

First record of *Homoeographa lanceolella* Ragonot (Lepidoptera: Pyralidae: Phycitinae) in Chile

Primer registro de *Homoeographa lanceolella* Ragonot (Lepidoptera: Pyralidae: Phycitinae) en Chile

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The Neotropical genus *Homoeographa* Ragonot, 1888 (Lepidoptera: Pyralidae: Phycitinae) currently includes two species: *H. lanceolella* Ragonot, 1888 from Peru and *H. mexicana* Neunzig, 1994 from Mexico (Nuss *et al.* 2003-2015). Current knowledge of the two species is restricted to the original descriptions, including the male and the female for the type species, *H. lanceolella*, and only the male holotype for *H. mexicana*, while their known distribution ranges remain restricted to the respective type localities (Heinrich 1956, Neunzig 1994).

One male and two females of *H. lanceolella* (Fig. 1-4) were collected at light in the Azapa Valley (18°31'S, 70°10'W) (Fig. 5), Arica Province, in the Atacama Desert of northern Chile in 2012 and 2014, providing the first records for this species in Chile. This discovery greatly expands the range of *H. lanceolella*, as its type locality (Callao, Peru) is located approximately 1,300 km northwest of the Azapa Valley.

The three specimens reported here were well scaled when they were collected, suggesting that they were freshly emerged. Consequently, they do not appear to be vagrant specimens coming from the type locality. Their larvae most certainly would have matured near the sampling site, which means that the geographic range of *H. lanceolella* may include a great part of the coastal desert of southern Peru and northern Chile.

Geographic ranges restricted to the coastal desert of southern Peru and northern Chile have been documented for species of different insect orders (e.g.: Porter 1985, Stange 1989, Howden 2008). In Lepidoptera this pattern has been mentioned for species of several families, including both butterflies and moths, with ranges sometimes also including southern Ecuador (e.g.: Peña & Ugarte 1996, Vargas *et al.* 2013). Thus further sampling is required in this geographic

area in order to characterize better the distribution of *H. lanceolella*.

The first Chilean locality (Azapa Valley) here reported for *H. lanceolella* is in a highly human-modified area characterized by intensive agricultural activities that have strongly transformed the original habitats (Luebert & Plissock 2006). Despite this high level of disturbance, some native phytophagous Lepidoptera species are able to maintain relatively high levels of abundance, sometimes associated with the capacity to use exotic hosts (Vargas 2013, Vargas & Mundaca 2014). Although the three Chilean specimens of *H. lanceolella* were not obtained in a quantitative study, as they were fortuitously found at light, it appears that the abundance of this species is low in the sampling site as only three adults have been found in about ten years of surveying for moths in the same place. However, as the biology of its immature stages remains unknown, it is not possible to attempt to correlate the low abundance with human disturbances.

Larvae of Phycitinae are mostly leaf rollers, although a great diversity of other habits have been also reported for this group, including some species that are seed feeders, inquilines or predators (Munroe & Solis 1998). Thus additional sampling would be useful to understand better the biology of this little-known moth in the arid environments of the Atacama Desert.

Voucher material is deposited in the "Colección Entomológica de la Universidad de Tarapacá" (IDEA), Arica, Chile.

Material examined: One male, one female Azapa, Arica, Chile, August 2014, H.A. Vargas coll. One female Azapa, Arica, Chile, October 2012, H.A. Vargas coll.

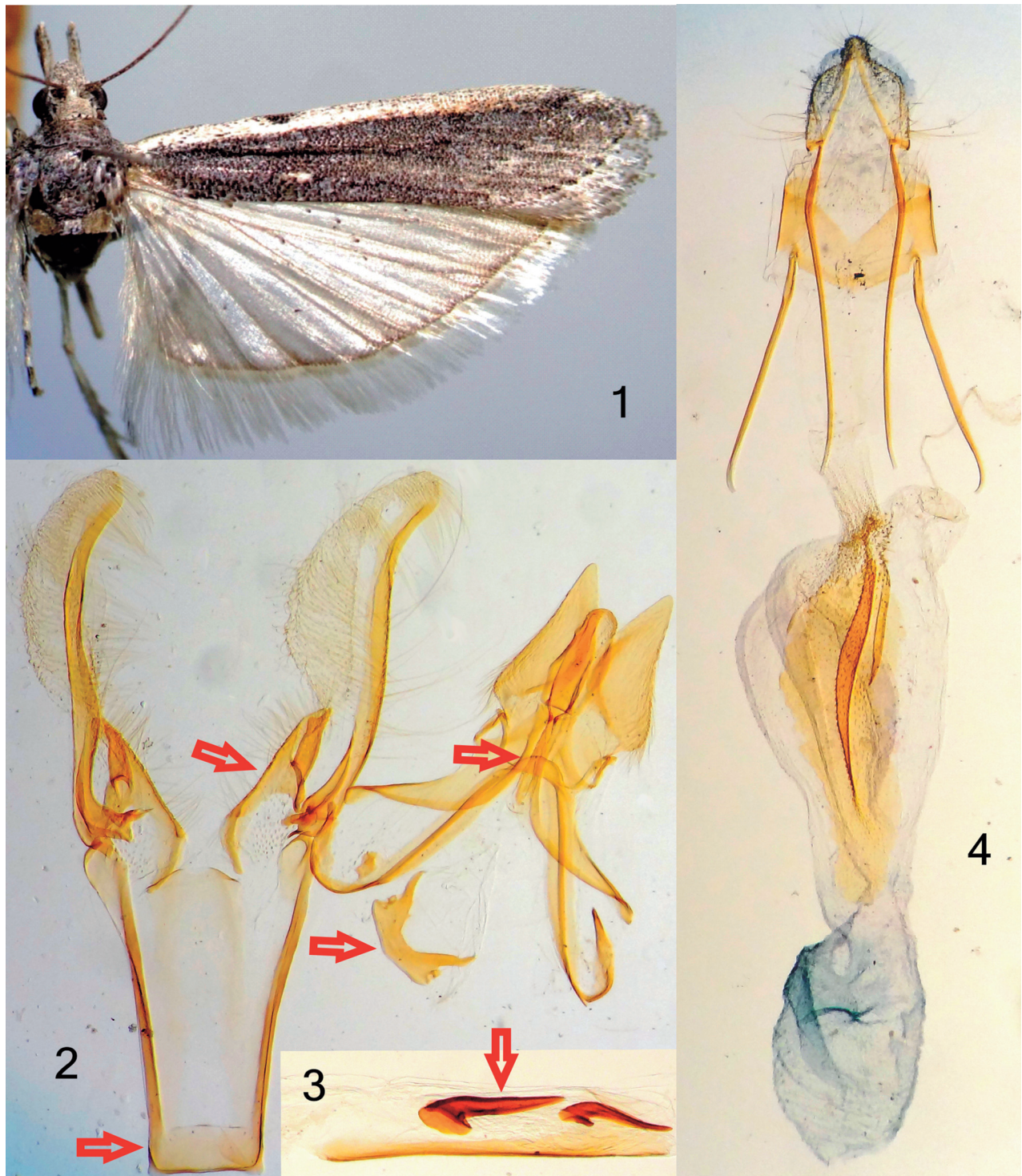


FIGURE 1-4. *Homoeographa lanceolella*. 1) Female adult in dorsal view; 2) male genitalia, aedeagus removed; 3) aedeagus; 4) female genitalia. Arrows in the male genitalia indicate the main morphological differences with *Homoeographa mexicana*.

FIGURA 1-4. *Homoeographa lanceolella*. 1) Hembra en vista dorsal; 2) genitalia del macho, aedeagus removido; 3) aedeagus; 4) genitalia de la hembra. Las flechas en la genitalia del macho señalan las principales diferencias morfológicas con *Homoeographa mexicana*.



FIGURE 5. Geographic position of the first Chilean record of *Homoeographa lanceolella* (black triangle) in the Azapa Valley (18°31'S, 70°10'W), Arica Province.

FIGURA 5. Posición geográfica del primer registro chileno de *Homoeographa lanceolella* (triángulo negro) en el Valle de Azapa (18°31'S, 70°10'W), Provincia de Arica.

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