MORPHOMETRIC OBSERVATIONS ON *ORCHESTIA SELKIRKI* STEBBING, 1888 (PERACARIDA, AMPHIPODA) IN THE JUAN FERNÁNDEZ ISLANDS

BY

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INTRODUCTION AND METHODS

The crustacean communities on Chilean oceanic islands are characterized by the presence of endemic, Polynesian, and American species (González et al., 2008; Retamal & Moyano, 2010; Fernández et al., 2014; De los Ríos-Escalante & Ibáñez-Arancibia, 2016). The crustaceans of non-marine environments are characterized are widespread, such as was observed for Easter Island (Dumont & Martens, 1995; De los Ríos-Escalante & Ibáñez, 2015). For the Juan Fernández Islands the presence of the widespread copepod *Paracyclops fimbriatus* (Fischer, 1853) was observed (Brehm, 1936), and that species was also reported for ephemeral ponds on Easter Island (Dumont & Martens, 1995; De los Ríos-Escalante & Ibáñez, 2015). In addition, 13 species of non-marine Isopoda and one species of Amphipoda were observed for the Juan Fernández Islands (Stroual, 1960; González et al., 2008).

The Juan Fernández Islands are composed of the islands Alejandro Selkirk, Robinson Crusoe, and Santa Clara, and are located at 750 km from the continent, in the Pacific Ocean. These islands have an endemic perennial forest with small temporal streams as their unique inland-water sources (Niemeyer & Cereceda, 2016).
Notes and News

1984). Literature reports about inland water crustaceans are restricted to these small streams (Schellenberg, 1935; Stroual, 1960), and recent studies are only based on literature reviews and comparison with other oceanic islands, as well as with the Chilean continental territory, the latter confirming the endemism of those species (González et al., 1998).

The aim of the present study now is to make a morphometric description of a population of *Orchestia selkirki* Stebbing, 1888, found in a so-called “Claro Verde”, that is a zone with *Myrceugenia fernandeziana* (Hook. & Arn.) Johow forest with small streams, and with many access difficulties due to a long mountain path and in addition access problems with respect to entry from the continent. This valley is located on Robinson Crusoe Island, one of the islands of the Juan Fernández archipelago (Pérez-González et al., 2014).

Field collections were conducted from 16 to 20 February 2011, using pitfall traps. The traps consisted of two plastic cups of $7.4 \times 10.2$ cm and $7.6 \times 12.0$ cm in size, respectively, placed one inside the other, so the smaller one was easy to be removed. This inner cup was filled to one-third of its capacity with a mixture of water (80%), ethanol (10%), and laundry detergent (10%), and the traps were operated for four consecutive days. Specimens were identified according to the descriptions of Schellenberg (1935).

Ten individuals of each sex from the collected specimens were measured, viz., for body length (BL), three measures of body width (BWA, BWB, BWC), lengths of the antennae (AL), and the length of the uropodal exopod (UEL), in accordance with the descriptions of Contreras et al. (2013) (fig. 1). In addition, a ratio between BL and, respectively, BWA, BWB, BWC, AL, and UEL was obtained for each sex. These measurements for each sex were compared using a non-parametric Mann-Whitney *U*-test (Zar, 1999; Nussbaum, 2005) using the software “R” (R Development Core Team, 2009).

**RESULTS AND DISCUSSION**

The literature revealed that there are no significant differences between measurement parameters for both sexes of *Orchestia selkirki*, with the exception of the BL/BWA ratio (table I; fig 2). The use of morphometric analysis was described as an important tool for the study and characterization of species of Amphipoda (Esmaeili-Rineh et al., 2016), their populations (Scapini et al., 1999; Contreras et al., 2013), and morphotypes (Iaciofano & Lo Bruto, 2016). Also, the morphometric variations observed can be explained as responses to environmental variations in the habitats of the amphipods (Longo & Mancinelli, 2013; Goos et al., 2014). The results obtained correspond to a sampling programme in which samples were