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External Genitalic structures of two species of genus *Euplexia* Stephens (Noctuidae: Lepidoptera)

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genitalia

A B S T R A C T

Genitalic attributes are very important for authentic identification of any species. In the present communication external male and female genitalic attributes of *Euplexia conducta* Walker and *Euplexia semifascia* (Walker) have been studied and illustrated in detail for the concrete diagnosis of a species.

Introduction

The genus *Euplexia* was proposed by Stephens on type species *lucipara* Linnaeus in 1829. This large genus comprises large number of species distributed in many parts of the World, but in present study, only two species of this genus has been studied and illustrated in detail.

Four specimens of *Euplexia conducta* Walker and six specimens of *Euplexia semifasica* (Walker) have been collected from different localities of Western Ghats of India. Male and female genitalia have been discussed and photographed for the first time. A key based on external male genitalia has also been constructed.

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 and female genitalia, abdomen of preserved specimens were detached and potashed in 10% solution (Robinson 1976), washed in 1% glacial acetic acid and dissected in 30% alcohol for taking out male and female 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 and female genitalic structures

was done with the help of image processing unit in the department of Zoology, Punjabi University, Patiala. The terminology given by Klots (1970) 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 *Euplexia* Stephens

Stephens, 1829, *Nom. Br. Insects*., **1829**: 41.

Type species: *Euplexia lucipara* Linnaeus.

Distribution: Nearctic and Palaerctic regions; throughout India, Sri Lanka and Mayanmar; Fiji.

Diagnosis: Eye naked, with or without lashes; probosics fully formed; palpi upturned, the second joint not reaching vertex of head and fringed with hair, the third prominent. Thorax with a slight tuft of outspreading hair behind the collar and paired tufts on metathorax. Abdomen with dorsal tufts on proximal segments; tibial without spines. Forewing with the cilia crenulate.

Key to the studied species of genus Euplexia Stephens

1. Male genitalia with uncus long, needle like; tegumen as long as uncus; juxta candle like; vesica with cornuti present . . . . . ***conducta* Walker**
- Male genitalia with uncus short, thick, sharp at tip; tegumen longer than uncus; juxta tongue shaped; vesica membranous with cornuti absent . . . . . ***semifascia* (Walker)**

Euplexia conducta Walker

Walker, 1829, *Cat*., **10**: 296.

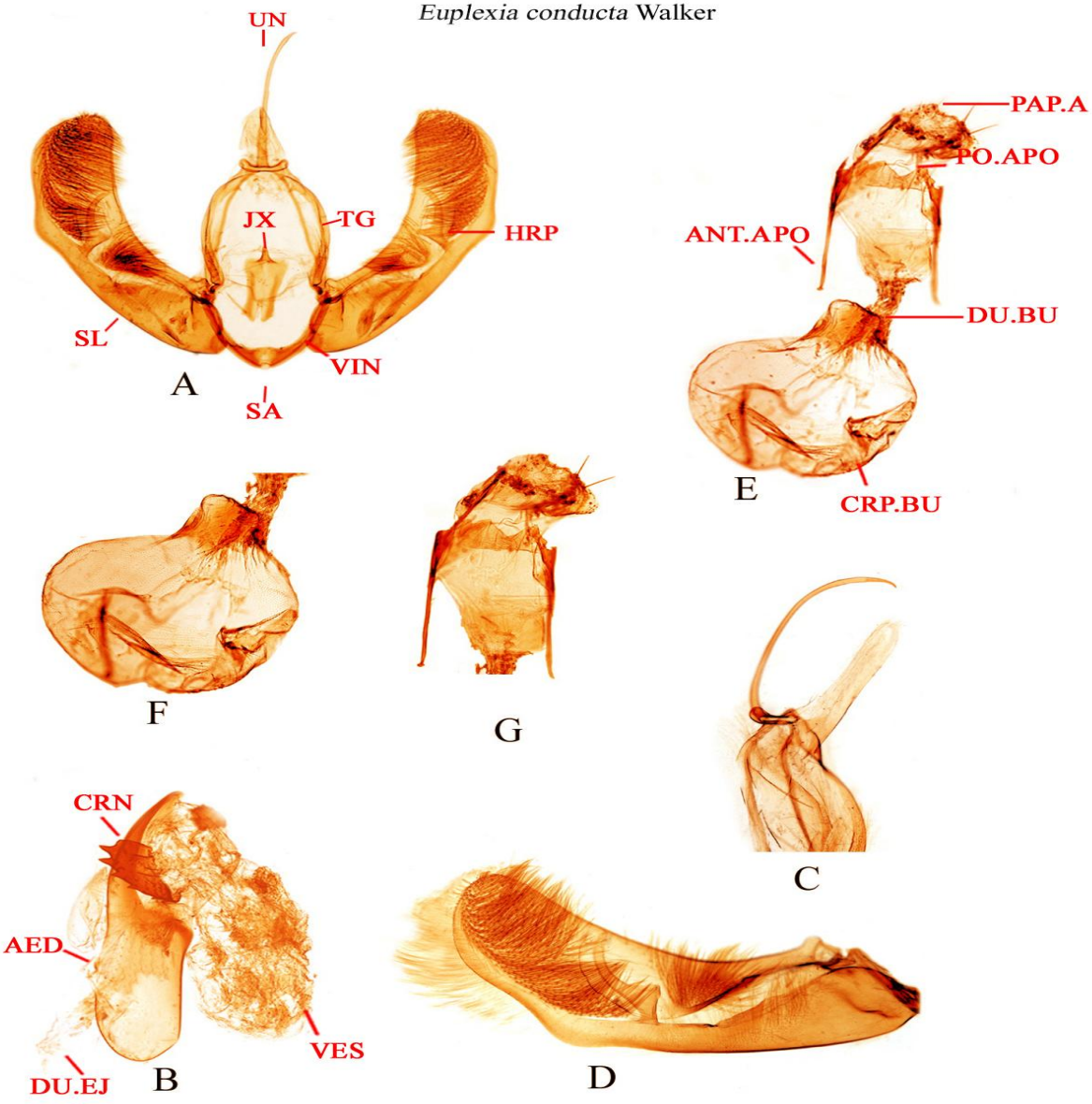
Male genitalia: Uncus long, curved, needle like, tip pointed, weakly sclerotized; paired socii present; tegumen broad, weakly sclerotized, as long as uncus, both the arms broad, inverted u-shaped; vinculum sclerotized, smaller than tegumen, u-shaped; saccus reduced; valvae broad, foot like, symmetrical, densely setosed with macro setae; costa broad, concave; sacculus sclerotized, slightly excurved beyond middle; harpe well marked, sickle shaped; juxta candle like; transtilla membranous; aedeagus broad, tube like, sclerotized distally; vesica membranous, partially scobinate bearing two sclerotized patches having bristled cornuti; ductus ejaculatorious entering medially.

Female genitalia: Corpus bursae rounded, membranous with scobination, narrow and sclerotized towards ductus bursae; signum absent; ductus bursae narrow, short, partially sclerotized tube; ostium bursae simple; posterior apophyses almost of equal length as anterior apophyses; papilla analis oval, broad, sclerotized with macro and micro setae.

Wing Span: 36mm.

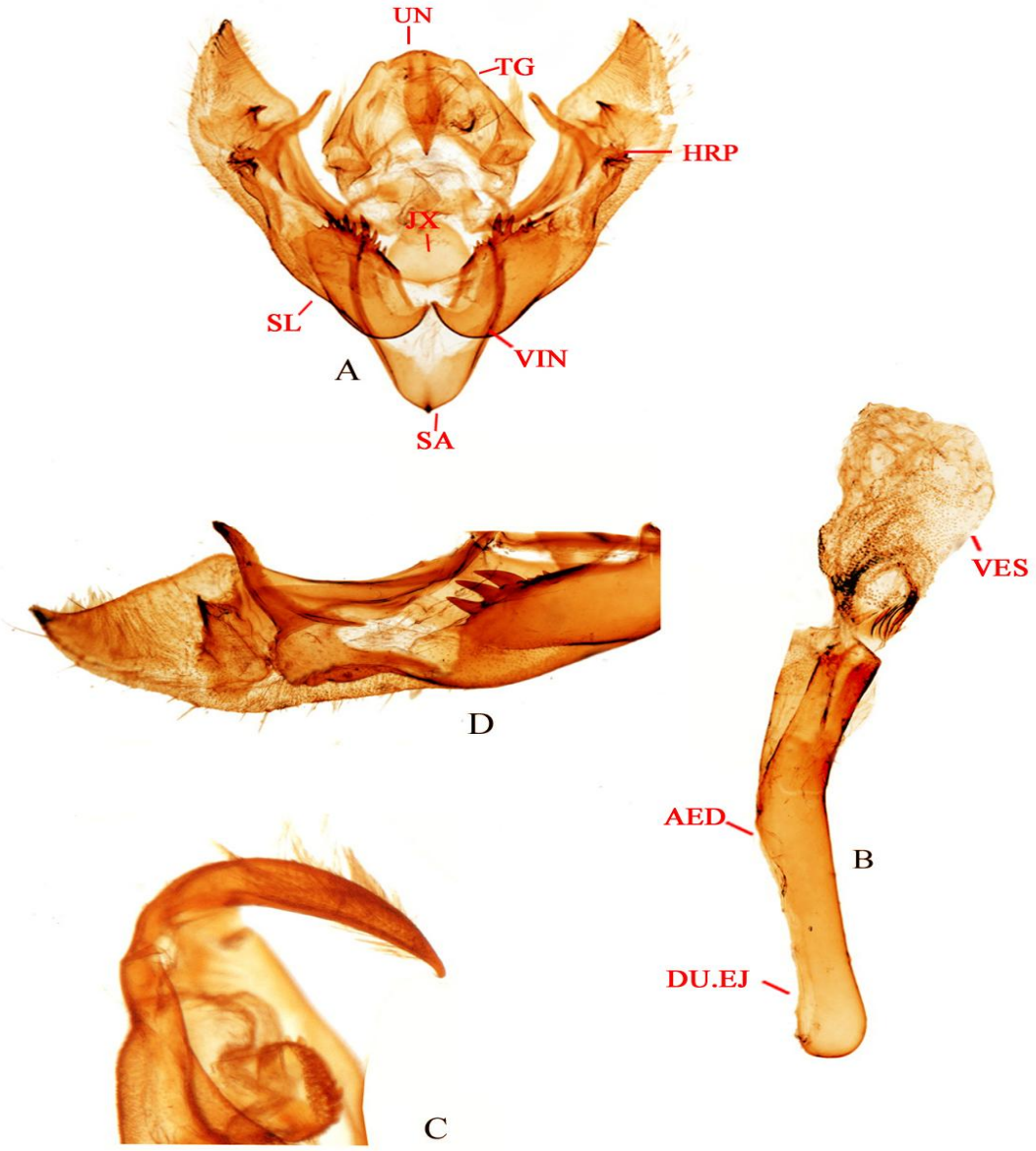
Old Distribution: Throughout India, Sri Lanka & Burma; Andamans; Fiji.

Euplexia conducta Walker



A. Male genitalia, B. Aedeagus, C. Uncus with Tegumen (Lateral view),
D. Valva (Left), E. Female genitalia, F. Corpus bursae (Enlarged),
G. Papilla analis with Apophyses (Enlarged)

Euplexia semifascia (Walker)



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

Material examined

Himachal Pardesh: Nauni: 27.ix.06, 2♀♀, Sabathu: 7.viii.06, 1♂,
Barog: 18.viii.08,3♂♂.

***Euplexia semifascia* (Walker)**

Walker, 1856, *Cat. Lep. Het*., **33**: 737.

Male genitalia: Uncus strong, curved, narrow at base, broad medially with pointed apex, sparsely setosed with setae; tegumen longer than uncus, both the arms highly broad, inverted u-shaped; vinculum sclerotized, less broad, v-shaped, as long as tegumen; saccus present; valvae well developed, symmetrical differentiated into parts; costal margin excurved, sparsely setosed with setae at apex; harpe and ampulla well marked; sacculus sclerotized, developed into strong dentate projections; juxta tongue shaped; transtilla present, sclerotized; aedeagus long tube like, sclerotized; vesica membranous, partially curved with sclerotized patches; ductus ejaculatorious entering subapically.

Wing Span: 38mm.

Old Distribution: N. W. Himalayas; Satara; Nilgiris.

Material examined

Himachal Pardesh: Kharapathar . 21.vi.06, 2♂♂, Koti: 8.vii.08,1♂,
Vazula: 19.vi.08, 2♂♂.

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