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FIRST HOST PLANT RECORD FOR *NOTOFENUSA FLINTI* SMITH, 1973 (HYMENOPTERA: SYMPHYTA: TENTHREDINIDAE)

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Abstract
In the Magallanes Region of Chile, *Notofenusa flinti* Smith, 1973 has for the first time been observed to produce leaf mines on *Nothofagus pumilio* (Poepp. et Endl.) Krasser. (Nothofagaceae). *N. flinti* is discussed to be monophagous on *N. pumilio*.
Key words: Hymenoptera, Symphyta, Tenthredinidae, *Notofenusa flinti*, Nothofagaceae, *Nothofagus pumilio*, monophagous.

Primer registro de planta hospedadora para *Notofenusa flinti* Smith, 1973 (Hymenoptera: Symphyta: Tenthredinidae)

Resumen
Se entrega la primera información biológica, una planta hospedadora, *Nothofagus pumilio* (Poepp. et Endl.) Krasser. (Nothofagaceae) para *Nothofenusa flinti* Smith, 1973 y se discute la posible monofagia de *N. flinti* asociado a *Nothofagus pumilio*.
Palabras clave: Hymenoptera, Symphyta, Tenthredinidae, *Notofenusa flinti*, Nothofagaceae, *Nothofagus pumilio*, monófago.

Introduction

Tenthredinidae is a family of sawflies which contains more than 5500 species (Taeger & Blank 2008). From the Neotropics 326 species are known but a considerable number of additional species remains undescribed (Smith & Pérez 1995; Blank, personal communication). Currently 16 species have been recorded from Chile.

Notofenusa Benson, 1959 is a small genus of leafminer wasps distributed in southern Argentina and Chile, for which Smith (1973, 2003) has recognized 4 species. An additional name, *Tenthredo cognata* Spinola, 1851, has also been associated with *Notofenusa*, but its identity is ambiguous due to the lack of type material.

Notofenusa flinti Smith, 1973 is the only *Notofenusa* species which has been recorded from the Magallanes Region (Faúndez 2007). Besides the collecting data presented by Smith (1973), no additional biological information is known about this species.

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The purpose of this work is to report the larval host plant association of *N. flinti* for the first time.

Materials and methods

Observations were made in the botanical garden "Carl Skottsberg" (53°08'S-70°53'W; 6 m s.n.m), Instituto de la Patagonia, Universidad de Magallanes, in Punta Arenas city, Magallanes Region. The larvae collected have been extracted from leaves and have been maintained in the laboratory in glass bottles and wooden boxes which were partly filled with soil.

The enlarged photos were taken with a digital camera adapted to a stereoscopic microscope.

Results

During the beginning of spring (i.e. latter October and early November) a lot of leafminer larvae have been observed damaging the "lenga" *Nothofagus pumilio* (Poepp. et Endl.) Krasser. (Nothofagaceae) specimens of the Carl Skottsberg botanical garden. Under laboratory conditions, some adults of *Notofenusa flinti* have been obtained from these larvae. Accordingly some additional adults collected on this tree can also be associated to the damage of *N. pumilio*.

The young larvae start feeding along the edge of a leaf (Fig. 1). The later instars may completely consume the leave tissue thus only the upper and lower cuticle remains (Fig. 2).

It is important to remark that all the *N. pumilio* specimens of the botanical garden have been damaged by *N. flinti*.

Fig. 1. Early damage of *Notofenusa flinti* on *Nothofagus pumilio*.

Fig. 2. Late damage of *Notofenusa flinti* on *Nothofagus pumilio*

Discussion

Previously a hostplant association has been published only for one *Notofenusa* species: *Notofenusa surosa* (Konow, 1905) which has been reared from "roble" *Nothofagus obliqua* (Mirb.) Blume (Smith 1973, 2003). The present data on *N. flinti* confirm the idea proposed by Smith that possibly also the other *Notofenusa* species can be found on *Nothofagu*s spp.

In the botanical garden where the present observations have been made, representatives of the native flora of the Magallanes Region are cultivated. Also two other *Nothofagus* species, which occur in this region, *N. antarctica* (G. Forster) Oerst. and *N. betuloides* (Mirb.) Oerst., are grown here in the neighborhood of *N. pumilio* trees. We have observed only two damaged leaves on two specimens of *N. antarctica*, but no adults were collected from these trees and no larvae were found inside the leaves. For this reason *N. antarctica* is supposed not be a larval hostplant of *N. flinti* but we can not exclude this possibility totally.

No other plant species in the botanical garden has been damaged by *N. flinti*, but all *N. pumilio* trees have been found to be infested by this leafminer. Therefore, we believe that *N. flinti* is monophagous on *N. pumilio* but this idea needs be confirmed by information from other localities.

Further research is needed to obtain additional data on the bionomy of *N. flinti* and its economic impact because *N. pumilio* is an important commercial species in southern Chile. So far *N. flinti* has been recorded only from few locations in the Magellanes Region (Smith 1973, present data). But to assess the economic impact of this species it appears also necessary to get a better knowledge about its distribution and about its possible occurrence in other Chilean regions.

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