

NEW *ITHUTOMUS* SPECIES FROM CHILE (LEPIDOPTERA: YPONOMEUTIDAE)

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ABSTRACT.— A new species of microlepidoptera, *Ithutomus valdivianus* n. sp., from Chile, is described. Its host and its diagnostic characters are indicated.

RESUMEN.— Se describe a *Ithutomus valdivianus* sp. nov. de microlepidóptero de Chile; se señala su hospedero y se indican los caracteres diagnósticos para la identificación de las especies del género *Ithutomus*.

KEY WORDS: biology, hostplants, immature stages, *Ithutomus valdivianus* n. sp., larvae, Neotropical, South America, Winteraceae.

The webbing together of terminal leaves of *Drimys winteri* J. F. (Forster) (Winteraceae) was observed for a number of seasons in the areas that surround Valdivia, Chile. These webbings were considered to be similar to those described by Beéche *et al.* (1990) and Davis (1991) on *Drimys winteri* var. *andina*.

When these webbed leaves were opened up, larvae were observed to be present in some, which were collected for rearing and identification. As a result, specimens of an unknown species in the genus *Ithutomus* were discovered, which is described in this paper.

MATERIALS AND METHODS

The entomological material used in this study comes mainly from the samples of webbed leaves of *Drimys winteri*, collected in the localities of Santo Domingo and Teja Island, in the province of Valdivia (X Región in Chile), during the month of March, 1988. These webbed leaves were maintained at 20°C (±5°C) y 70% (±10%) relative humidity until adults emerged. Two adult females, collected from the same area as the larvae, and donated by Mr. E. Kraemer, were also used. A pair of adults reared from larvae were dissected and the genitalia from both sexes were studied. The species was then described based upon the external morphological characters, which consists largely of distinct wing patterns, and also upon morphological characteristics of the male and female genitalia. Genitalic terminology follows Klots (1970).

Type material has been deposited in the collections of the Museo Nacional de Historia Natural, Santiago (MNHN), Museo de Zoología de la Universidad de Concepción, Concepción (MZUC), and in the collection of Mr. Marcos Beéche, Santiago (CMB), all in Chile.

Ithutomus valdivianus Beéche and Parra, sp. nov.

Adult (Fig. 1).— Length of forewing 24–26mm. Forewing coloration, with a longitudinal band of dark brown scales on the forewing. **Head:** Vestiture of frons has yellow scales and a small dark brown tuft just below the antennal bases; dark reddish-brown vertex and light reddish-brown scales between the antennal bases. Antenna with scape that is dark reddish-brown dorsally and yellowish ventrally; pedicel and flagellomeres with a dorsal ring of dark brown scales that decreases dorsally along the antenna. Maxillary palpus yellow with some dark brown scales. Labial palpus curved upward, the first segment reddish-brown, second segment distal end yellowish, and third segment yellowish. **Thorax:** Patagium dark reddish-brown. Tegula and mesoscutum grey. Mesoscutellum grey, a little darker than the mesoscutum. Prothoracic leg has trochanter and femur with dark brown scales; tibia with dark brown scales, and extreme distal region is yellowish; tarsus yellowish. Mesothoracic leg has trochanter with dark brown scales and yellowish; femur

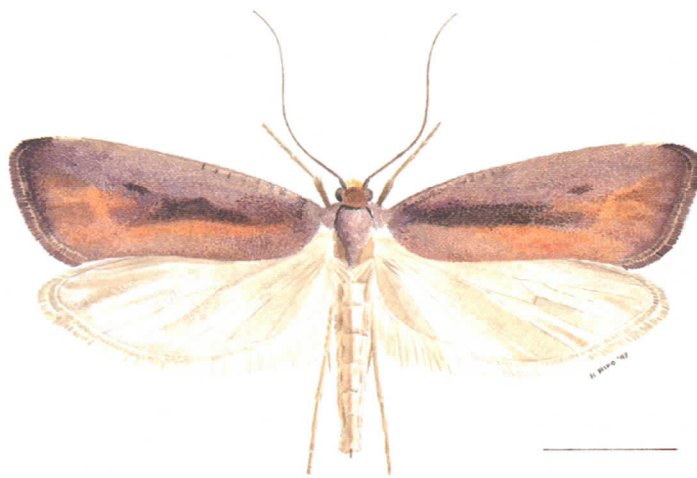


Fig. 1. Imago of *Ithutomus valdivianus* sp. nov. Scale 0.5mm.

and tibia dark brown; tarsus yellowish with some dark brown scales on the first tarsomere. Metathoracic legs yellowish. **Forewing:** Dorsum with a longitudinal band of dark reddish-brown scales forming an irregular outline that extends from the wing base to the discal cell; between this cell and the costal margin, there are grey scales; the costal margin has 4–6 small groups of dark brown scales; between the longitudinal band and the internal margin of the wing, the scales are dark reddish-brown; between the discal cell and the termen, the scales are reddish-brown, and the apical area is dark reddish-brown. Forewing ventral side with light golden brown scales. Ventral and Dorsal sides of hindwing are light golden brown. **Abdomen:** General coloration yellowish. **Male genitalia** (Fig. 2–3): Uncus absent. Socius well developed, large, smooth, slender arm terminating in an enlarged truncate apex. Subscaphinum a slender base that enlarges to form an elongate, triangular, nearly conelike apex. Vinculum, along with segment 9, form a nearly circular ring. Saccus broad with a truncate apex. Valve a broad lobe and a rounded apex with a conelike basal projection. Aedeagus nearly cylindrical, highly curved on the posterior half. **Female genitalia** (Fig. 4): Papilla analis of subconal form, with a small incision on the extreme distal end. Posterior apophysis elongate, 1.3 times that of the anterior apophysis; in front of the anterior apophysis, towards the distal end, there is a small lobe partly sclerotized and covered with bristles. Ductus bursae a slender, membranous tube equal to anterior apophysis in length. Corpus bursae spherical without signa. Ductus seminalis connects on the side of the base of the corpus bursae.

Types.— **Holotype** ♂: CHILE: X Region, Valdivia, 18 Apr 1988, leg. M. Beéche (MNHN). **Allotype** ♀: CHILE: X Región, Valdivia-Ligüento, 21 Apr 1992, leg. E. Kraemer (MNHN).

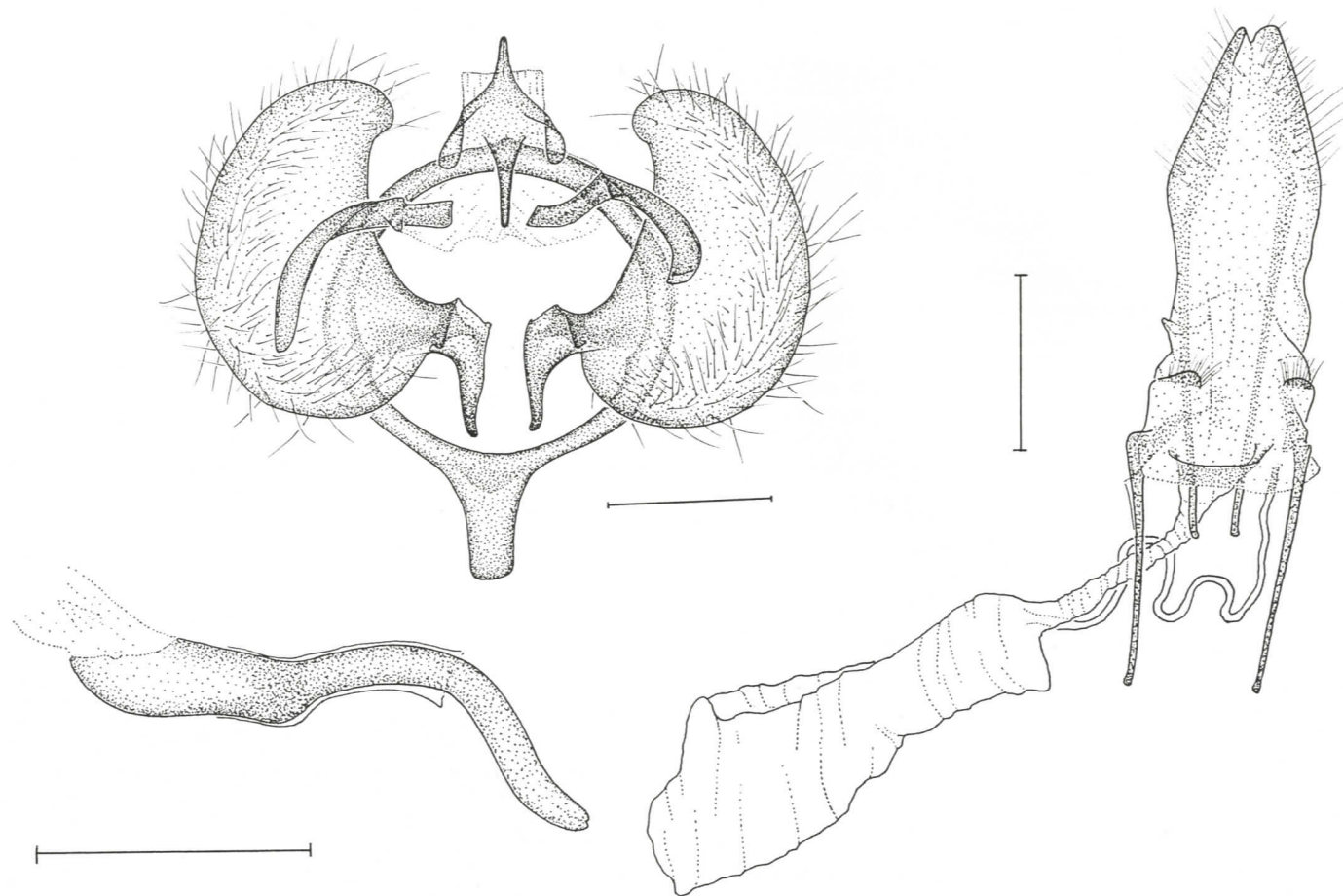


Fig. 2-4. Genitalia of *Ithutomus valdivianus* n. sp.: 2) Male genitalia in ventral view. 3) Aedeagus in lateral view. 4) Female genitalia (all scale lines = 0.5mm).

Paratypes (locality as holotype): Valdivia, 1 ♂ 4. Apr. 1988 (1 ♂), 19 Apr 1988 (5 ♀), leg. M. Beéche (MNHN); 4 Apr 1988 (1 ♀), 19 Apr 1988 (1 ♂), leg. M. Beéche (MZUC); 23 Apr 1988 (2 ♀), leg. M. Beéche (CMB). Valdivia-Ligüento, 21 Apr 1992 (1 ♀) leg. E. Kraemer (CMB).

Etymology.— The name of this species makes reference to the province of Valdivia, Chile, which is the area where it has been collected.

Distribution.— Known only from the province of Valdivia (X Región), Chile. Yet, considering the broad distribution of *Drimys winteri* through the country, it is possible that its geographic distribution could be larger.

Flight period.— April; apparently univoltine.

Hosts.— The species has been collected exclusively in *Drimys winteri* in Valdivian forest. The webbed nests of this moth are found at a height not surpassing 2m.

Comments.— *Ithutomus valdivianus* n. sp., is the second known species to date of the genus *Ithutomus*. Similar to the type species of this genus, this newly described taxa is also associated to *Drimys winteri*, where it rolls and webbs the leaves together, giving an appearance of a paper cone. It is, however, important to note that this action does not produce any serious damage to the host. Even though the terminal buds are contained within the webbing, they are not consumed, which makes possible normal development and growth of the plant; the larvae only consume parts of the leaves. The strict biotic relationship between the two known species of *Ithutomus* and *Drimys winteri*, suggests a possible common ancestor associated with the same host.

KEY TO ADULTS OF *ITHUTOMUS*

1. Moth of an aqua-green coloration, with a longitudinal stripe on the

forewing that has a protrusion that extends to the internal margin of the wing; female genitalia with anterior apophysis half the length of the posterior apophysis; male genitalia has a small lobe close to the base of the valve *Ithutomus formosus* (Butler) 1'. Moth of a grey-brownish coloration, with a longitudinal stripe on the forewing that does not have a protrusion that extends to the internal margin of the wing; female genitalia with posterior apophysis 1.5 times as long as the anterior apophysis; male genitalia with a cone-like projection at the base of the valve *Ithutomus valdivianus* n. sp.

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