

First record of the gall-inducing insect *Ophelimus mediterraneus* (Borowiec & Burks) (Hymenoptera: Eulophidae) in eucalyptus plantations in the Americas, and the first record of males of the species

Rocio Buyatti^{1, 3}, Carmen Hernandez¹, Daniel Aquino², Silvia Lopez¹, Marcelo Berretta^{1,3}

¹ Instituto Nacional de Tecnología Agropecuaria (INTA), Instituto de Microbiología y Zoología Agrícola (IMYZA). Buyatti R A. buyatti.rocio@inta.gob.ar

² División Entomología, Museo de La Plata (FCNyM, UNLP, CONICET), La Plata, Bs. As., Argentina.

³ Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)

INTRODUCTION

-Species of the genus *Eucalyptus* (Myrtaceae), native to Australia, are widely planted due to their commercial value, but are vulnerable to pests such as *Ophelimus* gall wasps (Hymenoptera: Eulophidae).

-In Argentina, there are two reported species: *Ophelimus maskelli* (Ashmead) (2013) and an unidentified *Ophelimus* species (2017).

MAT AND MET

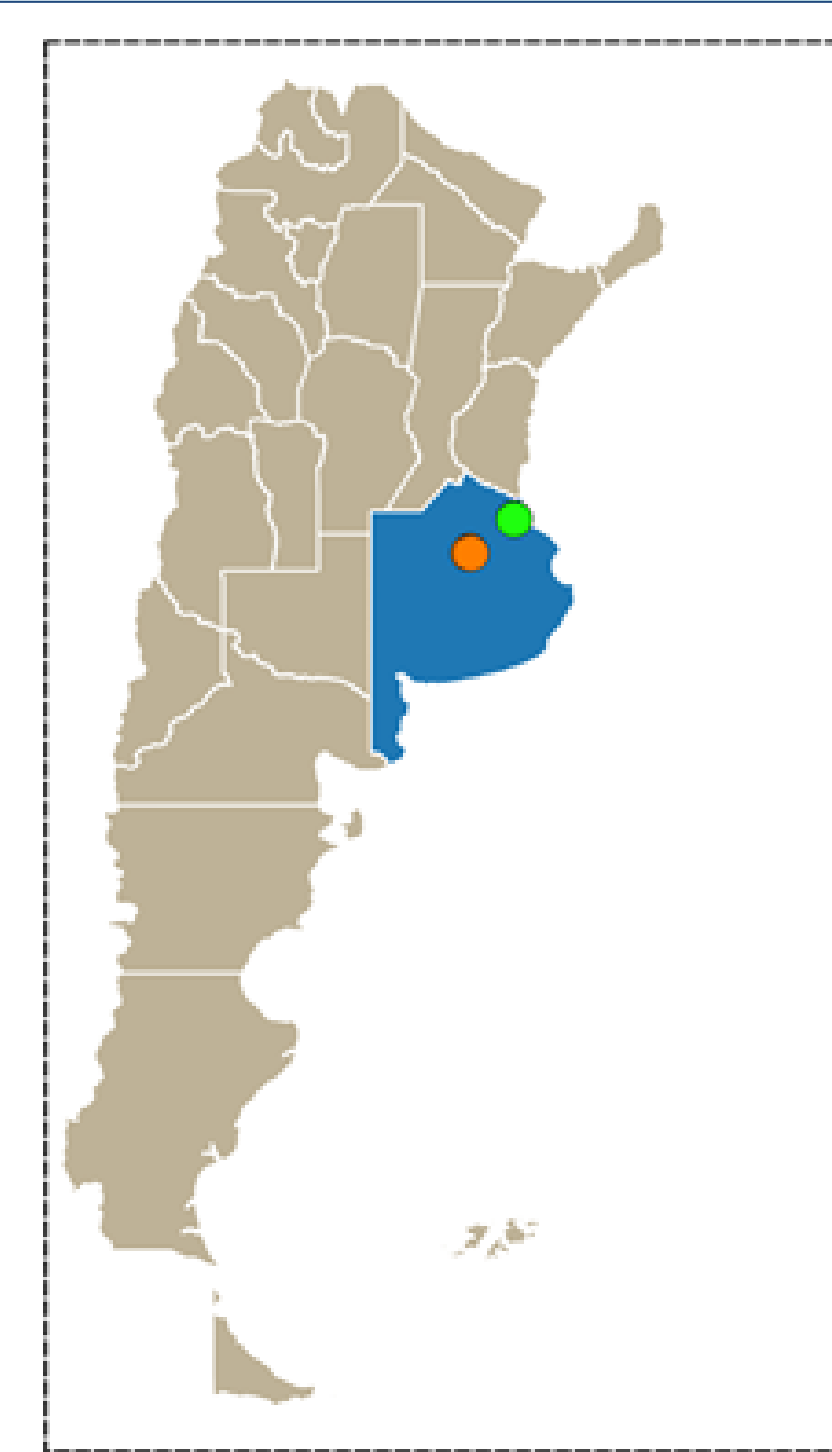
-Branches with mature galls were collected from the trees in 4 plantations across 2 localities in Buenos Aires province, Argentina.

-Molecular (COI and 28S sequencing) and morphological analyses were performed on the adults.

RESULTS & DISCUSSION

-The specimens in this study match the description of *O. mediterraneus*. The COI and 28s sequences from Argentina exhibited a 99-100% identity with those from European populations of *O. mediterraneus*, supporting their identification as the same species.

-Male description. Body length: 560-625 µm; very similar to female, difficult to differentiate, except for the smaller body size and gaster, similar in color except for mesotibia brown and the distal and apical ends white and gaster smaller and lighter.



References

Plantations

● 25 de Mayo

● Hurlingham

■ Prov. de Buenos Aires

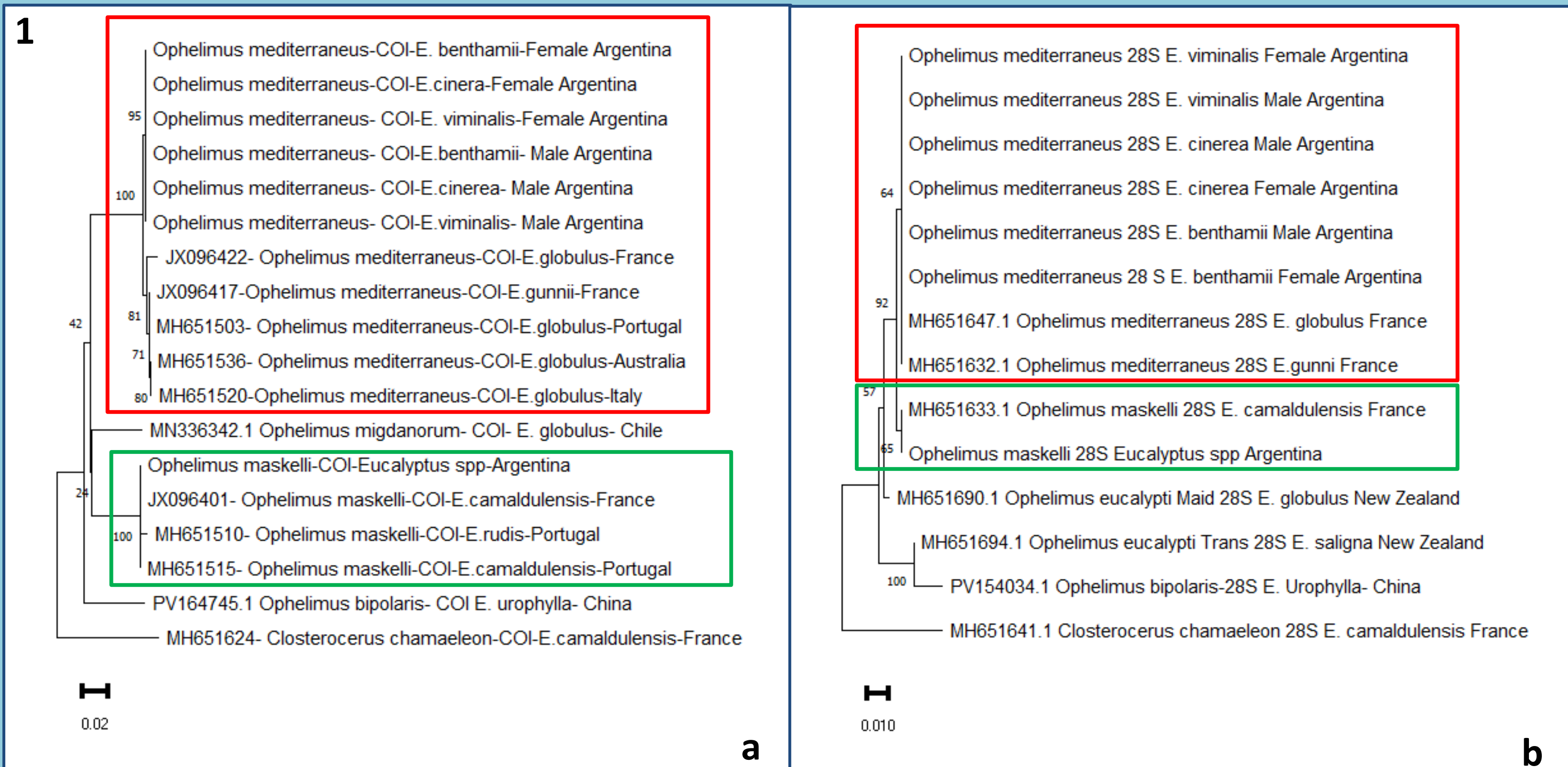


Figure 1. Neighbour-Joining tree depicting relationships among *Ophelimus* species based on the gene: a) COI; b) 28S. Information is presented in the following order: molecular code, species, molecular marker, host species, and country.

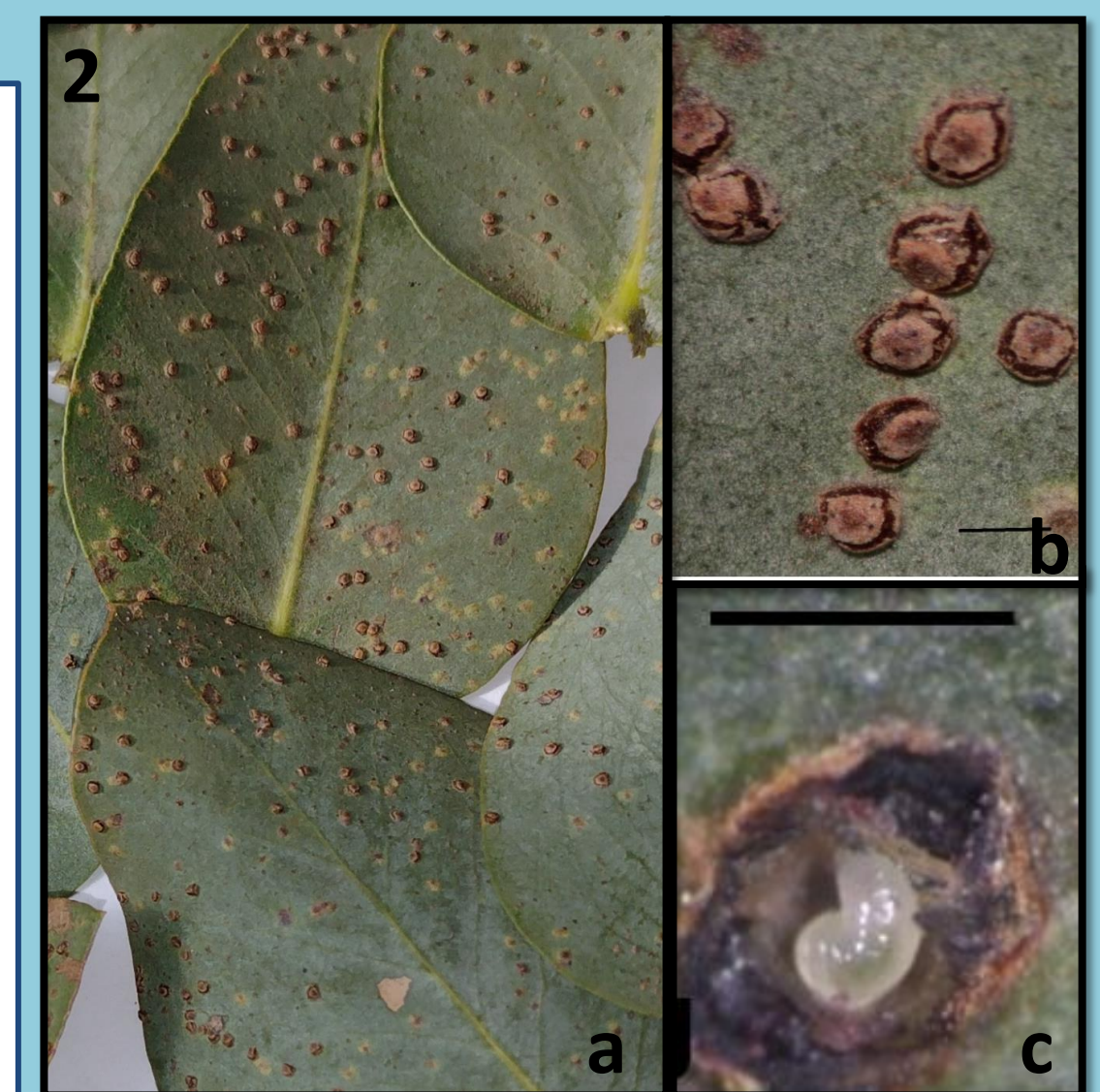


Figure 2. a) Damage caused by *O. mediterraneus* on *E. cinerea* leaves. b) Galls; c) larva of *O. mediterraneus*.

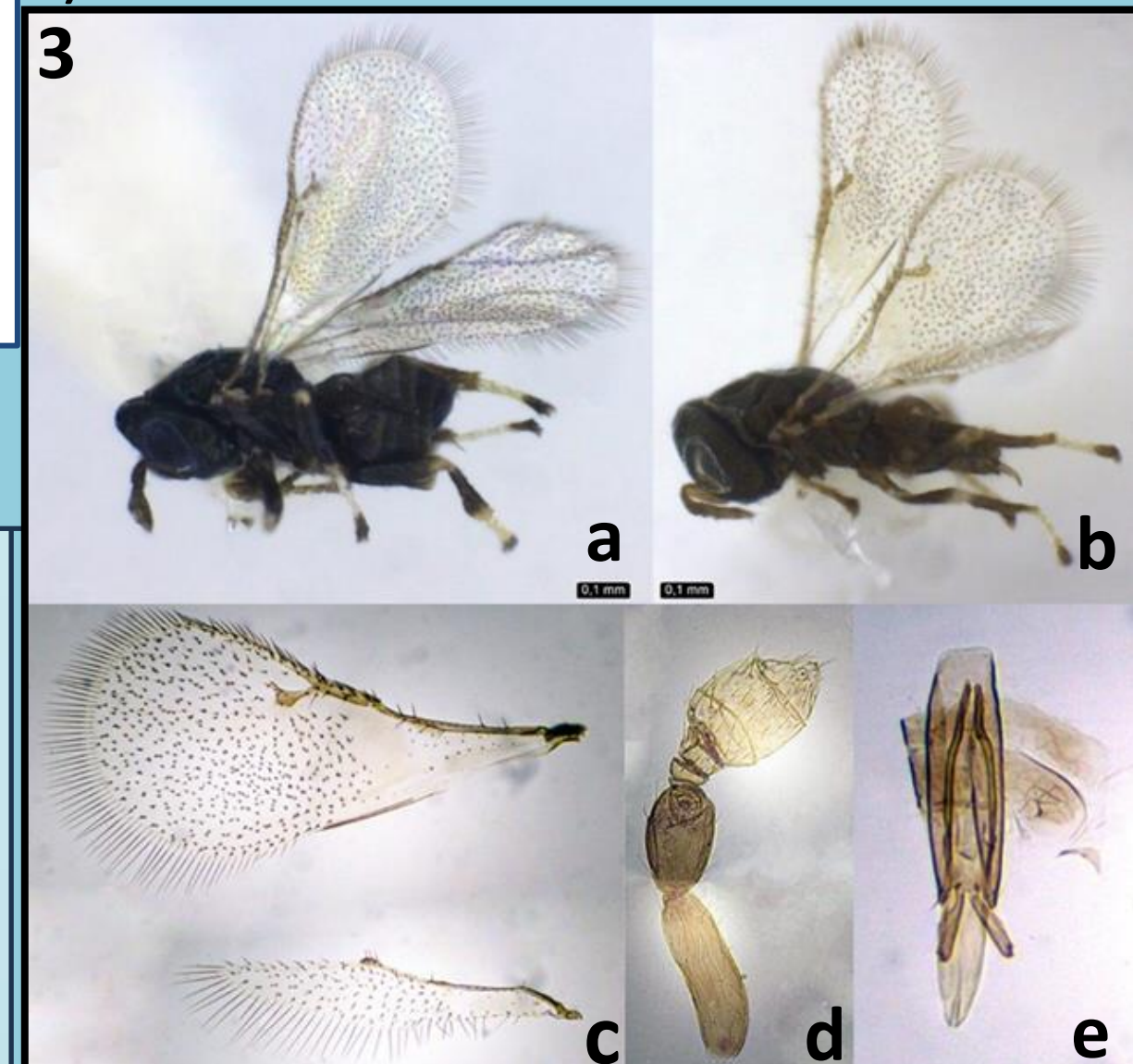


Figura 3 a): female lateral view; b) male lateral view; c) male fore and hind wings; d) male antenna; e) male genitalia.

CONCLUSION

-The presence of *O. mediterraneus* is confirmed for the first time in Argentina and the Americas.

- The male of this species is described, contributing to the taxonomic knowledge of the genus *Ophelimus*.