

# **GLOBAL INVASIVE SPECIES DATABASE**

FULL ACCOUNT FOR: Gonipterus scutellatus

### Gonipterus scutellatus

Kingdom	Phylum	Class	Order	Family
Animalia	Arthropoda	Insecta	Coleoptera	Curculionidae

**Common name** gorgojo del eucalipto (Spanish), eucalyptus snout beetle (English), eucalyptus

weevil (English), gum tree weevil (English), Eukalyptusrüssler (German)

**Synonym** 

Similar species Gonipterus gibberus

**Summary** Gonipterus scutellatus, or the eucalyptus snout beetle, is native to Australia. It

is specific to *Eucalyptus* species, and *G. scutellatus* is considered to be one of the major defoliators of *Eucalyptus* spp. worldwide. It causes damage to eucalyptus in both larval and adult stages, in particular to the young leaves and repeated defoliation by *G. scutellatus* can lead to tree death. However, the egg parasitoid *Anaphes nitens* has been introduced as a successful

biological control agent in several countries.



view this species on IUCN Red List

# **Species Description**

Please see PaDIL (Pests and Diseases Image Library) Species Content Page Beetles: <u>eucalyptus snout beetle</u> <u>Gonipterus scutellatus Gyllenhal</u>, <u>1833 (Coleoptera: Curculionidae: Entiminae)</u> for high quality diagnostic and overview images.

# **Notes**

Notes on taxonomy and nomenclature: a third species, *Gonipterus platensis* Marelli, was described in Argentina and said to be different from both *G. gibberus* and *G. scutellatus* (Marelli, 1927). Rosado-Neto (1993) treats it as a synonym of *G. scutellatus* (from EPPO, 2005).

# **Habitat Description**

The only hosts are *Eucalyptus* spp., of which the most susceptible are *Eucalyptus camaldulensis*, *Eucalyptus globulus*, *Eucalyptus maidenii*, *Eucalyptus punctata*, *Eucalyptus robusta*, *Eucalyptus smithi*i and *Eucalyptus viminalis* (Griffith, 1959 in Walker 2008).

#### **General Impacts**

Feeding by *Gonipterus* spp. leads to characteristically scalloped leaf edges, with a resultant dieback of shoot tips and development of tufts of epicormic shoots (Walker 2008). *G. scutellatus* are important defoliators of *Eucalyptus* spp. Trees become stunted and may split and die.

**System:** Terrestrial



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### **Management Info**

The mymarid solitary-egg parasitoid *Anaphes nitens*, an Australian native, has been used as a successful biocontrol agent against *G. scutellatus* in several countries. These include Brazil, Chile, Mauritius, New Zealand, South Africa, Spain and the United States. *A. nitens* larvae feed directly on and from within *G. scutellatus* host eggs. (Hanks *et al.* 2000; Santolamazza-Carbone *et al.* 2009; Wilcken *et al.* 2008; Williams *et al.* 1951; Withers 2001).

Chemical methods are not recommended for control of *G. scutellatus* as honey bees are frequent visitors of *Eucalyptus* spp. during its long flowering season. (EPPO 2005).

*G. scutellatus* is listed as an A2 quarantine pest for the European and Mediterranean Plant Protection Organisation (EPPO), and it is regulated by most EPPO countries, particularly the EU. Eucalyptus species introduced into endangered countries in form of plant or cuttings must originate from a pest-free area, or the plants must be free of soil, and treated for *G. scutellatus*. (EPPO 2005).

## **Pathway**

Larvae and/or pupae may be present in soil. (EPPO 2005). Transportation of host. Larvae and/or pupae may be present in soil. (EPPO 2005). On clothing/footwear, hikers' clothes/boots - when disturbed, adult *Gonipterus scutellatus* readily drop from tree branches and cling to whatever they land on. (Hanks *et al.* 2000). Transportation of wood. (Wilcken *et al.* 2008). May be present on plants/plant material. (EPPO 2005).

**Principal source:** European and Mediterranean Plant Protection Organization (OEPP/EPPO), 2005. *Gonipterus gibberus* and *Gonipterus scutellatus* Bulletin OEPP/EPPO Bulletin 35, 368–370

**Compiler:** IUCN SSC Invasive Species Specialist Group (ISSG) with support from the Overseas Territories Environmental Programme (OTEP) project XOT603, a joint project with the Cayman Islands Government - Department of Environment

### Review:

Pubblication date: 2010-09-28

#### **ALIEN RANGE**

[1] ARGENTINA [6] BRAZIL [1] CHILE [2] FRANCE [1] ITALY [1] KENYA [1] LESOTHO [1] MADAGASCAR [1] MALAWI [1] MAURITIUS [1] MOZAMBIQUE [1] NEW ZEALAND [1] PORTUGAL [1] SAINT HELENA [1] SOUTH AFRICA **[2]** SPAIN [1] SWAZILAND [1] UGANDA [1] UNITED STATES [1] URUGUAY [1] ZIMBABWE

### **BIBLIOGRAPHY**

15 references found for Gonipterus scutellatus

#### Managment information

European and Mediterranean Plant Protection Organization (OEPP/EPPO), 2005. Gonipterus gibberus and Gonipterus scutellatus. Bulletin OEPP/EPPO Bulletin 35, 368 370

**Summary:** Available from: http://www.eppo.org/QUARANTINE/insects/Gonipterus\_gibberus/DS\_Gonipterus\_spp.pdf [Accessed 26 July 2010] Hanks, L. M.; Millar, J. G.; Paine, T. D.; Campbell, C. D., 2000. Classical biological control of the Australian weevil *Gonipterus scutellatus* (Coleoptera: Curculionidae) in California. Environmental Entomology. 29(2). April, 2000. 369-375.



# **GLOBAL INVASIVE SPECIES DATABASE**

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#### IUCN/SSC Invasive Species Specialist Group (ISSG)., 2010. A Compilation of Information Sources for Conservation Managers.

**Summary:** This compilation of information sources can be sorted on keywords for example: Baits & Lures, Non Target Species, Eradication, Monitoring, Risk Assessment, Weeds, Herbicides etc. This compilation is at present in Excel format, this will be web-enabled as a searchable database shortly. This version of the database has been developed by the IUCN SSC ISSG as part of an Overseas Territories Environmental Programme funded project XOT603 in partnership with the Cayman Islands Government - Department of Environment. The compilation is a work under progress, the ISSG will manage, maintain and enhance the database with current and newly published information, reports, journal articles etc.

Paine, T. D.; Millar, J. G., 2002. Insect pests of eucalypts in California: Implications of managing invasive species. Bulletin of Entomological Research. 92(2). April, 2002. 147-151.

Santolamazza-Carbone, Serena; Pestana Nieto, Montserrat; Perez Otero, Rosa; Mansilla Vazquez, Pedro; Cordero Rivera, Adolfo, 2009. Winter and spring ecology of *Anaphes nitens*, a solitary egg-parasitoid of the Eucalyptus snout-beetle *Gonipterus scutellatus*. BioControl (Dordrecht). 54(2). APR 2009. 195-209.

Tribe, G. D. 2005. The present status of *Anaphes nitens* (Hymenoptera: Mymaridae), an egg parasitoid of the *Eucalyptus* snout beetle *Gonipterus scutellatus*, in the Western Cape Province of South Africa, The Southern African Forestry Journal, 203: 1, 49 • 54 Walker, K. 2008. eucalyptus snout beetle (*Gonipterus scutellatus*) Pest and Diseases Image Library

Summary: Available from: http://www.padil.gov.au/viewPestDiagnosticImages.aspx?id=771 [Accessed 26 July 2010]

#### General information

CABI, 2010. Gonipterus scutellatus. [Distribution map]. Distribution Maps of Plant Pests, 2010, June, Map 344 (2nd revision)

**Summary:** Available from: http://www.cabi.org/dmpp/?loadmodule=review&page=1155&reviewid=141632&site=164 [Accessed 26 July 2010]

Huerta-Fuentes, Amanda; Chiffelle-Gomez, Italo; Serrano-Garzon, Maryi; Vazquez-Silva, Tatiana; Araya-Clericus, Jaime, 2008. Susceptibility of eucalyptus species to *Gonipterus scutellatus* and electrophoretic profiles of adult marker proteins. Agrociencia. 42(3). APR-MAY 2008. 327-334.

Lanfranco, D.; Dungey, H. S., 2001. Insect damage in *Eucalyptus*: A review of plantations in Chile. Austral Ecology. 26(5). October, 2001. 477-481.

Maltzeff, Paolo; Colonnelli, Enzo, 1994. *Gonipterus scutellatus* Gyllenhal in central Italy (Coleoptera, Curculionidae). Bollettino dell Associazione Romana di Entomologia. 48(1-4). 1993 (1994). 103-105.

**Summary:** Gonipterus scutellatus Gyllenhal is reported from central Italy (Latium) for the first time. The Eucalyptus weevil was thus far reported in Europe only from Italian and French Riviera.

Rosado-Neto, Germano H., 1993. Gonipterinae of the eucalyptus: First record of *Gonipterus scutellatus* in the State of Sao Paulo, Brazil and some notes on *G. gibberus* (Coleoptera, Curculionidae). Revista Brasileira de Entomologia. 37(3). 1993. 465-467.

**Summary:** *Gonipterus scutellatus* Gyllenhal, 1833 is reported for the first time in the State of Sao Paulo, Brazil. Some accounts, synonymies and distribution of this species and of *G. gibberus* Boisduval, 1835 in southern South America are added. A bibliographic list, mainly of South American references of both species, is also given.

Walker, K. (2007) Australian gum tree weevil (Gonipterus gibberus) Pest and Diseases Image Library.

**Summary:** Available from: http://www.padil.gov.au/viewPestDiagnosticImages.aspx?id=874 [Accessed 26 July 2010] Wilcken, C. F.; de Oliveira, N. C.; Sartorio, R. C.; Loureiro, E. B.; Bezerra Junior, N.; Rosado Neto, G. H., 2008. *Gonipterus scutellatus* Gyllenhal (Coleoptera: Curculionidae) occurrence in *Eucalyptus* plantations in Espirito Santo State Brazil. Arqivos do Instituto Biologico Sao Paulo. 75(1). JAN-MAR 2008. 113-115.

Summary: The eucalyptus snout beetle *Gonipterus scutellatus* Gyllenhal was found in Espirito Santo State, Brazil, attacking clonal plantations of *Eucalyptus urophylla* x *E. grandis* (hybrid @urograndis@). The presence of this species in Brazil has been known since 1979, with a geographical distribution restricted to Brazil@s South and S@o Paulo State. The pest@s introduction to the state of Esp@rito Santo was probably accidental and its occurrence has been limited to the central region of the state. Field surveys did not detect the egg parasitoid *Anaphes nitens* (*Hymenoptera: Mymaridae*), which is the main natural enemy of *G. scutellatus*.

Withers, T. M., 2001. Colonization of eucalypts in New Zealand by Australian insects. Austral Ecology. 26(5). October, 2001. 467-476.