

Bogotá, COLOMBIA

Notes and life cycle of *Drymoea veliterna* (Lepidoptera: Geometridae)

Liliana Prada-Lara¹, Martha C. Gómez² & Sergio Andrés Vargas³

¹Pontificia Universidad Javeriana, ²Gimnasio Campestre, ³Jardín Botánico de Bogotá José Celestino Mutis

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1 Female laying eggs



2 Eggs



3 Eggs ready to hatch



4 First instar (L1)



5 First instar (L1)



6 Second instar (L2)



7 Second instar (L2)



8 Third instar (L3)



9 Third instar (L3)



10 Fourth instar (L4)



11 Fourth instar (L4)



12 Fifth instar (L5)



13 Fifth instar (L5)



14 Fifth instar (L5)



15 Prepupa



16 Prepupa



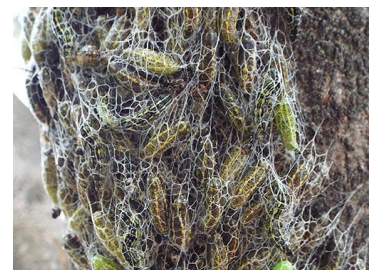
17 Pupa with larva exuviae on the top



18 Pupa prior to adult eclosion



19 Pupa aggregation under the stereoscope



20 Pupa aggregation. Notice the silk cocoon

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21 Pupa colony. Notice the silk cocoon



22 Adult emerging



23 Adult expanding its wings



24 Adult expanding its wings



25 Adult expanding its wings



26 Adult expanding its wings



27 Adult drying its wings



28 Head close-up. Notice the yellow proboscis



29 Copulation



30 Male



31 Female



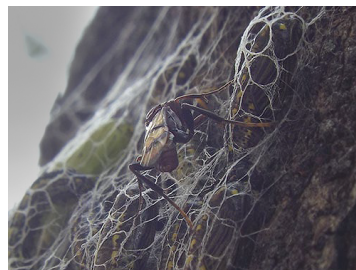
32 Male genitalia



33 Female genitalia



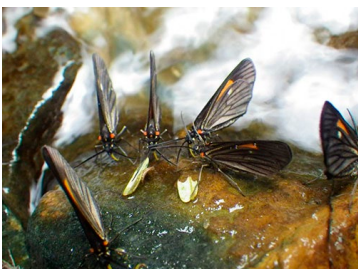
34 *Compsocryptus* sp. (Hymenoptera: Ichneumonidae) on pupa



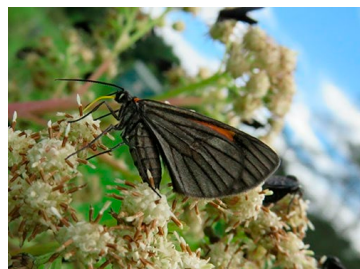
35 *Compsocryptus* sp. (Hymenoptera: Ichneumonidae) on pupa



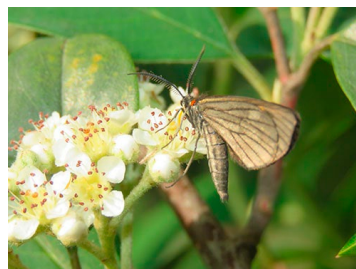
36 Sarcophagidae (Diptera) feeding on empty pupa



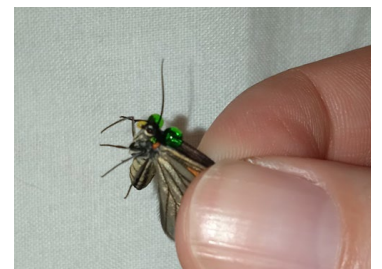
37 Adults puddling
Alberto Galindo-Cardona



38 Female feeding
Omar Javier López



39 Male feeding
Juan Carlos Caicedo



40 Defensive thoracic liquid

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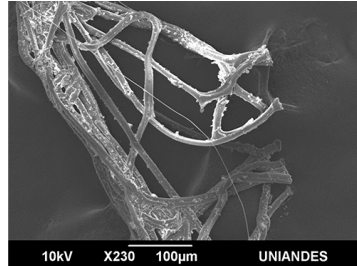
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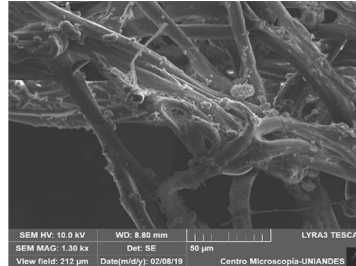
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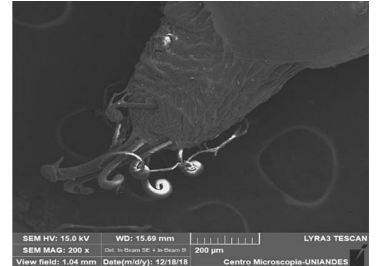
41 Defensive thoracic liquid



42 Cocoon silk fibers



43 Cocoon silk fibers



44 Pupa last abdominal segment

Photo: Santiago Abril

Photo: Santiago Abril

45 *Croton* spp. with larvae46 *Croton* spp. with larvae47 *Croton* spp. with larvae48 *Croton* spp. with larvae

49 Leaf defoliation

Known distribution. Bolivia, Colombia, Ecuador, and Perú. Distribution in Colombia: Antioquia, Boyacá, Caldas, Cundinamarca, Huila, Meta, Norte de Santander, Quindío, Risaralda, Tolima, and Valle del Cauca.

Taxonomic notes. The species was described in Chancamayo, Perú as *Nelo veliterna* Druce, 1885. However, over time different synonyms have been used: *Melanoptilon veliterna* Druce, 1885, *Nelo racilia* Druce, 1899, *Sangalopsis microleuca* Dognin, 1910, and *Drymoea microleuca*. The genera *Melanoptilon*, *Nelo* and *Sangala* were synonymized by Pitkin (2002) into *Drymoea*, transferring the species into the latter genus. These changes have created confusion when using the correct and valid name of the species which is *Drymoea veliterna* (Druce, 1885).

Biology. The species can be found throughout the whole year, having the highest seasonality picks on March, June, and November. A single record of an unknown ectoparasitic wasp has been registered in Bogotá. On reared adults, a liquid came from the thorax when specimens were disturbed. This might suggest the presence of defensive glands on the thorax.

Host plants. In Bogotá city, the larvae can be found on *Croton* spp. It seems larvae and adults obtain nutrients from their host plants, giving them unpalatability as a defense strategy.

Future Research. Associations with the *Croton* species where larvae can be found might explain the different coloration found on the specimens (ex: yellow and dark-green phenotypes). Likewise, caterpillars do not feed on all *Croton* species and do not defoliate the trees equally (Fig 45-49). This could indicate how the influence of environmental and/or physiological factors from the host plant could affect the herbivore rate. It also might be interesting studying the presence of defensive glands on the thorax for Geometridae moths, and their composition (alkaloids, proteins, etc.). Future research on *Drymoea veliterna*, their host plants, and their defensive glands, will for sure open a new chapter for Ennominae moths in Colombia.

Sources: <https://www.inaturalist.org/>.

Abril, S. 2019. Caracterización y análisis ecológico preliminar de la estructura de las adaptaciones externas de la etapa pupal de *Drymoea veliterna* (Lepidoptera: Geometridae). Monografía grado 11°, Gimnasio Campestre, Bogotá, Colombia. 36 pp.

Hernandez, L. C.; Fajardo, G.; Fuentes, L. S.; Comoglio, L. 2017. Biology and reproductive traits of *Drymoea veliterna* (Lepidoptera: Geometridae). Journal of Insect Biodiversity 5(12): 1-9.

Pitkin, L. M. 2002. Neotropical ennomine moths: a review of the genera (Lepidoptera: Geometridae). Zoological Journal of the Linnean Society 135: 121-401.