 81°21' to 82°14' E. From administrative point of view forest area of Bastar district is divided into two forest divisions: Kanger Valley National Park (200 sq. km) and central Bastar division (2211.807 Sq. K.M.). Bastar harbors several types of forests such as moist deciduous bamboo patch, and semi evergreen forests. Due to such variable forest types, Bastar has a rich and unique biological diversity.

Present study is a part of survey on the butterflies in different regions of Bastar district. The present investigation was carried out for a period of one year (Sep 2012 to Aug 2013). Field work was conducted from morning 9 am to 4 pm in every 15 days. Photographs were taken in the natural habitat of the butterflies, during the field work for identification. Butterflies were identified with the help of internet and literature (Evans 1932, Talbot 1939 & 1947 Winter Blyth 1957, Kunte 2000, Kunte et al. 2015 and Kehimkar 2008).

RESULTS AND DISCUSSION

During present studies 7 species (Table-1) of butterflies, belonging to family Hesperidae, not reported so far from Bastar region have been recorded from different parts of Bastar district. Before the present studies 115 species of butterflies have been reported (Chandra et al., 2007 and Sharma and Chandra 2009) from Chhattisgarh. Recently 22 species have been added to this list from 10 districts of Chhattisgarh by Chandra et al. (2014) and R. P. Kavane and T. V. Sathe (2015). Thus, before the present studies were made, 137 species of butterflies of which 18 species belonging to family Hesperidae were reported. Of these 18 species, 11 species have been recorded from Bastar district and 7 species from other districts of Chhattisgarh.

Family – Hesperidae

Sub-Family—Coeliadinae (Awls)

1 Orange Awlet (*Burara jaina*) Fergusonii de Niceville

Distribution - This species is found in India, Nepal, Bhutan, Myanmar. In India it's distributed from southwards up to Maharashtra, Uttaranchal to Arunachal Pradesh, West Bengal to further Northeast.



Figure-1 *Burara jaina*

Table-1. List of butterflies of family Hesperidae first time recorded in Baster District.

S.NO	SUBFAMILY	SPECIES NAME	LOCAL NAME	SITE
1	COELIADINAE	<i>Burara Jaina</i>	Orange Awlet	Kanger Valley
2	COELIADINAE	<i>Badamia exclamationis</i>	Brown Awl	Kanger Valley
3	COELIADINAE	<i>Hasora Vitta</i>	Plain Banded Awl	Kanger Valley
4	PYRGINAE	<i>Odontoptilum angulata</i>	Chestnut Angle	Machkot
5	PYRGINAE	<i>Caprona ransonnetti</i>	Golden Angle	Machkot
6	HESPERIINAE	<i>Cupitha purreea</i>	Wax Dart	Kanger Valley
7	HESPERIINAE	<i>Chestnut bob</i>	lambrix salsata	Chaper Bhanpuri

Description - Orange streaks on chocolate brown upper. Hindwing fringed with orange. Under side pale brown. Under hindwing with orange strips along veins. This species was seen in the view point of the Kanger Valley National Park on 18-8-2013 morning.
Remark- New record for Central India.

2 Brown Awl (*Badamia exclamationis*) Fabricius
Distribution - This species found in India, Nepal, Sri Lanka, Bhutan, Pakistan, Afghanistan, Myanmar. In India its find in all regions having moist deciduas forest.

Description - Brown coloured butterfly with very long and narrow forewing. Settees under leaves folded tightly over the back. This species was recorded from butterfly zone of the Kanger Valley National Park on 16-08-2013.

Remark- New record for Bastar



Figure-2. *Badamia exclamationis*

3 Plain Banded Awl (*Hasora Vitta*) Buttlar
Distribution: - This species found in India, Bangladesh, South Myanmar In India Western Ghats, Sikkim to Arunachal Pradesh, North East, Andaman.
Description - Dark brown butterfly with white or bluish discal band on under hindwing which is outwardly diffused. Apex pointed hindwing distinctly lobed. This species was recorded from Butterfly zone of Kanger Valley National Park on 28-8-2013.
Remark- New record for Bastar



Figure-3. *Hasora vitta*

Sub- Family—Pyrginae (Flats)

4 Chestnut Angle (*Odontoptilum angulata*) C & R fielder

Distribution - This species is found in India, Sri Lanka, Nepal, Bhutan, Myanmar, Thailand and China. In India it is reported from Maharashtra, Himachal Pradesh, Arunachal Pradesh, West Bengal and North East part of India.

Description - This is a beautiful skipper with angular wings upper side pale brown and chestnut. Upper forewing with a few white semitransparent spots and upper hindwing with a few white line across wing. This species was seen near a water body in Machkot forest region on 18-08-2013.

Remark-New record for Chhattisgarh.



Figure-4. *Odontoptilum angulata*

5 Golden Angle (*Caprona ransonnetti*) C & R fielder

Distributor: India, Pakistan, Sri Lanka, Myanmar .In India Peninsular India up to Bihar, Uttaranchal to Arunchal Pradesh, Northeast.

Description – Tawny Golden Yellow butterfly with angular wing upper forewing white semitransparent spot or central and marginal yellow brown areas. During the study this species was photographed near the Ganesh Bahar Nala at Machkota road on 24-10-2012.

Remark-New record for Bastar.



Figure-5. *Caprona ransonnetti*

Subfamily—Hesperiinae

6 Wax Dart (*Cupitha purreea*) (Moor).

Distribution: India, Nepal, Bhutan, Bangladesh, Myanmar. In India Karnataka and Southwards, Sikkim to farther North east, Andaman.

Description – It is a rare yellow coloured butterfly. Under forewing with a black basal wedge and a black tornal patch. During the study it was recorded from the view part (upper hill) in Kanger Valley National Park on 23.10.2012

Remark-New record for Bastar.



Figure-6. *Cupitha purreea*

7. Chestnut Bob – (*Iambrix salsala*) (Moore)

Distribution – India (throughout the India), Sri Lanka, Nepal, Bangladesh, Myanmar

Description – It is a dark brown butterfly with black edged silver spots at centre of under hindwing. It is a common butterfly of bamboo forest. This species was photographed in Kosa Kendra, Chaperbhanpuri (20-12-2012).

Remark- New record for Bastar.

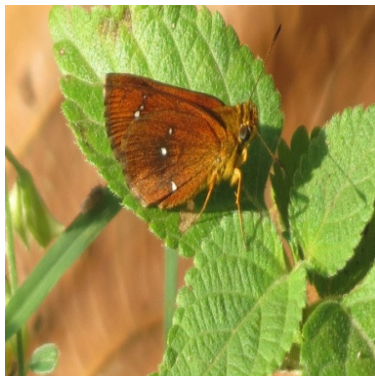


Figure-7. *Iambrix salsala*

CONCLUSION

During the present studies, 7 species of butterflies were recorded first time in Bastar district. Of these 5 species were recorded from Kanger Valley National Park and 2 species were recorded from Machkot site.

Maximum 5 species were recorded in the months of August.

Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

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