

**Short Communication*****GYNAUTCERA PAPILIONARIA GUERIN-MENEVILLE*  
(LEPIDOPTERA: ZYGAENIDAE) - A NEW DISTRIBUTIONAL  
RECORD FROM JHARKHAND****INTRODUCTION**

Family Zygaenidae comprises moths commonly called Burnet Forester moths, or smoky moths. They are typically diurnal or crepuscular in wings with a slow fluttering flight. They have rather clubbed antennae and have metallic sheen with prominent spots of red or yellow. Lefroy and Howlett (1971) described the Batesian mimicry shown by some species of these moths, and they also secrete their own toxin throughout all stages of their life-cycle rather than obtaining from host plants.

Zygaenidae is one of the important family belonging to the order Lepidoptera (Heterocera), widely distributed in tropical and in temperate regions of the world. About 1000 species are reported under the family worldwide, of which, more than 150 species and subspecies are known to occur in Indian sub-region (Hampson, 1892). Later, Fletcher (1925) treated 315 species and subspecies of Zygaenidae in the catalogue of Indian Insects. The family is divided into four subfamilies viz., Zygaeninae, Chalcosiinae, Paudinae and Himantopterinae on the basis of presence or absence of mouth parts and structure of antennae (flagellate at the tip or not). In India, the

subfamily Zygaeninae is represented by 14 genera and 52 species and subspecies, Chalcosiinae, 26 genera and about 80 species and subspecies and the other subfamilies, Paudinae and Himantopterinae comprise 4 species under 3 genera and 4 species and one genus respectively.

While studying the insect fauna of Dalma Wildlife Sanctuary, Jharkhand during 2007-2009 a single live moth specimen (fig.1 & 2) was collected during the morning hours in the core area (Kongadhasa) of the sanctuary and was identified into *Gynautocera papilionaria* Guerin-Meneville, a rare moth belonging to the subfamily Chalcosiinae. The genus *Gynautocera* Guerin is represented by only one species known so far from India. Literature study reveals that moths from Jharkhand state were not reported as such till date. However, fragmentary works on moths have been reported from eastern part of India, viz., Orissa and West Bengal by Mandal and Maulik (1991), Bhattacharya (1997), Mandal and Maulik, (1997). Sambath (2009) reported a preliminary list of moths of 31 species from Dalma Wildlife Sanctuary, Jharkhand. Recently, Sambath (2012) have also reported 132 species of moths from the same locality (communicated).

*Gynautocera papilionaria* Guerin-Meneville (Lepidoptera: Zygaenidae)  
- A New Distributional Record from Jharkhand

Fig.1 : *Gynautocera papilionaria* (Dorsal side)Fig.2 : *Gynautocera papilionaria* (Ventral side)

The distribution of the present moth is fragmentary and not reported so far from Eastern part of India especially in Bihar and Jharkhand. Hence, reported for the first time from Jharkhand.

The diagnostic and systematic accounts etc., dealt in this paper is mainly based on the works of Hampson (1892) and Bhattacharya (1997).

#### SYSTEMATIC ACCOUNT

Class Insecta

Order Lepidoptera

Suborder Heterocera

Superfamily Zygaenoidea

Family Zygaenidae

Subfamily Chalcosiinae

Genus : *Gynautocera* Guerin, 1831

*Gynautocera papilionaria* Guerin-Meneville

1831. *Gynautocera papilionaria* Guerin-Meneville, Mag. Zool.: 12.

1892. *Gynautocera papilionaria*, Hampson, Fauna Brit. India, Moths, 1: 279.

1997. *Gynautocera papilionaria*, Bhattacharya, Fauna of West Bengal, State Fauna Series, Part-7: 233. Zool. Surv. India,

*Diagnostic features:* Antennae metallic dark blue. The head, thorax and abdomen black; vertex of head crimson; pectus and segmental bands on abdomen below and end of abdomen crimson. Wings are black. The apex of the fore wing is more

produced; the hind wing is round, shot with blue and a large white patch with its edges and veins crossing it metallic blue. The base of the wings crimson ventrally. Wingspan: 80 mm (M).

*Material examined:* 1ex., 8.xii.08, Kongadhasa, Dalma Wildlife Sanctuary, East Singhbhum, coll. S. Sambath.

*Distribution:* India: Jharkhand, Assam, Himalayas, Jammu & Kashmir, Meghalaya, Nagaland, Sikkim, Uttar Pradesh and West Bengal.

*Elsewhere:* Bangladesh, Bhutan, Myanmar, South China, and Vietnam.

*Remarks:* Hampson (1892) mentioned two forms of *G. papilionaria* Guerin-Meneville viz., *fraterna* and *rara*. The present specimen is a *fraterna* form as described by Hampson. It is a forest form, not occurring in the plains.

#### ACKNOWLEDGEMENTS

The author is grateful to the Director, Zoological Survey of India, Kolkata for providing necessary facilities. Sincere thanks are also due to Dr. P.M. Sureshan, Scientist - 'C' & Officer-in-Charge, Zoological Survey of India, Gangetic Plains Regional Centre, Patna for constant encouragements.

#### REFERENCES

- Bhattacharya, D.P. 1997. Insecta : Lepidoptera : Zygaenidae, *Fauna of West Bengal, State Fauna Series, Part-7: 233. Zool. Surv. India.*
- Fletcher, T.B. 1925. *Catalogue of Indian Insects*, Pt. 9, Zygaenidae, 92pp.- Kolkata.
- Hampson, G.F. 1892. *Fauna of British India, Moths*, 1: 279.
- Lefroy, H.M. and Howlett, F.M. 1971. *Indian Insect life*, published by Today & Tomorrow's Printers & Publishers, New Delhi.
- Mandal, D.K. and Maulik, D.R. 1991. Insecta: Lepidoptera: Heterocera: Noctuidae, Sphingidae and Geometridae. State Fauna Series, 1, *Fauna of Orissa (Part-III)*, *Zool. Surv. India*: 209-234.
- Sambath, S. 2009. A preliminary list of moths (Heterocera: Lepidoptera) from Dalma Wildlife Sanctuary, Jharkhand. *Bionotes*, 11(1): 18-19.
- Sambath, S. 2012. Taxonomic studies on the insect fauna of Dalma Wildlife Sanctuary, Jharkhand w.s.r. to Lepidoptera. *Zool. Surv. India* (communicated).

S. SAMBATH

*Zoological Survey of India, Gangetic Plains Regional Centre Patna, Bihar*  
\**Zoological Survey of India, Central Zone Regional Centre, Jabalpur, Madhya Pradesh*