

## Recharacterization of Genus *Zonoplusia* Chou & Lu (Noctuidae: Lepidoptera)

Charan Kamal Sekhon<sup>1\*</sup> and Jagbir Singh<sup>2</sup>

<sup>1</sup>Department of Zoology, Sri Guru Granth Sahib World University (SGGSWU), Fatehgarh Sahib, Punjab, INDIA

<sup>2</sup>Department of Zoology and Environmental Sciences, Punjabi University, Patiala-147001, Punjab, India

\*Corresponding Author E-mail: drcks31@gmail.com

### ABSTRACT

Genus *Zonoplusia* Chou & Lu was established in 1979 on the type species *ochreata* (Walker). It is a monotypic genus and the male genitalic attributes of this taxa has been studied here for the first time. These new attributes have been incorporated in the revised diagnosis of genus.

**Keywords:** Lepidoptera, Noctuidae, *Zonoplusia*, Western Ghats, Moths.

### INTRODUCTION

The subfamily Plusiinae (Lepidoptera: Noctuidae) is comprised of moths with a robust body, small to average size, usually with a characteristic metallic spot in the center of the forewing. Their larvae, known as semi loopers, are characterized by the combination of biordinal crochets with the first two pairs of prolegs, on abdominal segments three and four, absent or vestigial, which determines their locomotion as "measuringworms"<sup>2,12</sup>. Genus *Zonoplusia* Chou & Lu is distributed universally. In the present work, external male genitalic attributes have been incorporated to update the diagnosis of the species. Because the present species is the type of the genus and its diagnostic features can be incorporated in the revised characterization of genus.

### MATERIALS AND METHODS

The adult representatives of two Noctuid moth species were collected from the florescent lights fitted at different places in Western Ghats of India. The collected moths were killed and preserved in air tight wooden boxes. For the preparation of slides of external male genitalia, abdomen of preserved specimens were detached and potashed in 10% solution<sup>14</sup>, washed in 1% glacial acetic acid and dissected in 30% alcohol for taking out genitalia. After proper dehydration in different grades of alcohol, the genitalic structures were cleared in clove oil and then mounted in Canada balsam on cavity slides. The photography of external male genitalic structures was done with the help of image processing unit in the department of Zoology, Punjabi University, Patiala. The terminology given by Klots<sup>11</sup> has been followed in the present studies for nomenclature purpose. The adult Noctuid moths along with dissected specimens were preserved in insect cabinets.

### OBERVATIONS:

#### GENUS *ZONOPLUSIA* CHOU & LU

Chou & Lu, 1979, *Entomotaxonomia*, 1 (1): 15

#### *Zonoplusia ochreata* (Walker)

Walker, 1826, *Cat. Lep. Het.*, 33: 839.

**Male genitalia:** Uncus broad at base, narrow beyond middle with apical spine, beset with setae; tegumen longer than uncus, broad with both the arms swollen and scobinate, sclerotized, inverted u-shaped; vinculum narrow, shorter in length from tegumen, sclerotized, u-shaped; saccus present; valvae broad, sclerotized, symmetrical, differentiate into parts; cucullus broad with corona ornamented with spines; sacculus broad, round; harpe fused with ampulla, well marked; juxta membranous; transtilla membranous; aedeagus swollen proximally, narrow and sclerotized distally with apical spines, vesica membranous, with patch of scobination apically and brush like sclerotized cornuti medially; ductus ejaculatorius entering medially.

**Wing Span:** 30 mm.

**Old Distribution:** Hongkong; Formosa; Shimla; Nagas.

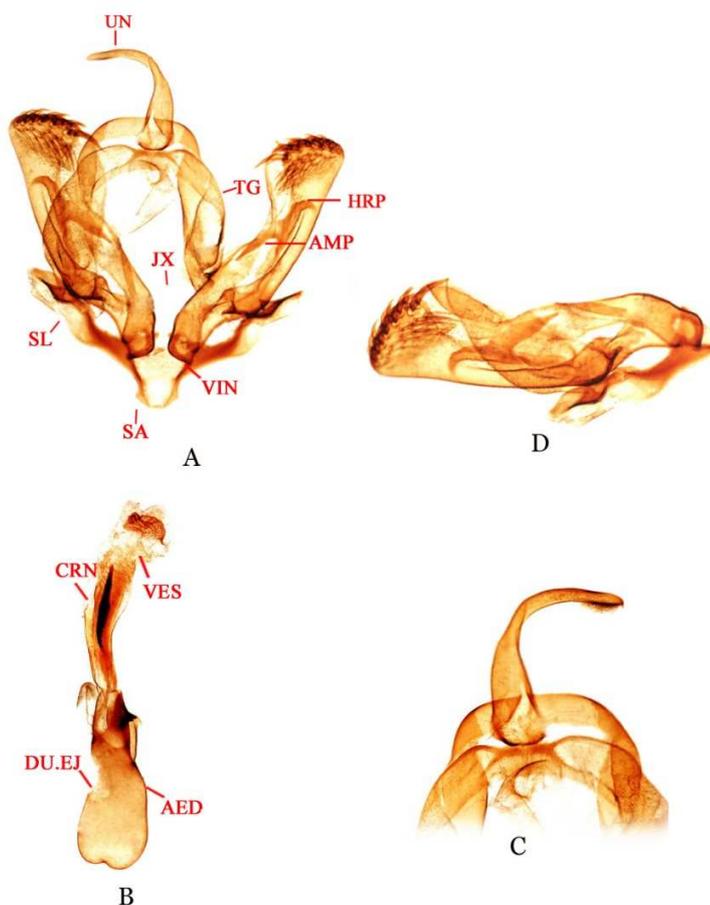
**Material Examined:**

Karnataka: Medikeri: 30.vii.07, 1 ♂.

Maharashtra: Malshej Ghat: 11.xi.10, 1 ♂.



*Zonoplusia ochreata* (Walker)



A. Male genitalia, B. Aedeagus, C. Uncus with Tegumen (Lateral view), D. Valva (Left)

### DISCUSSIONS

This species has been reported for the first time from Western Ghats states *i.e.*, Karnataka, Maharashtra from India.

### CONCLUSIONS

Genitalia has been studied to update the diagnosis of species, various parts of male genitalia like uncus, tegumen, juxta, vinculum, saccus, vesica and ductus ejaculatorious, apophyses, corpus bursae, ductus bursae and signum described in detail. These features will be helpful in identification of this species authentically in future.

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