

# First host record and morphological notes on the rare Chilean wasp *Vervoortihelcon scaramozzinoi* van Achterberg (Hymenoptera, Braconidae, Helconinae, Vervoortihelconini)

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## Abstract

The first host record for *Vervoortihelcon scaramozzinoi* van Achterberg, 1998 is presented and additional notes on its morphology are provided and illustrated. The species is recorded as parasitizing the cerambycid beetle *Stenorhopalus rubiginus* in *Podocarpus* L'Hér ex Pers (Podocarpaceae). The metasomal carapace is shown to be sexually dimorphic and comprising 4 tergites in females but 5 in males. Some aspects of metasomal sculpture are reported as being variable and others highly consistent between individuals and differing somewhat from the original description.

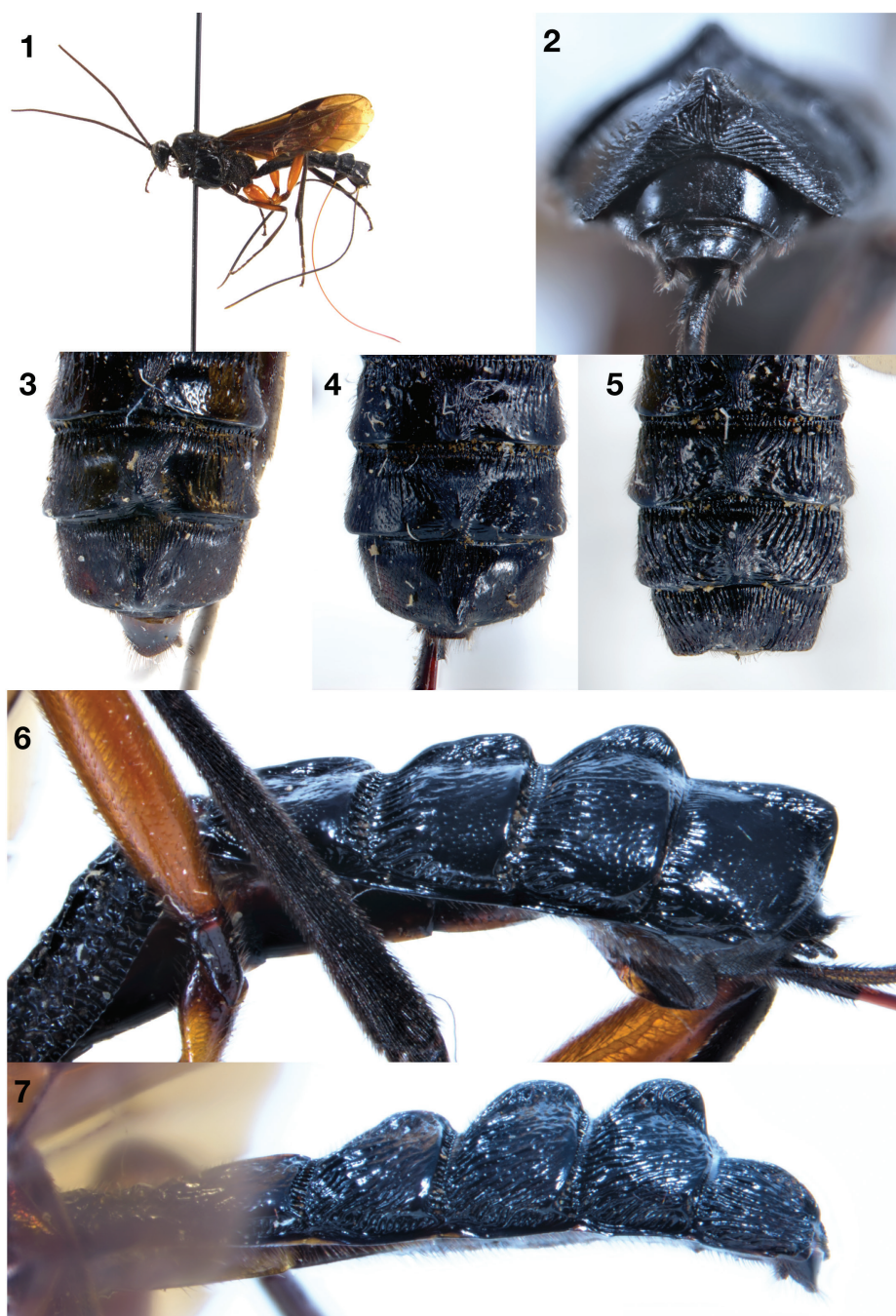
## Keywords

Braconidae, Helconinae, Chile, sexual dimorphism, sculpture, host record, *Stenorhopalus*, Coleoptera

## Introduction

The genus *Vervoortihelcon* van Achterberg, 1998, was until now known from only the female holotype and male paratype of its type species, *V. scaramozzinoi* van Achterberg (fig. 1 in van Achterberg 1998), both from Valdivia, Sto Domingo, Valdivia Province, Chile. Van Achterberg placed *Vervoortihelcon* in a new subtribe, the Vervoortihelconina in the Helconini because of the fused and strongly sculptured metasomal tergites 2–5. With the elevation of Helconini to subfamily status (Sharanowski et al. 2011), Chen and van Achterberg (2019) now give this group full tribe status, i.e. Vervoortihelconini. Neither of the type specimens has any associated biological data. Here we report on 12 further specimens of *V. scaramozzinoi* discovered in the New Zealand Arthropod Collection, Auckland, New Zealand. These comprise 6 males and 5 females from Bio Bio Region of Chile, probably sent to E.S. Gourlay (a New Zealand entomologist), and then bequeathed to the New Zealand Arthropod Collection in 1970. These specimens have no further data but do provide additional morphological data. The material additionally includes, one male specimen from Llanquihue, Rio Pescado, in the Los Lagos Region, dated 28 Nov. 1983 which was collected by G. Kuschel with the following notation “reared ex *Platynocera* sp. in *Podocarpus rubigenus*”. *Platynocera* is now regarded as a junior synonym of *Stenorhopalus*, a cerambycid beetle in the subfamily Necydalinae, tribe Necydalini. G. Kuschel was a world renown coleopterist who generated many interesting rearing records (e.g. Quicke et al. 2019) especially in Chile and New Zealand.

**Morphological notes.** The additional specimens now available allow us to comment on some aspects of structure and sculpture not apparent from the original description and illustrations of the type specimens of *V. scaramozzinoi*. The metasomal syntergite of the female comprises metasomal tergites 2–5 as in the original description, with the 6<sup>th</sup> tergum smooth and retracted under the 5<sup>th</sup> (Figs 1, 6). However, in males the syntergite comprises five segments, tergites 2–6 are strongly sculptures and completely fused (Figs 4, 7). In addition there is variation in the degree of metasomal sculpturation, especially of the posterior tergites. Among females, some individuals have the 5<sup>th</sup> tergite coarsely striated as in the type specimens (Fig. 3), others have it almost smooth with only a weak indication of longitudinal striation (Fig. 4). In males the 6<sup>th</sup> metasomal tergite is always strongly longitudinally sculptured (Figs 5, 7). In both sexes tergites 3–5 have a strong medial-posterior ‘tubercle’ which is more or less posteriorly blunt and sculptured (Figs 6, 7) but the male 6<sup>th</sup> tergite lacks a tubercle (Figs 5, 7). Van Achterberg (1998: figs 9, 14) illustrates the sculpture of the posterior faces of the 5<sup>th</sup> metasomal tubercles of male and female *V. scaramozzinoi* respectively. All our specimens differ somewhat from these illustrations in that in both sexes the sculpture comprises a medio-dorsal lozenge-shaped area with more or less vertically orientated fine sculpture, and lateral areas with fine parallel, more or less horizontal striation (Fig. 2).



**Figures 1–7.** *Vervoortihelcon scaramozzinoi* morphological features. **1** habitus **2** posterior aspect of apex of female 5<sup>th</sup> metasomal tergite showing largely sub-parallel lateral pattern of striation **3** metasomal tergites 3–5 of female with relatively strong sculpture **4** metasomal tergites 3–5 of female with reduced sculpture **5** metasomal tergites 3–6 of male **6** female metasoma, lateral view showing fused tergites 2–5 **7** male metasoma, lateral view showing fused tergites 2–6.

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