

Introduction

The eucalyptus snout beetle, *Gonipterus* spp. are a pest of *Eucalyptus* stands in the world causing serious economic losses. *Gonipterus platensis* (Figure 1) was first reported in Antioquia (Colombia) in 2016, by the Instituto Colombiano Agropecuario -ICA (ICA, 2016), threatening more than 60.000 ha planted with eucalyptus around the country. Classical biological control of these species has worked in some countries using the egg parasitoids *Anaphes nitens* (Girault) and *Anaphes inexpectatus* Huber & Prinsloo, 1990 (Hymenoptera: Mymaridae) and complemented with different natural enemies (NE) in some countries (Nascimento et al. 2017). *A. nitens* had been reported with high efficiency finding *G. scutellatus* egg-masses reaching a parasitism rate of 80–100% of eggs in North-west Spain (Rivera et al. 1999). It is necessary to know *Gonipterus platensis* NE, including the presence of *A. nitens* and *A. inexpectatus*, in local conditions so integrated pest management programs could be designed. This is the first survey of the NE for *G. platensis* in Colombia.

Goal

Identify natural enemies of egg capsules of *Gonipterus platensis* and determine the presence of *Anaphes nitens* and *A. inexpectatus*, as a basis for a program of biological control.

Methods

Egg capsules of *G. platensis* (Figure 2) were surveyed in isolated eucalyptus trees in the municipalities of San Pedro de los Milagros, Don Matías and Rionegro and in eucalyptus plantations in the municipalities Medellín and Caldas in Antioquia (Figure 3). 215 egg capsules were collected from 24th January 2019 to 27th March 2019. In each locality 30.7 eggs capsules were collected on average. Rionegro and Caldas were sampled twice. Egg capsules were collected from shoots and youngest leaves, where NE were also searched. 101 eggs capsules were randomly selected to be dissected (Figure 4) and checked for parasitoids presence. 114 egg capsules were left into plastic containers and maintained at room conditions (26–30 °C, 70-80% HR) for seven days.

Results and discussion

The average number of eggs per capsule was 6.92 (± 0.45), no difference between localities nor repeated sampling were found ($p = 0.05$). It is reported that *Gonipterus scutellatus* Gyll. females lay egg capsules of approximately 8 eggs (Santolamazza & Rivera, 2003). Larvae emerged until five days after egg capsules were collected. Neither eggs nor egg capsules showed evidence of NE.

There are no species of the Gonipterini tribe naturally distributed in Colombia, it is restricted to Australia, New Caledonia, and Fiji, now days assigned to Entiminae subfamily. There is no any other species that form egg masses as the ones that *Gonipterus* spp. forms (covered with excrements). Then the introduction of the Australian egg parasitoids, *A. nitens* and *A. inexpectatus* to control *G. platensis* could be safe. It is expected that these parasitoids show preference for the eggs that are so specific to the species of the genus *Gonipterus* (Loch 2008). Efforts for its importation should be started in a short time.



Figure 1. *Gonipterus platensis* (Marelli, 1926) (Coleoptera: Curculionidae) on *Eucalyptus* sp. leaves.



Figure 2. Egg masses of *Gonipterus platensis* (Marelli, 1926) (Coleoptera: Curculionidae) on *Eucalyptus* sp. leaves.

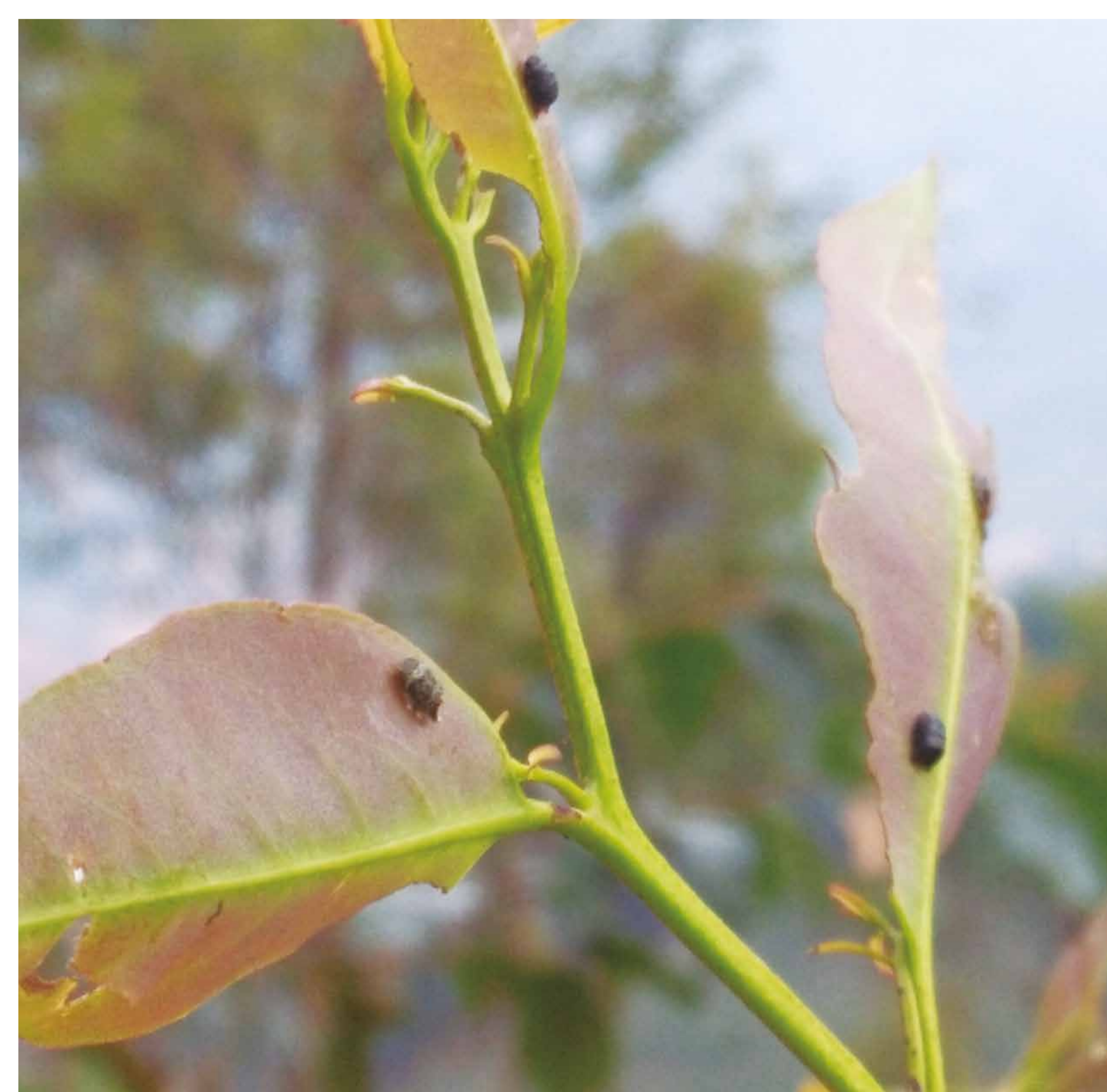


Figure 3. Shoots of eucalyptus with egg masses of *Gonipterus platensis* (Marelli, 1926) (Coleoptera: Curculionidae).



Figure 4. Dissected egg masses of *Gonipterus platensis* (Marelli, 1926) (Coleoptera: Curculionidae).

References

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