

# Detection of symbiotic bacteria in *Anaphes nitens* (Hymenoptera: Mymaridae) and *Gonipterus platensis* (Coleoptera: Curculionidae) eggs



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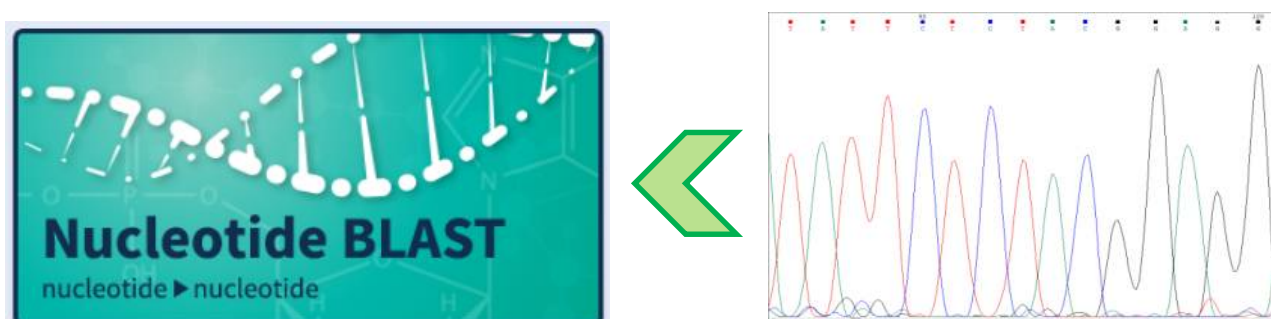
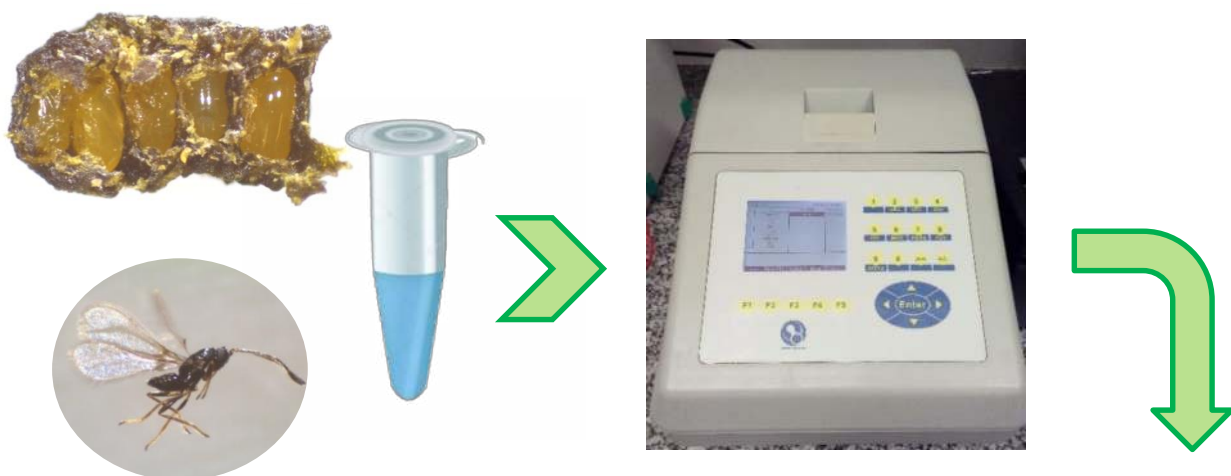
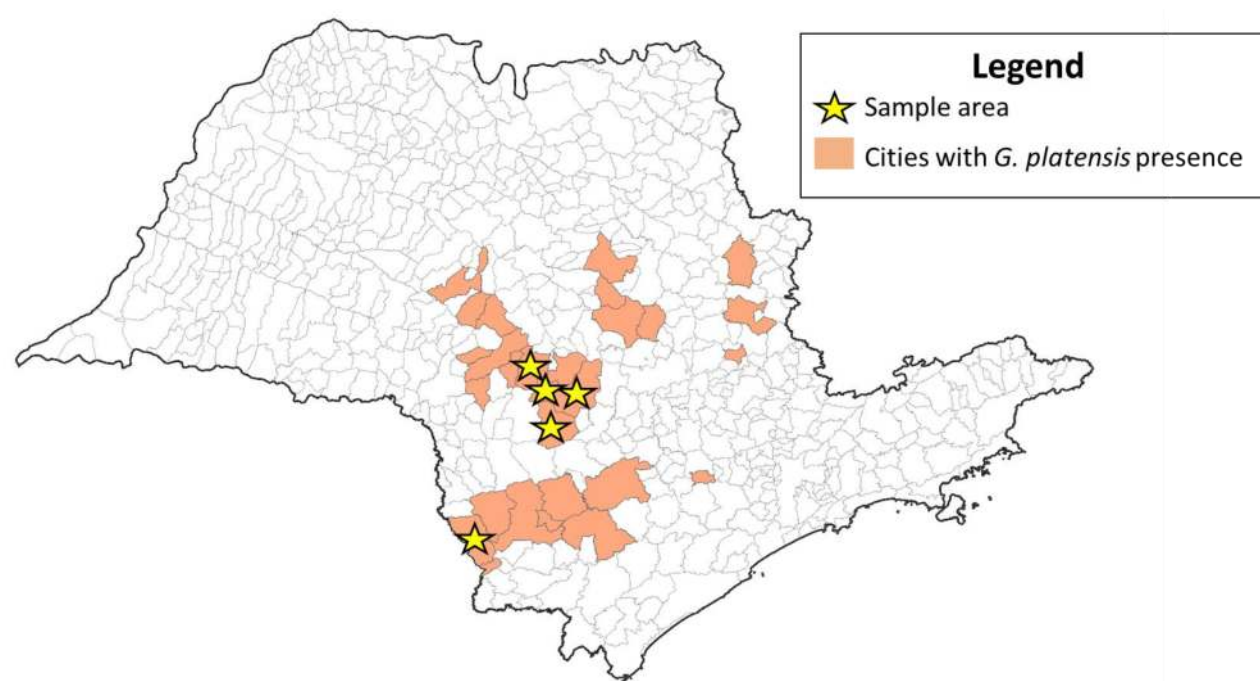
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## Introduction and Aims

Outbreaks of *Gonipterus platensis* (Coleoptera: Curculionidae) in *Eucalyptus* plantations have occurred in the States of São Paulo and Paraná, Brazil, in the last years, due to low parasitism rates of the egg parasitoid *Anaphes nitens* (Hymenoptera: Mymaridae). Symbiotic bacteria can act in different ways on hosts, influencing the parasitism's efficiency. However, there are no records of symbionts in *A. nitens*. This work aims to identify symbiotic bacteria in different parasitoid populations and eggs of their host.

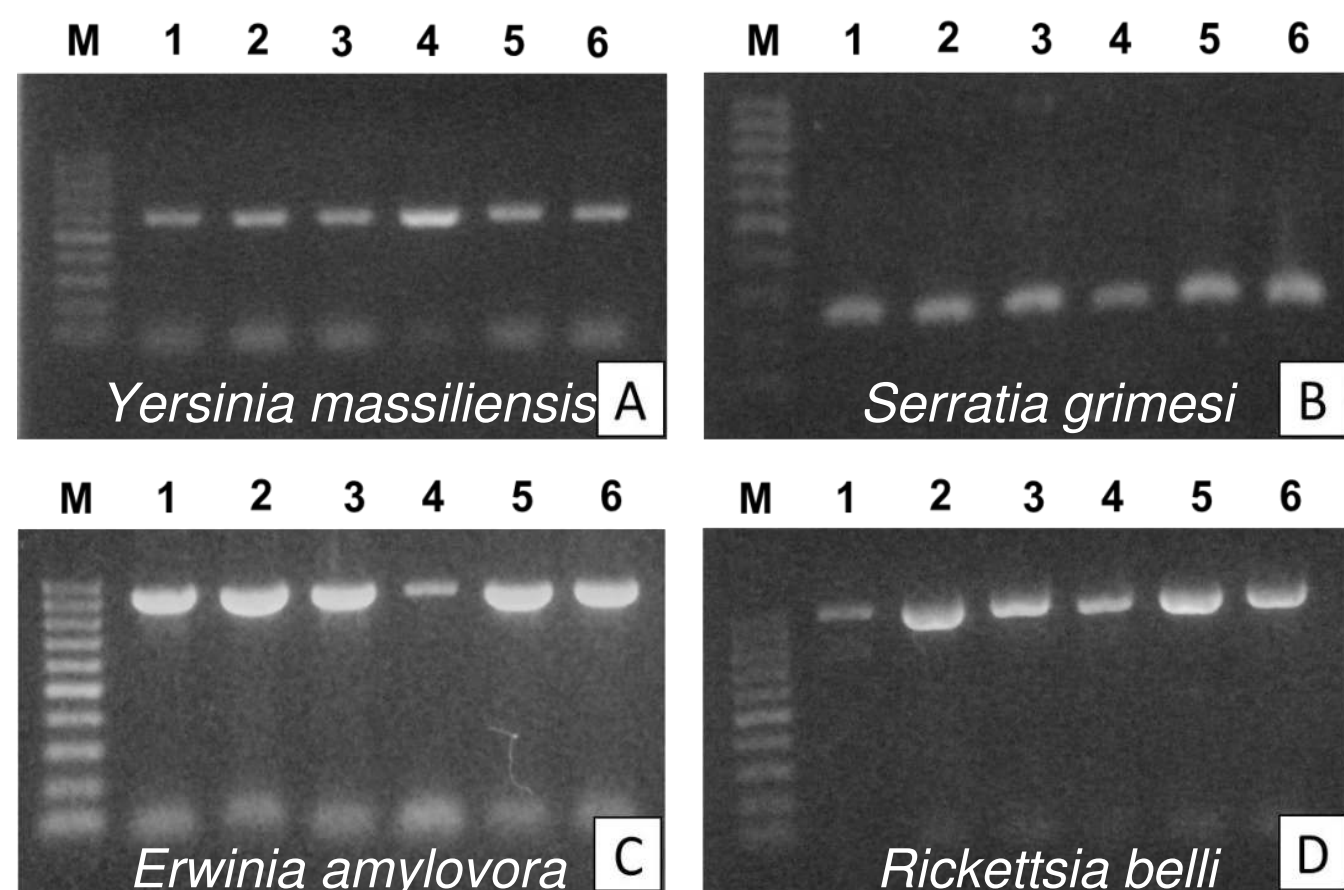
## Material & Methods

Adults of six populations of *A. nitens* (five from São Paulo and one from Espírito Santo state) and eggs from a laboratory population of *G. platensis* were evaluated by PCR using specific primers for identification of nine different genera of cellular endosymbionts



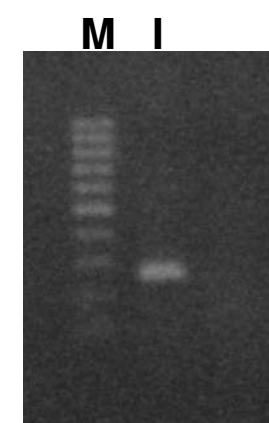
## Results & Discussion

All populations of *A. nitens* had presence of cellular endosymbiont *Rickettsia belli* and bacteria *Erwinia amylovora*, *Yersinia massiliensis* and *Serratia grimesii*.



M: molecular marker; 1: Aracruz, ES; 2: Botucatu, SP; 3: Itatinga, SP; 4: Lençóis Paulista, SP; 5: Pratânia, SP; 6: Itararé, SP

The bacterium *Serratia grimesii* was identified in the eggs of *G. platensis*



M: molecular marker; I: *Gonipterus platensis* eggs

## Conclusions

- All the parasitoids populations have the same endosymbiont bacteria.
- The bacteria *S. grimesii* is found in the parasitoid and the pest, probably is acquired by horizontal transmission.

## Acknowledgment

