

## A NEW SPECIES OF THE GENUS *CHRYSOTEUCHIA HUBNER* (LEPIDOPTERA : CRAMBIDAE) FROM PAKISTAN WITH ITS RELATIONSHIP .

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خلاصہ

جنس کرائی سوٹوچیا، ہبزر کی ایک نئی نوع کی تفصیلی بیان بحوالہ اسکی شکلی خصوصیات مخصوص طور پر اسی جو ارے، اگلے اور پچھلے پروں کی رنگیت اور نر اور مادہ تناسلی اعضاء سمیت پاکستان سے بیان کی گئی ہے۔ نیز اسکی دوسری نوع کے ساتھ بحث بھی پیش کی گئی ہے۔

### Abstract

A new species of the genus *Chrysoteuchia Hubner* is described in detail with reference to its morphology of head appendages , venations of fore and hind wings and male and female genital components from Pakistan . Its relationships with other species is also briefly discussed .

**Key words :** New species , *Chrysoteuchia*, Crambidae , Lepidoptera , relationship .

### Introduction

Goater (1986) in his British pyralid moths a guide to their identification describe and illustrated the *Chrysoteuchia culmella* (L.) with reference to colour patterns and nature of feeding of its larvae as well distributional range. Hashmi and Tashfeen (1992) presented a large check list of Lepidoptera from Pakistan but they did not mention any species of the genus *Chrysoteuchia Hubner*. Kamaluddin *et al.*, (2007) presented a check list of moths of Pakistan but they did not list any species of the genus *Chrysoteuchia Hubner*. Sterling and Parsons (2012) in their field guide to the Micro –moths of great Britain and Ireland illustrated the lateral view of *Chrysoteuchia culmella* (L.) ,its pattern and larva of the same species.In this paper we are describing *chrysoteuchia sindellus* as a new species recorded first time from sindh province of Pakistan.

### Material and Method

The specimens were collected from Mitthi (Sindh) with the help of light trap in the field of gramineous plants and identified with the help of literature at hand an internet source . For the study of wing venations the slide were made of both wings , for the study of both genital components the abdomens were detached at base and boiled in 10% KOH solution for about one to two minutes then wash with tap water and examine in glycerine .The diagrams were made by graticule and finalized with black Indian ink. The procedure were followed by the Kamaluddin and Ahmad (1980, 1995) and Kamaluddin and Isma (2017).

### Results and Discussion

The representatives of the *Chrysoteuchia hubner* are distributed in oriental and palaearctic region. This new species is first time recorded from Sindh, Pakistan. The cladistic analysis of this genus and species is presented by Kamaluddin *et al.*, (2017). This species is closely related to *C. hubner* (L) by its synapomorphic characters like general characters of its colour patterns and the maxillary palpi highly protected but separated by its autapomorphic characters like dark spots at apical margin of metanotal wing in moles herpagon with a large thorn with crenulated apex and in females apophysis anterior about two times the length of apophysis anterior.

### Genus: *Chrysoteuchia Hubner* .

*Chrysoteuchia*, Hubner, 1825, *Verz. Bekannt. Schmett.*: 366.

*Amphilbolia*, Snellen, 1884, *Mem. Lepid. 1*: 159.

*Veronese*, Bleszynski, 1962, *Pol. ent.* 32:27.

**Diagnostic characters:** Body generally brown , frons rounded not produced, maxillary palpiporrected, much longer than head, proboscis large, mesonotal wings long and broad, with apices rounded, veins Sc and R1 parallel, R2and R3 stalked, M1 and M2 arising from upper angle of cell, tibiae with moderate spurs.

**Genital components:** In male tegumen short, semi-spherical, uncus simple lobe-like, gnathos much longer, membranous, herpagon very large flipper-shaped, with an long process at inner margin, theca large tubular, membranous conjunctiva simple with cornuti, in female papillae anales strip-like, both apophyses found, ductusbursae moderate, corpus bursae bag-like.

**Comments:** This genus is most closely resemble with the genus *Agriphila* Hubner in nearly general characters of colour pattern, body small sized but it can easily be isolated from the same in nearly both wings with highly metallic cilia, in male herpagon very large with an long process, in female both apophyses medially dilated and by the other characters as listed in the key and explanation.

**Type species:** *Tineahortuella* Hubner.

**Distribution:** Oriental and Palaearctic regions.

### *Chrysoteuchia sindellus* (Sp.n.)

(Figs. 1-8)

**Colour pattern:** Body general pale yellow except darker costal and apical margin of mesonotal wings and dull brown metanotal wings.

**Head (Fig. 2):** Frons broadly rounded, palpi well developed, thickly scaled, anteriorly porrected, 2<sup>nd</sup> segment of maxillary palpi about 3X the length of 3<sup>rd</sup> segment, proboscis large and highly twisted.

**Mesonotal wing (Fig. 3):** Mesonotal wings with anterior margin sinuated, posterior margin convex, apical angle rounded, veins Sc and R1 parallel to each other, R2 and R3 largely stalked unite with R4 and arise from upper angle of cell, M1 arises from lower angle of cell, two anal veins (1A and 2A) are found.

**Metanotal wings (Fig. 4):** Metanotal wings with anterior margin convex, posterior and apical margins sinuated, Sc+R1 parallel to Rs, veins M1 and M2 unite and arise from upper angle of cell, Cu1 arises from lower angle of cell, only one anal vein (1A) is found.

**Wing expansion** Body size 20-25mm. with wing expansion.

**Male genital component (Figs. 5-7)** Tegumen (Figs. 5 and 6) short Vase-shaped, saccus small V-shaped, a pair of large bunch of scales at distal lateral margin of tegumen, uncus narrowed bilobed, much shorter than membranous gnathos, herpagon large flipper-shaped, with a large thorn-like process, apically toothed, aedeagus (Fig. 7) large tubular, distally broad, membranous conjunctiva lobe-like with a serrated margins of thorn-like cornuti.

**Female genital component (Fig. 8):** Papillae anales narrowed strip-like with thickly scaled, apophyses posterior about 1/2 the length of apophyses anterior, both medially dilated, lobus vaginalis broad, rectangular shaped, ductusbursae short, broad, corpus bursae large balloon-shaped with irregular cornuti.

**Material studied:** Holotype, male, Pakistan, Sindh, Mitthi, on light, 15.5.2014, leg. Zubair Ahmad, lodged at supervisor record. Paratypes, one male, three females, same data as Holotype, lodged at supervisor record.

### Conclusion

This species is most closely resemble with *C. culmella* (L.) in nearly general characters of colour and maxillary palpi highly porrected but it can easily be differentiated from the same in nearly some dark spots at apical margin of metanotal wings, herpagon with a large thorn with crenulated apex and by the other characters as listed in the key and explanation.

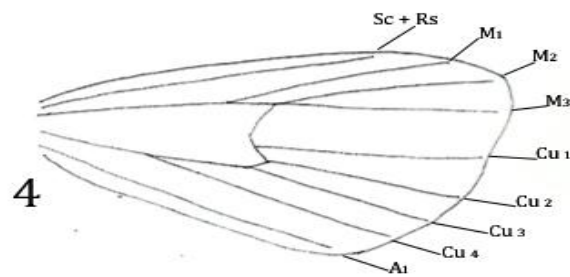
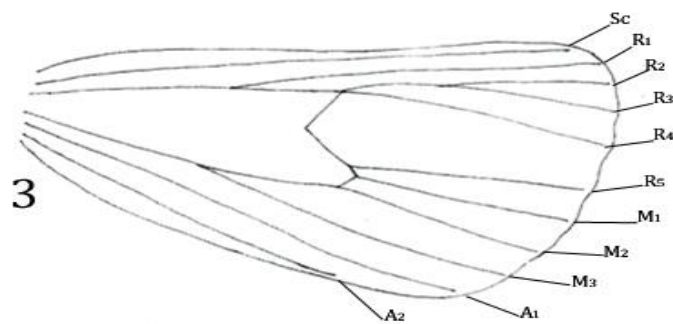
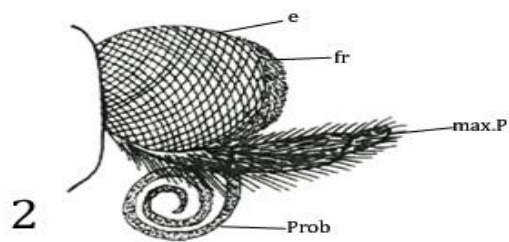
### Illustration Figures

*Chrysoteuchia sindellus* (sp. N.)

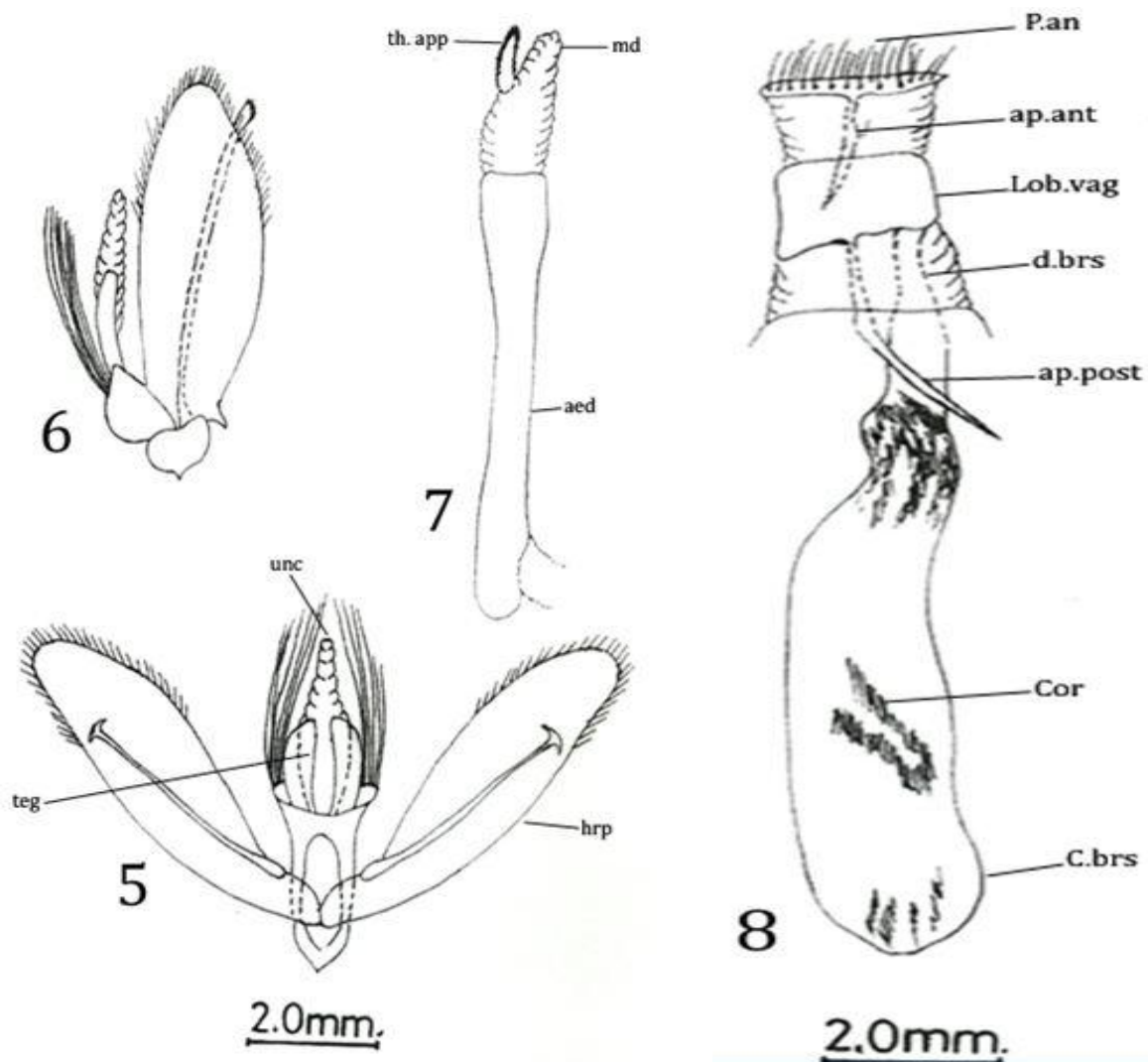
Figs: 1-8: 1. Entire, dorsal side, 2. head, lateral side, 3. mesonotal wing, 4. Metanotal wing, 5. tegument, ventral side, 6. Same lateral side, 7. aedeagus, lateral side, 8. Femal genital component.



**Fig. 1.** *Chrysoteuchia sindellus* (Sp.n.)



2.0mm



### Key to the latering

aed acedeagus ,ap.ant. apophyses anterior ,ao.post. apophyses posterior,c.brs. corpus bursac ,cor.cornuti , d.brs.ductus busac , fr.frons ,lob.vag.lobus veginalis  
 max.p. maxillary palp,mcl. membranous conjunctival lobe , p.an. papillac anaes  
 prb. Proboscis , hrp. Herpagon , teg. tegument , unc. uncus , A1-A3 anal veins 1 to 3 , Cu1 – Cu3, cutibus veins 1 to 3 , M1-M3, median veins 1 to 3 , R1-R5 radius veins 1 to 5 , Rs-radio suctorial vein , Sc. Subcoastal vein , Sc. R1 Subcoastal and radius 1 veins

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