

A human case of biting by *Nabis punctipennis* (Hemiptera: Heteroptera: Nabidae) in Chile

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Abstract. A case of the damsel bug *Nabis punctipennis* Blanchard, 1852 (Nabidae) biting human in Valparaiso Region, Chile, is described and discussed. The nabid might have been attempting to obtain water and/or solutes.

Key words. Heteroptera, Nabidae, adventitious bite, Chile

Resumen. Se describe y discute un caso de picadura a un humano por el chinche *Nabis punctipennis* Blanchard, 1852 (Nabidae), en la Región de Valparaiso, Chile. Se concluye la obtención de agua y/o solutos como el posible propósito de la picadura.

Palabras clave. Heteroptera, Nabidae, picadura adventicia, Chile

Introduction

Few heteropterans attack humans. Kissing bugs (Reduviidae: Triatominae) and bed bugs (Cimicidae) feed on vertebrate blood, and some willingly or preferentially suck blood from humans. All other heteropterans (except for Polyctenidae ectoparasitic on bats) leave vertebrates alone and they attack humans only adventitiously (SCHAEFER 2000).

In Chile the only heteropterans considered medically important or to bite humans are principally Reduviidae (Triatominae) (i.e. *Triatoma infestans* (Klug, 1834), *Mepraia spinolai* (Porter, 1933), *M. gajardoi* Frías, Henry & González 1998, *M. parapatrica* Frías, 2010) and Cimicidae such as *Cimex lectularius* (Linnaeus, 1758). Although no previous cases of adventitious biting by Nabidae have been reported in Chile, several cases of biting by *Nabis capsiformis* Germar, 1837 also living in Chile, have been described (KINNEAR 1909, MATHESON 1950, HEATH 1985, BRYAN 1933).

The heteropteran family Nabidae, commonly referred to as damsel bugs, contains about 500 species placed in 20 genera (SCHUH & SLATER 1995); four species have been recorded

from Chile: *Nabis punctipennis* Blanchard, 1852, *N. consimilis* Reuter, 1912, *N. capsiformis* Germar, 1837 and *N. faminei* Stål, 1859 (VOLPI & COSCARÓN 2010). Nabids are identified based on prothoracic legs adapted for capturing and handling prey (SCHUH & SLATER 1995). They are generalist predators of small arthropods (LATTIN 1989, SCHUH & SLATER 1995). Several species are economically important in suppressing pest populations (BRAMAN 2000).

Nabis punctipennis is found in Argentina and Chile and has a wide Chilean distribution; this predator of thrips, aphids, small insects and insect eggs has been recorded from different crops in Chile (ARTIGAS 1994). Several authors (e.g. ARTIGAS 1994, REBOLLEDO et al. 2005, ROMERO et al. 2007) have mentioned it from Antofagasta to Magallanes regions; however, its presence in Magallanes has not been documented by valid records. We believe that the erroneous record originated from a comment by REED (1901), who stated that the species *N. faminei* in Magallanes was probably a geographic variety of *N. punctipennis*; however, currently both species are considered valid. It is also possible that the morphological similarity between *N. punctipennis* and *N. faminei* resulted in misidentifications.

Our aim is to document the first known human case of biting by *N. punctipennis*.

Description of the case

The attack by *N. punctipennis* occurred at night, close to the light, in a house in Viña del Mar city (Valparaíso Region, Chile) in February, 2011. An adult attacked the neck of the victim, sucking blood; then the insect was killed, and the last abdominal segments were lost in this process; thus, the sex of the specimen is not known. The specimen is deposited in the collection of E. I. Faúndez. When the specimen was examined, abundant blood was observed in the abdomen.

The symptoms included considerable pinprick-like pain that persisted for about 20–30 minutes. An erythema appeared in the bite zone (about 20 mm in diameter) and lasted for about 4 hours. A minute red spot appeared at the point of stylet entry and persisted for 4 days.

Discussion

Several species of the Nabidae have been reported to bite humans (PÉRICART 1987). As for the genus *Nabis*, cases have been documented for the following species: *N. capsiformis* (KINNEAR 1909, MATHESON 1950, HEATH 1985, BRYAN 1933), *Nabis ferus* (Linnaeus, 1758) (JUDD 1952), *Nabis alternatus* (Parshley, 1922) (ROBERTS & KNOWLTON 1951), *Nabis limbatus* Dahlbom, 1851 (EKBLÖM 1926) and *N. kinbergii* Reuter, 1872 (GYOTOKU 1960, fide SCHAEFER 2000). The symptoms of biting by *N. punctipennis* are similar to the known *Nabis* cases, especially to those described by HEATH (1985). The usual reasons of adventitious biting appear to be defensive or to involve the acquisition of water and/or solutes (SCHAEFER 2000). In the case of *N. punctipennis*, defence was not involved. Because the nabid was not detected until it attacked, and because of the amount of blood found in its abdomen, we believe the bug was attempting to obtain water and/or solutes.

In Chile, many persons (more than 20 from 2005 to present) who had been bitten by unidentified insects, recognized nabids as the offending insects after having been shown their

photographs (E. I. Faúndez, pers. observ.). Because the insects responsible for biting were not collected, nabids were not previously considered to bite humans in Chile; however, such attacks are probably not rare. In addition, because *N. punctipennis* is economically important in helping to control crop pests, persons working in crops could be bitten by this insect.

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