

## Scientific Note

**First hostplant record for *Chinavia chilensis* Grazia, Schwertner & Ferrari (Heteroptera: Pentatomidae)**

Primer registro de una planta hospedante para *Chinavia chilensis* Grazia, Schwertner & Ferrari (Heteroptera: Pentatomidae)

Eduardo I. Faúndez<sup>1</sup>, Alejandra Guzmán<sup>2</sup> and Mariom A. Carvajal<sup>1</sup>

<sup>1</sup>Laboratorio de Entomología, Instituto de la Patagonia, Universidad de Magallanes, Av. Bulnes 01855 Punta Arenas, CHILE. E-mail: ed.fandez@gmail.com

<sup>2</sup>Ismael Valdes 1701, Pedro Aguirre Cerda, Santiago, CHILE.

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**Abstract.** The first hostplant record on *Prosopis tamarugo* (Fabaceae) is given for the Chilean green stink bug *Chinavia chilensis*. Observations were made in San Pedro de Atacama, Antofagasta Region, Chile. It was recorded that the females oviposited on the three. Later, nymphs develop on the fruits. The significance of this finding is discussed and it is concluded that *C. chilensis* may be highly specialized to feed on this vegetal species.

**Key words:** Host, Nezarini, Pentatominae, phytophagy.

**Resumen.** Se registra a *Prosopis tamarugo* (Fabaceae) como la primera planta hospedante de la chinche verde chilena *Chinavia chilensis*. Las observaciones se realizaron en la localidad de San Pedro de Atacama, Región de Antofagasta, Chile. Se pudo constatar que la hembra de la especie oviposita en el árbol y las ninfas se desarrollan sobre los frutos de este. Se discute la importancia del hallazgo y se concluye que *C. chilensis* podría estar altamente especializada en alimentarse de esta especie vegetal.

**Palabras clave:** Fitofagia, hospedante, Nezarini, Pentatominae.

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*Chinavia* Orian, 1965 is a large genus of pentatomid bugs, currently comprising 84 species (Fusternau *et al.* 2013). This genus is distributed in Afrotropical, Nearctic, Neotropic and Andean regions (Schwertner and Grazia 2007). Species of *Chinavia* are phytophages and some of these are considered of economic importance (Schwertner and Grazia 2007; Faúndez *et al.* 2013).

In Chile this genus is represented by six species, which are separated in two groups, one distributed within and above of the Atacama Desert, and the other south of it (Faúndez *et al.* 2013). In the Northern species group we found two species: *Chinavia laeta* (Stål, 1859); which presence in the country remains unclear as it only has been recorded from "Northern Chile" (Faúndez and Carvajal 2011; Faúndez *et al.* 2013). The other one, *Chinavia chilensis* Grazia, Schwertner & Ferrari, 2006, is an enigmatic species known only from a small portion of Northern Chile and one female of the type series is from Arequipa, Perú (Grazia *et al.* 2006). After its original description, Faúndez *et al.* (2013) gave some new records and that is the only information available for *C. chilensis*. The purpose of this contribution is to provide the first host association for this species.

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The observations were made in Bosque de Tamarugos, Ayllu de Solor, San Pedro de Atacama, Antofagasta Region, Chile (22°57'20"S - 68°11'50"W), during March, 2019. In there adults have been observed in *Prosopis tamarugo* Phil. (Fabaceae), and then females oviposited small batches of eggs in rows of 4-7 (Fig. 1). The eggs were oviposited mainly in the branches of the trees. After eclosion, nymphs started to move together and then separated around the tree in search for fruits (Figs. 1-2). In there, nymphs sucked juices and produced a little damage on the fruit (Fig. 3). In the study area, there were observed nearly 100 nymphs of different stages, in the examined trees.

In the place there were *Prosopis tamarugo* and *Prosopis chilensis* (Molina) trees; but *C. chilensis* only was associated with *P. tamarugo*. This plant also match almost exactly its distribution with *C. chilensis* (Chiappa *et al.* 1997; Faúndez *et al.* 2013), the only locality outside the distribution of *P. tamarugo* is Arequipa, Perú; which is still very close to *P. tamarugo* known distribution. The only female known from that locality was collected in 1912, few years after the Pacific War, in which some Chilean and Peruvian localities changed administrations. Thus, label data may not be very exact. Furthermore, Chiappa *et al.* (1997) mention that *Prosopis tamarugo* and *P. flexuosa* have allowed a local faunal system to survive in the arid conditions, and their associations are result of large evolutionary processes. Therefore, the strong association of *C. chilensis* with *P. tamarugo* is not rare. Additionally, several species of *Chinavia* have been also associated with *Prosopis* species (Schwertner and Grazia 2007), which also support this association. This can also explain why this species is very restricted and the *Chinavia* from Central and South Chile are more widespread. The central-south distributed species are generalists, thus not restricted in their distributions by the host plant (Faúndez *et al.* 2013; Faúndez and Rider 2014). Finally, it is good to remark that this is the first Chilean pentatomoid known to be associated with *Prosopis tamarugo*.



**Figuras 1-2.** *Chinavia chilensis* in *Prosopis tamarugo*. 1. Eggs and first instar nymphs. 2. Third instar nymph.



Figura 3. *Chinavia chilensis* in *Prosopis tamarugo*. Second instar nymphs on fruits.

### Literature Cited

- Chiappa, E., Villaseñor, R., Toro, H. and Covarrubias, R. (1997) Táctica reproductiva de *Prosopis* (Mimosaceae) y asociaciones ecológicas de sus polinizadores, en el desierto del norte de Chile. *Mulitequina*, 6: 9-20.
- Faúndez, E.I. and Carvajal, M.A. (2011) Catalog of Chilean Pentatominae Leach, 1815 (Hemiptera: Heteroptera: Pentatomidae). *Zootaxa*, 2835: 53-60.
- Faúndez, E.I., Carvajal, M.A. and Rider, D.A. (2013) Sinopsis del género *Chinavia* Orian, 1965 (Heteroptera: Pentatomidae) en Chile. *Boletín de Biodiversidad de Chile*, 8: 26-36.
- Faúndez, E.I. and Rider, D.A. (2014) Nuevos registros de Pentatominae Leach, 1815 en Chile (Hemiptera: Heteroptera: Pentatomidae). *Boletín de la Sociedad Entomológica Aragonesa*, 55: 159-162.
- Fürstenau, B.B.R.J., Schwertner, C.F. and Grazia, J. (2013) Comparative morphology of immature stages of four species of *Chinavia* (Hemiptera, Pentatomidae), with a key to the species of Rio Grande do Sul, Brazil. *ZooKeys*, 319: 59-82.
- Grazia, J., Schwertner, C.F. and Ferrari, A. (2006) Description of five new species of *Chinavia* Orian (Hemiptera, Pentatomidae, Pentatominae) from western and northwestern South America. *Denisia*, 50: 423-434.
- Schwertner, C.F. and Grazia, J. (2007) O gênero *Chinavia* Orian (Hemiptera, Pentatomidae, Pentatominae) no Brasil, com chave pictórica para os adultos. *Revista Brasileira de Entomologia*, 51(4): 416-435.

