Review of the genus **Cidariplura** Butler, 1879 (Lepidoptera, Erebidae, Herminiinae) in Taiwan with descriptions of four new species

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**Abstract**

The genus **Cidariplura** Butler, 1879 from Taiwan is reviewed. A total of seven species are confirmed to occur in this old landbridge island, and four new species are described: **C. shanmeii** Wu & Owada sp. nov., **C. maraho** Wu & Owada sp. nov., **C. atayal** Wu & Owada sp. nov. and **C. ilana** Wu & Owada sp. nov. The Taiwanese **C. bilineata** (Wileman & South, 1919) is superficially similar to the Indian and Nepalese **C. brevivittalis** (Moore, 1867) but their genitalia show distinct differences. **Elyra albifascia** Hampson 1929 is regarded as a junior synonym of **C. brevivittalis** (syn. nov.). All diagnostic characteristics of **Cidariplura** from Taiwan and its adjacent areas are illustrated.

**Key words:** **Cidariplura**, Herminiinae, Noctuoidea, Oriental region, Taiwan

The genus **Cidariplura** Butler comprises 17 species ranging from southern Palaearctic to Oriental regions (Warren, 1913; Poole, 1989; Owada, 1992a; Owada, 1992b; Chen, 1999; Zhang and Han 2009). It was established by Butler (1879) with a single species, **C. gladiata** Butler, 1879, to account for the extraordinarily long male labial palpi of the species. Such characteristics of the male labial palpi can be found in **Hadennia** Moore, [1885], **Trotosema** Butler, 1879 (= **Mosopia**), and **Cidariplura**, which Owada (1978) suggested formed a clade. Owada (1994) also found a distinctive apomorphic character i.e., the male foretibia with a distal sharp spine, among the genera **Mosopia**, **Cidariplura** and **Idia** Hübner, [1813]. The definitions of **Cidariplura** and some similar genera have varied from previous studies. For example, Hampson (1895) combined several species with such long labial palpi under the New World genus **Mastigophorus** Poey, 1832, synonymizing **Mosopia** Walker, [1866] with **Mastigophorus**, and stating “the typical American section (**Mastigophorus**) has a sheath to the fore tibia containing a mass of flocculent [= fluffy] scales”. The genus **Cidariplura**, having no foretibial sheath, was synonymized with **Mastigophorus** by Leech (1900) as implicit in his combination “**Mastigophorus gladiata**”. On the other hand, Swinhoe (1900) erected the genus **Oxaenanus** (type species: **M. brontesalis** Walker, [1859]) to correspond with Section II of Hampson’s “**Mastigophorus**”. **Oxaenanus**, however, differs from **Cidariplura** in having the first segment of the labial palpus porrect directing forward and no clear boundary between elongate second and third segments (Holloway 2008). The relationships among **Cidariplura**, **Mastigophorus**, and **Oxaenanus** need further attention and merit molecular studies based on a denser taxon sampling.

Here we examine taxonomic problems involved in the species of **Cidariplura** from Taiwan and adjacent areas. These species have been studied or at least mentioned by Owada (1987; 1992a; 1992b; 1994), Poole (1989), Wang (1994) and Chen (1999). Our present study confirms the occurrence of seven species of
brown; discal spot short, transverse, dark brown; medial line straight, ochreous; marginal part covered with small black stigma in each cell; marginal scales brown. Abdomen brown, 8th segment unmodified. Male genitalia (Figs 55, 56)- Uncus broad, stout. Tegumen and vinculum long, same in length; saccus V-shaped. Valva trifurcate, costal process stout with lateral semi-circular expansion, distal portion of valva broad, membranous, saccular process small, short, digit-like without hair tufts on apex. Juxta long plate-like, transtilla indistinct. Aedeagus stout, straight, 0.67 X shorter than valva; vesica well scobinated, without cornutus. Female genitalia (Fig. 67)- Ovipositor lobe membranous with short hair-like setae; both pairs of apophyses slender, moderate length; ductus bursae long, with a pair of broad lateral sclerites fused at basal portion. Corpus bursae elliptic, as long as ductus bursae, basal half part wrinkled; ductus seminalis arising from lateral side of corpus bursae, slightly broadened and coiled at basal portion.

**Etymology.** The species is named after the collecting locality of type series, Ilan County, northern eastern Taiwan.

**Distribution and bionomics.** This new species, endemic in Taiwan, occurs in low to mid-elevations of northern Taiwan. The adults occur only in May based on collecting records, possibly univoltine.

**Taxonomic notes.** This new species is superficially similar to *C. nigristigmata* (Leech, 1900) (Figs 32, 51, 52, 65, 74, 89) in S. China in having the forewing reniform stigma dark brown and V-shaped. The genital structures of this new species actually shows its closest relationship with *C. ochreistigma* (Leech, 1900) (Figs 31, 53, 54, 66, 75, 88) in S. China rather than *C. nigristigmata*, which is close to *C. hani* Chen, 1992 and *C. subhani* Zhang & Han, 2009 in Xizang (= Tibet), W. China, in the genital structures. *C. ilana* and *C. ochreistigma* form a separate lineage in *Cidariplura* based on three particular character states of the male genitalia: the costal process heavily sclerotized and broader with a ventral semi-circular expansion; the saccular process digit-like without hair tufts; and a pair of broad lateral sclerites of ductus bursae fused at the basal portion.

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