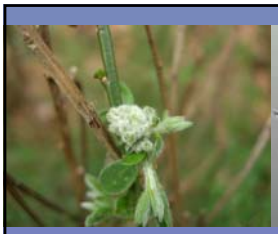


DWM- Project VPI10

Importation and release of *Aceria genistae* on English broom

Jean-Louis Sagliocco

Victoria

Australian Government
Land & Water Australia

DEPARTMENT OF PRIMARY INDUSTRIES | biosciences research

Importation and release of the broom gall mite *Aceria genistae*

1. Project history
2. Outputs
3. What next?

Scotch or English broom

Ranked 31st of Australian weeds

Infests *ca* 200,000 ha (Hosking *et al.* 1998) in NSW, Vic, Tas and SA

243 phytophagous arthropods recorded on Scotch broom (Syrett *et al.* 1996)

3 biocontrol agents released in Australia:

Twig miner *Leucoptera spartifoliella* Hübner (Lep.: Lyonetiidae) in 1993

Sap sucker *Arytainilla spartiophila* Förster (Hem.: Psyllidae) in 1994

Seed beetle *Bruchidius villosus* F. (Col.: Chrysomelidae) in 1995

Aceria genistae (Nalepa) Eriophyidae

Host-specificity tests completed by CSIRO & NSW DPI

Approval for release granted to CSIRO by AWC and BA in 2003 but project abandoned

DPI proposal supported by DWM in Sept 2006

Project objectives

Import colonies of the mite

Rear *A. genistae* under quarantine conditions

Conduct observations on the mite development and preserve specimens for identification

Request approval for release

Release mite and establish colony for mass-rearing and re-distribution

Transfer mite colony to state agencies (Tas and SA)

Establish nursery sites in Victoria and monitor establishment

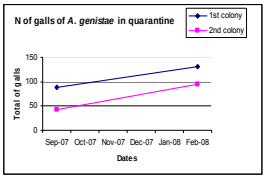
Imports

AQIS approval given to re-import mite from southern France where original biotype tested was collected

1st mite colony imported by DPI in November 2006 (autumn generation)

2nd colony imported in May 2007 (spring generation)

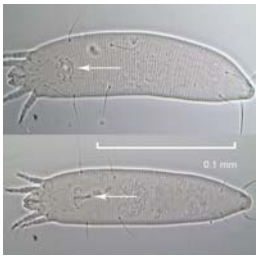
A. genistae development



Observations

- Single mite inoculation technique
- Symptoms of gall formation appear after 4-6 months
- Mites feeding cause gall formation
- Galls continue to develop if conditions are favourable
- Over 150 mites in one 4 mm diam. gall
- Majority of mites are females
- Harvest of adults possible after 8-10 months
- Gravid females migrate to new buds or new plants

A. genistae traits



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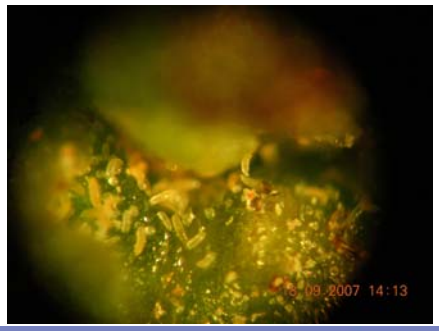
- Females 165-225 µ long
- Males 165 µ long
- low ♂/♀ sex ratio (about 0.05:1)
- Juveniles and adults in the same gall

A. genistae traits



A. genistae damage

Outputs

Mite released from quarantine in 2008
Mass-rearing initiated
Mite colonies transferred to partners: TIAR and AMLR NRM

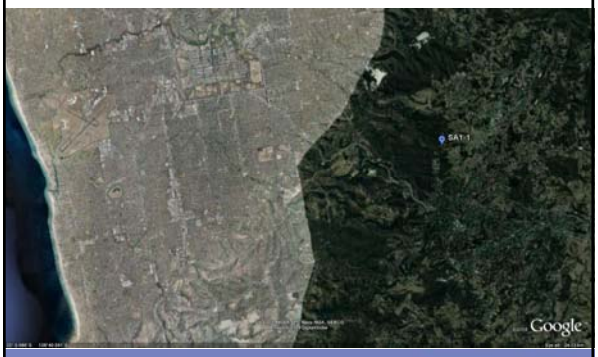
Releases:

- 8 releases in Victoria 2008-09 in Alpine National Park by DPI (live mites recovered from 2 of the Oct 2008 releases)
- 7 releases in Tasmania in 2009 (TIAR)
- 1 Release in South Australia in Sept 2008 (AMLR NRM)

Releases 2008-09

Victoria

South Australia



What next?

New Federal Initiative, Caring For Our Country

Implementation of weeds biological control for south-eastern Australia

DPI lead agency, partnership with TIAR, DPI NSW, SARDI

Releases of *Aceria* to continue in 2009-2011 in Vic, Tas., SA and NSW

What next?

Inoculation and mass-rearing of *Aceria*

Releases to continue in 2009-2011 in Vic, Tas., SA and NSW

Monitoring and mapping of dispersal

Impact evaluation at plant & site levels

Program evaluation

Acknowledgements

Defeating the Weeds Menace Program

Land & Water Staff

Workshop Organisers

Co-partners: Parks Victoria, TIAR and Adelaide & Mt Lofty NRM

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