

SHORT COMMUNICATION

First records of *Glypheapomis adroguensis* (Hemiptera, Pentatomidae) and its parasitoid, *Telenomus podisi* (Hymenoptera, Platygasteridae), on irrigated rice fields in Rio Grande do Sul, Brazil

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ABSTRACT. First records of *Glypheapomis adroguensis* (Hemiptera, Pentatomidae) and its parasitoid, *Telenomus podisi* (Hymenoptera, Platygasteridae), on rice fields in Rio Grande do Sul, Brazil. Eggs, nymphs, and adults of *Glypheapomis adroguensis* Berg, 1891 (Hemiptera, Pentatomidae) were observed for the first time on rice fields (*Oryza sativa* L.) in Charqueadas (29°59'S, 51°31'W) and Eldorado do Sul (30°02'S, 51°23'W) of Rio Grande do Sul state, Brazil. *Telenomus podisi* Ashmead, 1893 (Hymenoptera, Platygasteridae) was found in *G. adroguensis* eggs.

KEYWORDS. Egg parasitoids; rice; stink bug.

RESUMO. Primeiros registros de *Glypheapomis adroguensis* (Hemiptera, Pentatomidae) e seu parasitoide, *Telenomus podisi* (Hymenoptera, Platygasteridae), em arroz irrigado no Rio Grande do Sul. Ovos, ninfas e adultos de *Glypheapomis adroguensis* Berg, 1891 (Hemiptera, Pentatomidae) foram observados pela primeira vez no Rio Grande do Sul, Brasil, em lavouras de arroz irrigado (*Oryza sativa* L.) em Charqueadas (29°59'S, 51°31'W) e Eldorado do Sul (30°02'S, 51°23'W). *Telenomus podisi* Ashmead, 1893 (Hymenoptera, Platygasteridae) foi encontrado em ovos de *G. adroguensis*.

PALAVRAS-CHAVE. Arroz; parasitoide de ovos; percevejo.

Stink bugs of the genus *Glypheapomis* Berg, 1891 are exclusively Neotropical, occurring in most areas of Brazil (except the north), northern Argentina, and Uruguay (Berg 1891; Pirán 1956; Ruffinelli & Pirán 1959, Pirán 1967, 1970). Four species are recognized: *Glypheapomis adroguensis* Berg, 1891, *Glypheapomis setigera* Kormilev & Pirán, 1952, *Glypheapomis pelotensis* Campos & Grazia, 1998, and *Glypheapomis spinosa* Campos & Grazia, 1998 (Campos & Grazia 1998). The first two species are known from Argentina, Uruguay, and the Brazilian states of Rio Grande do Sul and Santa Catarina, where their host is *Paspalum quadrifarium* (Poaceae) (Kormilev & Pirán 1952). Campos & Grazia (1998) recorded *G. adroguensis* on azalea and *G. setigera* and *G. pelotensis* on rice; these last two species occur exclusively in Brazil (Campos & Grazia 1998). No studies about biology and immature stages morphology of *G. adroguensis* were found in literature.

Egg parasitoids are considered the primary natural enemies of Pentatomidae bugs (Martins *et al.* 2004). In the laboratory, Pacheco and Corrêa-Ferreira (1998) observed parasitism by *Telenomus podisi* on eggs of three pentatomid pests of soybean: *Euschistus heros* Fabricius, 1794,

Piezodorus guildinii (Westwood, 1837) and *Nezara viridula* (Linnaeus, 1758). In the laboratory, 70% parasitism by *T. podisi* on *Tibraca limbativentris* Stål, 1860 (Hemiptera, Pentatomidae) eggs was reported (Riffel *et al.* 2010); on irrigated rice plantation, these authors found more than 80% out of 3,344 eggs parasitized by *T. podisi* and *Trissolcus urichi* Crawford, 1913 (Hymenoptera, Scelionidae).

The genus *Glypheapomis* is closely related to *Tibraca* Stål, 1860 (Campos & Grazia, 1998). *T. limbativentris* and *Tibraca exigua* Fernandes & Grazia, 1998 have both been documented on rice plantations of southern Brazil (Fernandes & Grazia 1998).

During December 2010 until March 2011 we sampled irrigated rice fields in two areas (2,500 m²/each) in Charqueadas (29°59'S, 51°31'W) (Puita variety) and Eldorado do Sul (30°02'S, 51°23'W) (Epagri 109 variety) of Rio Grande do Sul state, Brazil. In the morning (from 9 a.m. to 12 a.m.), weekly, all plants from 12 randomly spaced plots of 1 m² (delimited by a wood square) were examined. Plants in the vegetative phase (V1 to V13) were searched during five minutes, while those in the reproductive phase (R0 to R9) (Counce *et al.* 2000) were searched for 10 minutes, according to the plant

mass. Collected insects and eggs suppose to be *G. adroguensis* were placed in plastic bags, identified and sexed in the laboratory. The nymphs were kept with food until adult emergence in Gerbox (11 x 11 x 3 cm) and eggs in Petri dishes (9 cm Ø) with moistened cotton until the parasitoid emergence or nymph eclosion ($25 \pm 1^\circ\text{C}$; $60 \pm 10\%$ RH; 12:12 h L: D). The Charqueadas sample included 17 eggs, 52 second instar nymphs, and 32 adults (Fig. 1) (18 males and 14 females) of *G. adroguensis*. The Eldorado do Sul sample included 20 eggs, 10 second instar nymphs, and 11 adults (six males and five females). All eggs recorded in Eldorado do Sul were parasitized by *T. podisi*, identified by Dr. Valmir Antonio Costa, from Instituto Biológico de Campinas, Brazil.

In both areas, adults were found at the base of the plants between the stems, while eggs and nymphs were found on the leaf apices. Adults of *G. adroguensis* were observed on rice stems in a position similar to that described for *T. limbativentris* (Ferreira & Martins 1984), with the head pointed downward.

These records of *G. adroguensis* indicate that rice plantations may represent important breeding and feeding sites

for the species. Given the economic importance of the rice crop in Rio Grande do Sul state, close monitoring of the system is recommended. We suggest additional studies on the biology, immature stages morphology and ecology of *G. adroguensis*, and on the potential of *T. podisi* as a biological control agent.

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Fig. 1. *Glyphepomis adroguensis*, adult. Scale bar: 5 mm.