

## NOTE

### Unique genitalic structure in a West African lycaenid butterfly, *Liptena seyboui* Warren-Gash & Larsen, 2003 (Lepidoptera: Lycaenidae: Poritiinae: Liptenini)

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## INTRODUCTION

*Liptena* Westwood, [1851] is a large, quite heterogeneous genus distributed solely in the Afrotropical region with the majority of species being restricted to the main Guineo-Congolian forest zone and only a few occurring in the southern (Zambezi) and northern (Guinea savannah) transition zone and dense woodland, savannah area (Larsen 1991, 2005).

Male genitalia of *Liptena* are discussed extensively by Stempffer (1967) and Stempffer *et al.* (1974), who also illustrated genitalia of at least one species of each defined species group in the genus. Many of them are rather simple often with crescentic uncus, long and slender sub-unci, oval, bi-lobed valvae, where one or both of the tips end in longer, tentacle-like process (Fig. 1). Two species groups with very different genitalia have already been separated from *Liptena* (*Obania*, *Kakumia*) (Collins & Larsen, 1998).

*Liptena seyboui* Warren-Gash & Larsen, 2003 was described from a small type series collected at a single locality, Alépé Forest in eastern Ivory Coast (Collins *et al.*, 2003). It was subsequently caught by ABRI collectors also in Ghana (Tano Ofin), but the butterfly remains a real rarity. The specimens in the type series were collected high with long handle nets, as with the Liberian specimen and the species could be associated with arboreal *Crematogaster* ants, similarly to many of its congeners, many of which occur locally around *Crematogaster*-infested trees. For these reasons, it is not totally surprising that a male was captured in the Wologizi Mountains in Liberia during a research expedition by Gábor Simonics, which is a significant range extension to the west. Warren-Gash & Larsen in their description have already mentioned the species' special genitalic characters calling it an "unusual excrescence", but the original drawings could not reproduce its unique features, which we describe below, supported by high resolution images that were not

possible to produce during the time of description. The Liberian specimen is also illustrated (Fig. 2).

*Specimen data:* ♂ LIBERIA, Wologizi Mountains, Ridge Camp 2, 8°7'20.79"N, 9°56'50.75"W, 883 m, 22–31.xi.2018. General collecting. Sáfián, Sz., Simonics, G. Leg. ANHRT: 2018.43. ANHRT unique number: ANHRTUK00058074.

Stempffer's (1967) terminology of genitalia characters are used to described the genitalic features of *L. seyboui* with slight modifications, where no appropriate association was possible. Genitalia were dissected using KOH solution to dissolve soft abdominal tissue. For examination and photography, Nikon SMZ25 stereomicroscope was used with Nikon DS-Fi1 digital camera adapter and NIS Elements imaging software. The plates were edited using Adobe Photoshop CC 2018 photo editor and Adobe Indesign desktop publishing software.

## MALE GENITALIA

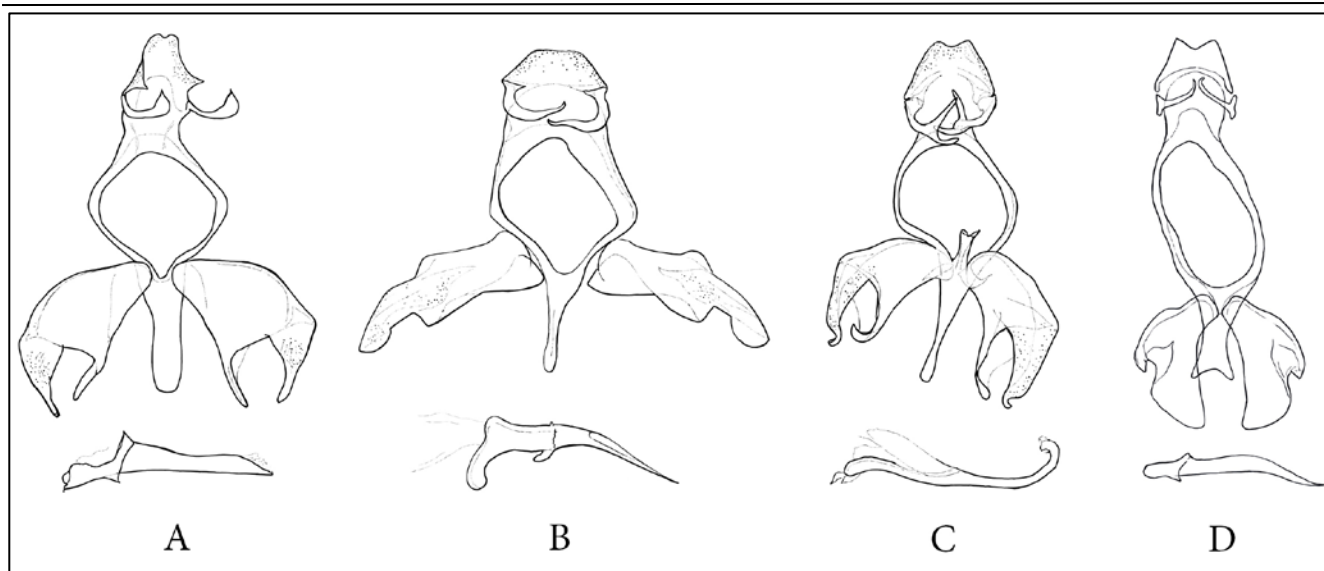
(Figs 3–4) Uncus crescentic. Long, curved sub-unci and tegumen as in multiple species within the genus, also similar to those in *Cephetola*, slightly more slender. Saccus very long (almost as long as tegumen dorsoventrally), protruding downwards, spatulate (fish-tail shaped in posterior view). Weakly sclerotized fulcrum inferior forms a ring. Shape of valva similar to many other Liptenini, with long, tentacle-like saccular process (lower tip), bends slightly upwards (in lateral view). Costal lobe of valva ends in a complex structure, which is probably characteristic of the species. Upper lobe or processus complex with modified appendix on tip, unique to *L. seyboui*. Tip ends in rather weakly sclerotized, soft and bursa-like discoid lump, with long stick or tentacle-like process protruding downwards, almost transverse to valve.

The process is so unique in appearance that is highly diagnostic to the species. Unfortunately the male genitalia of the supposedly closely related *L. eketi* are not known but is suspected to express similarities. As Warren-Gash & Larsen's (2003) highly schematic original drawings match the illustrated Liberian specimen, it is most unlikely that these unique genitalic features are results of

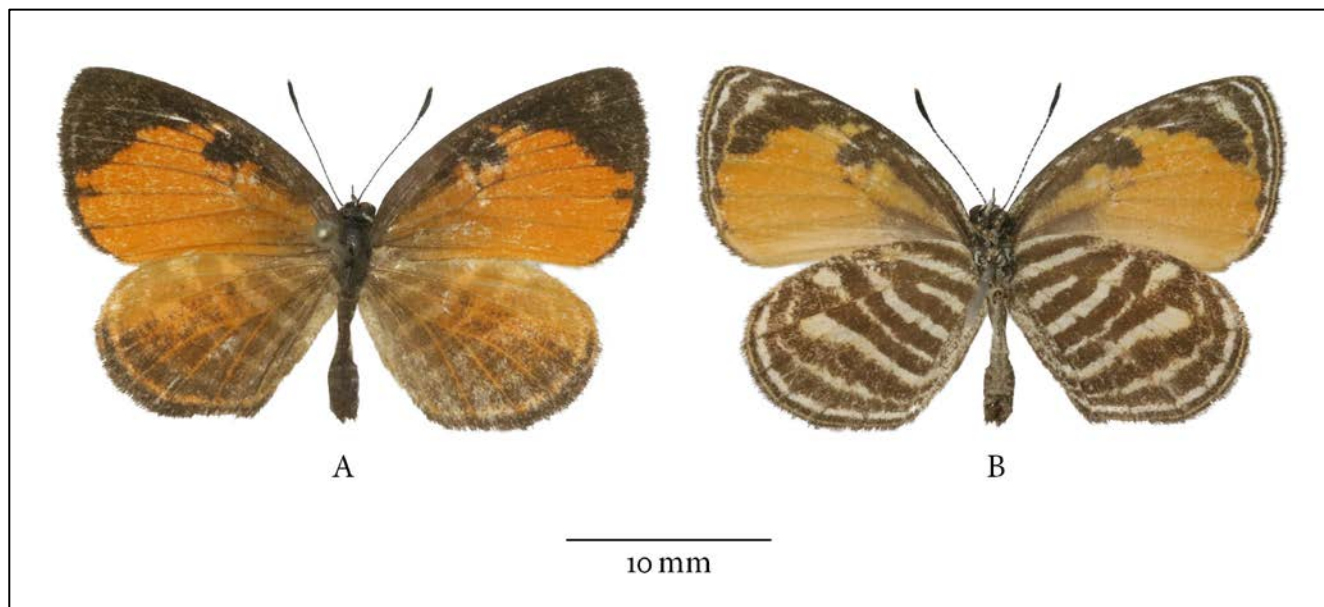
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**Figure 1** – Male genitalia of *Liptena ferrymani ferrymani* (A), *L. modesta* (B), *L. rochei* (C) and *L. batesana* (D) [re-drawn from Stempffer's (1967) and Stempffer *et al.*'s (1974) original].



**Figure 2** – *Liptena seyboui* male (Liberia, Wologizi Mountains) ANHRT unique number: ANHRTUK58074

deformation caused by inadequate development or other unknown reasons.

The slightly s-shaped aedeagus also carries features unusual to Liptenins. Its posterior tip is broad and blunt, almost squat, while the anterior end is more strongly sclerotized, ovoid with a small, weakly sclerotized sack, fortified with three claw-like structure.

#### ACKNOWLEDGEMENTS

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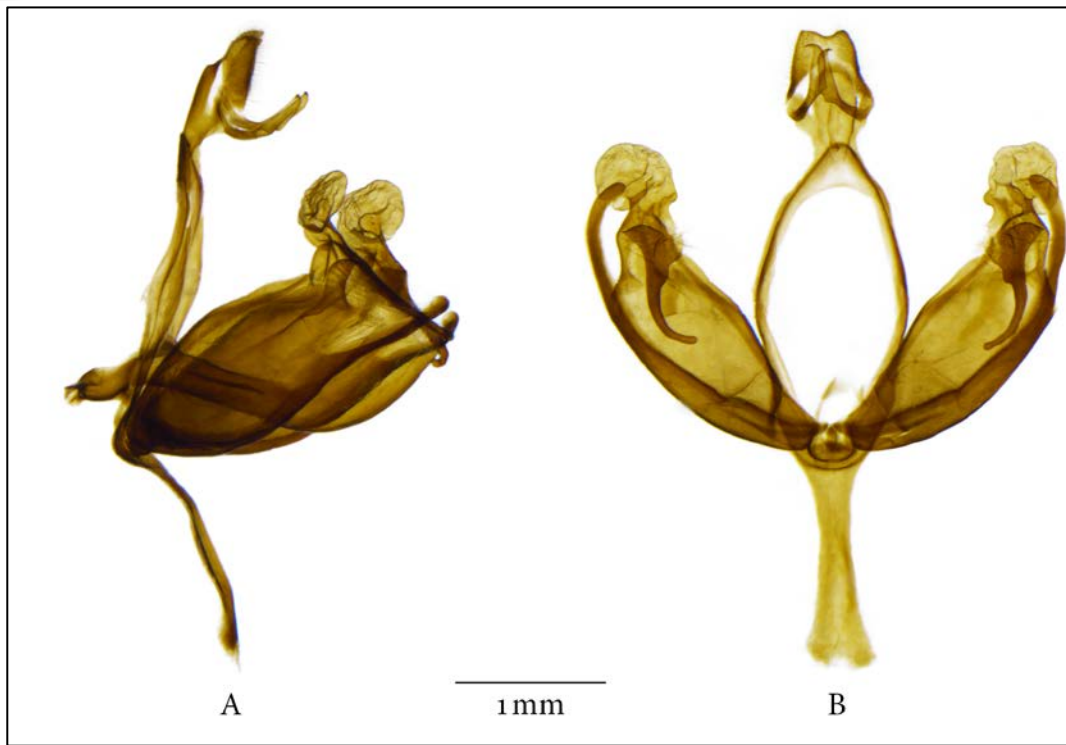
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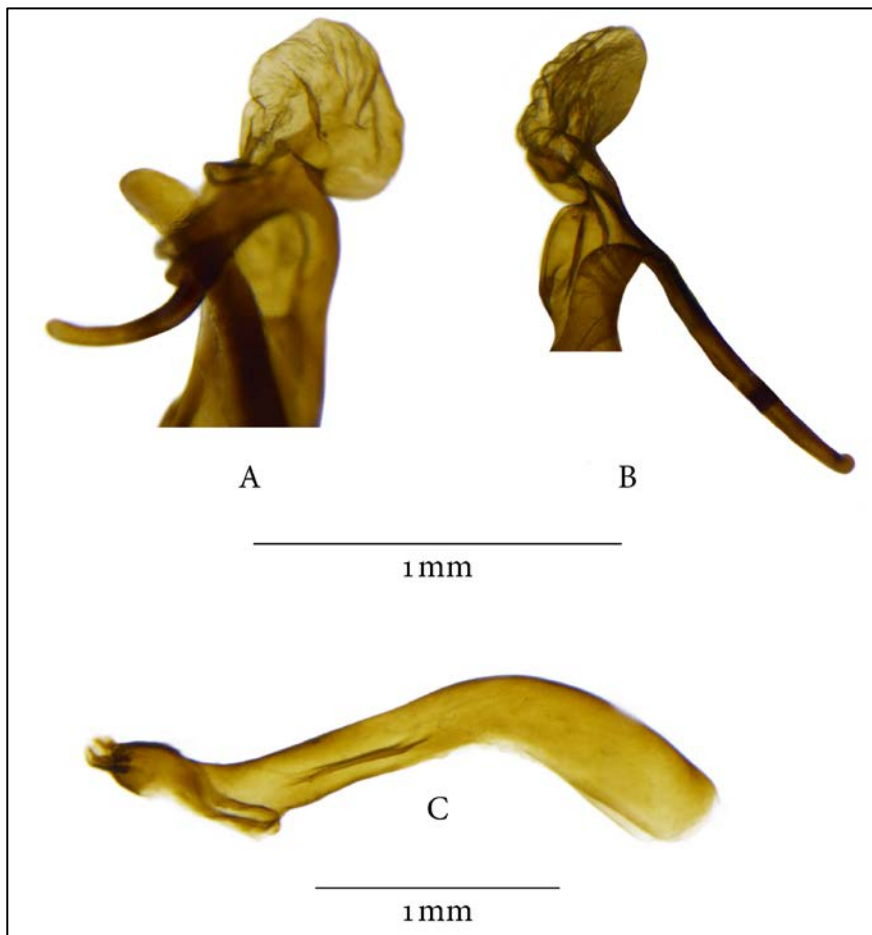
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**Figure 3** – Male genitalia of *L. seyboui*: lateral view in natural position – A, posterior view pressed on slide – B.



**Figure 4** – Male genitalia of *L. seyboui*: unique process on dorsal tip (posterior view in natural position) – A, unique process on dorsal tip (lateral view) – B, aedeagus in lateral view – C.