



## The lygaeoid bug genus *Sadoletus* Distant (Hemiptera: Heteroptera: Heterogastridae) from Japan

TERUAKI BAN<sup>1</sup> & TADASHI ISHIKAWA<sup>2,3</sup>

<sup>1</sup>“a” Institute for Environment Research, Osaka-shi, Osaka, Japan. E-mail: [heterogastridae6223@gmail.com](mailto:heterogastridae6223@gmail.com)

<sup>2</sup>Department of General Systems Studies, the University of Tokyo, Tokyo, Japan. E-mail: [chuishikawa@gmail.com](mailto:chuishikawa@gmail.com)

<sup>3</sup>Corresponding author

### Abstract

The Japanese species of the heterogastrid genus *Sadoletus* Distant are revised taxonomically. Three species are recognized, including a new species, *S. ryukyuensis* **sp. nov.**, which has been regarded so far as *S. valdezi* Bergroth in Japan. “True” *S. valdezi* is confirmed in Japan as well. A key to the Japanese species is provided.

**Key words:** Lygaeoidea, new species, *Sadoletus valdezi*, taxonomy

### Introduction

The genus *Sadoletus* Distant of the heteropteran family Heterogastridae Stål comprises ten species (Slater 1964) described mainly from the Oriental Region (Scudder 1962). In Japan, two species of *Sadoletus* have been recorded (Hidaka 1959): *S. izzardii* Hidaka from Japan proper and *S. valdezi* Bergroth from the Ryukyus.

Through our continuous surveys to clarify the Japanese heterogastrid fauna, we found a series of individuals that are similar in general habitus to, but different in some features such as coloration of the hemelytra and connexiva from, those regarded as *S. valdezi* in Japan. After a careful examination of the specimens on the basis of morphology, including a comparison with the original description of *S. valdezi* and others, these two series of individuals were shown to be two distinct species. Furthermore, we showed clarified that the species newly recognized is the ‘true’ *S. valdezi* and that the other one (previously regarded as *S. valdezi*) is undescribed.

In this paper, we taxonomically revise the Japanese species of the genus *Sadoletus*, describe a new species for the populations previously known as *S. valdezi* in Japan, and correctly record *S. valdezi* from Japan for the population we newly confirmed. Also provided are descriptions of male and female genitalia for each species and a key to the Japanese species of the genus.

### Material and methods

Dried specimens were used. For observations of genitalia, the male and female abdomens were removed from the body after the specimens were softened by hot steam. The removed parts were immersed in hot 10% KOH solution for an hour, and then soaked in distilled water for further dissection. The endosoma of the phallus was everted naturally by osmotic pressure during the immersion of the phallus or was pulled out by tweezers or a needle with a shaft.

Observations were made under a stereoscopic microscope (Olympus SZ60) for external morphology. Genitalia were observed and drawn by using other stereoscopic microscope (Leica CLS150X) and an optical microscope (Olympus BX41) with the aid of a drawing tube. The genitalia were then preserved in small glass tubes with glycerin and mounted on the pin with the respective specimen. Photos were taken using other stereoscopic