

THE SIREX WOOD WASP (*Sirex noctilio* F.) - PRESENT STATUS IN URUGUAY

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Pine forests in Uruguay cover about 16% of man made forests representing some 50,000 hectares approximately.

The older stands and also the biggest ones are located in the southern part of the country, on sandy soils in the coast of the Atlantic ocean and Rio de la Plata. The main planted tree in this area is *Pinus pinaster* Ait. followed by other species like *P. radiata* Don., *P. halepensis* L., *P. taeda* L. and *P. elliotii* Engel.

Since the early 1970 until present time, a significative area was also being planted in the northern part of the country, Rivera, Paysandú, Rio Negro and recently Durazno. During 1984-1993 period, more than 11.000 hectares of pine were planted in the above mentioned area.

The first wasp infestation was registered in 1980. Formerly it appeared in isolated dead trees and then gradually started to cause severe damage in pine stands on northwest area of the country.

Some of these pine stands showed up to 70% of trees damaged.

The most injured species was *Pinus taeda* L, while other more resinous species like *P. elliotii* appeared to be more resisting to the attack of this siricid.

The infestation was linked to accidental introduction in sawn timber imported from overseas as well as in packing materials.

Latter on, the pest spread all over the country and it is now present in all pine growing areas.

AVERAGE ATTACK (%) IN DIFFERENT SPACINGS (*)

Species	3.0 X 3.0 M	2.5 X 2.5 M
<i>P. taeda</i>	40.4%	25.7%
<i>P. patula</i>	-	26.0%
<i>P. pinaster</i>	25.0%	-
<i>P. radiata</i>	38.5%	11.0%
<i>P. elliotii</i>	24.0%	18.0%
<i>P. echinata</i>	-	14.0%

<i>P. palustris</i>	-	8.0%
<i>P. halepensis</i>	2.5%	-

* Stand with 20 years. Evaluation done in 1985 (Porcile, com. Pers.)

AVERAGE ATTACK (%) IN *Pinus elliottii* (*)

Spacing	Tree/ha	Average attack (%)
2.0 X 2.0	2.500	11.0
2.0 X 2.5	2.000	8.3
2.5 X 2.5	1.600	7.5
3.0 X 3.0	1111	1.8

* Stand with 20 years. Evaluation done in 1985 (Porcile, com. Pers.)

CRONOLOGY

From 1980 to 1985:

- The wasp was detected
- Samples of the insect were send abroad in order to confirm its identification
- The parasitic wasp *Ibalia leucouoides* (Hochenw.) was found in the Entomology laboratory of Forest Service in Toledo, Uruguay.
- A F.A.O. advisory assisting the Forest Service outlined a first approach on the control of the pest
- *Sirex noctilio* F. was included in the national list of plant pests(23/12/85)

From 1986 to present:

- A private forest owner affected by the wasp introduced the nematode *Deladenus siricidicola* Bedding under technical assistance provided by Faculty of Agronomy.
- The Forest Service created a Department of forests pests and diseases prevention. Monitoring pine pests, included sirex wasp, was one their commitments.
- Plant Protection Committe for the Southern Cone established a Working Group on Forest Protection that had to elaborate a program aimed to organize the control measures against Sirex in the Region.

Surveys carried out in different pine growing areas of Uruguay showed a direct relationship between percent of attacked trees and stand density (number of trees per hectare).

Furthermore, weakness resulting from other factors including other insects attacks,

lower quality stands, poor soils or lack of management, made the attack easy to the wasp.

A proper forest management and the action of natural enemies as *Ibalia* parasitic wasp contributed to the maintenance of a low pest population level.

Preventive strategies aimed to detect new outbreaks of the insect are necessary now and in the future.

The last report on phytosanitary prospection carried out in 1995 by Forest Service Management and Protection Division showed that the sirex wasp is still present in the northeast of Uruguay.

In this area, the contra measures are based on forest management practices mainly.

In the southern region, population of this insect appeared to increase recently. The land owning scheme and the nature of unevenaged and high density stands contributed to make control difficult.