

## A mixed colony of *Scaptotrigona depilis* and *Nannotrigona testaceicornis* (Hymenoptera, Apidae, Meliponina)

C. Menezes<sup>1</sup>, M. Hrnčir<sup>2</sup> and W.E. Kerr<sup>3</sup>

<sup>1</sup>Departamento de Biologia, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, SP, Brasil

<sup>2</sup>Departamento de Biologia, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, SP, Brasil

<sup>3</sup>Instituto de Genética e Bioquímica, Universidade Federal de Uberlândia, Instituto de Genética e Bioquímica, Uberlândia, MG, Brasil

Corresponding author: C. Menezes  
E-mail: menezes.cristiano@gmail.com

Genet. Mol. Res. 8 (2): 507-514 (2009)

Received December 12, 2008

Accepted January 26, 2009

Published May 12, 2009

**ABSTRACT.** We describe a case of a spontaneously established mixed colony of two species of stingless bees. The host colony of *Scaptotrigona depilis*, an aggressive bee that forms large colonies, was invaded by workers of *Nannotrigona testaceicornis*, a smaller bee that forms small colonies. The host colony and the invading species colony were maintained in next boxes about 1.5 m apart. The *N. testaceicornis* colony had been recently divided. Observations were made daily for 10 min, and every two weeks the colony was opened for observations within the nest. Initially the host colony bees repulsed the invading species, but as their numbers built up, they were no longer able to defend the entrance. An estimated 60-90 *N. testaceicornis* workers lived integrated into the colony of *S. depilis* for 58 days. During this period, they reconstructed and maintained the entrance

tube, changing it to an entrance typical of *N. testaceicornis*. They also collected food and building material for the host colony. *Nannotrigona testaceicornis* tolerated transit of *S. depilis* through the entrance, but did not allow the host species to remain within the tube, though the attacks never resulted in bee mortality. Aggression was limited to biting the wings; when the bees fell to the ground they immediately separated and flew back. There have been very few reports of spontaneously occurring mixed stingless bee colonies. It is difficult to determine what caused the association that we found; probably workers of *N. testaceicornis* got lost when we split their colony, and then they invaded the colony of *S. depilis*.

**Key words:** Stingless bees; Behavior; Communication; Mixed colony; Nestmate recognition