Zootaxa 4039 (4): 583–590
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.4039.4.8
http://zoobank.org/urn:lsid:zoobank.org:pub:D86C0159-4D25-4C45-BB99-4E043E0E6D72

Description of a new species of *Oligosita* Walker (Chalcidoidea: Trichogrammatidae), egg parasitoid of *Balclutha brevis* Lindberg (Homoptera: Cicadellidae) living on *Pennisetum setaceum*, from Italy

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Abstract

A new species of *Oligosita* Walker (Chalcidoidea: Trichogrammatidae), *O. balcluthae* Viggiani et Laudonia **n. sp.**, is described as a parasitoid of the eggs of *Balclutha brevis* Lindberg (Homoptera: Cicadellidae) associated with crimson fountain grass, *Pennisetum setaceum* (Poaceae) in Italy. Morphological features and biology of the new species are discussed and illustrated. The 28S-D2 and ITS2 regions were successfully amplified and sequenced.

Key words: molecular characterization, leafhopper, *collina* group, 28S-D2, ITS2

Introduction

The leafhopper *Balclutha brevis* Lindberg (Homoptera: Cicadellidae) was recorded for the first time in the Mediterranean basin, in Italy, by Bella and D'Urso (2012). The species is associated with crimson fountain grass, *Pennisetum setaceum* (Forsskal) Chiovenda, a perennial Poaceae spread throughout South Africa, Indonesia, North America, Caribbean regions, Oceania, and recently in Mediterranean countries: southern Spain, southern France, Canary Islands, Balearic Islands and Italy (Sicily, Sardinia and Calabria) (Pasta *et al*. 2010). Studies on the bioecology of this alien leafhopper obtained an egg parasitoid belonging to the genus *Oligosita* Walker (Chalcidoidea: Trichogrammatidae), which is here described as a new species.

Material and methods

Ears of *P. setaceum* were sampled from June 6, 2012 to May 28, 2013 in Sicily, Catania (Piazza Michelangelo and Via Giovannino-Nuovalucello) to study the phenology of host and parasitoid. The emerged specimens of the parasitoid were preserved in alcohol 70% and some dried. Specimens used for taxonomic study were mounted on slides using balsam-phenol as a permanent medium.

Taxonomic nomenclature follows Doutt and Viggiani (1968), Pinto and Viggiani (2004) and Pinto (2006).

Oligosita specimens used for DNA analysis were collected in Catania (37°31'22" N, 15°05'34" E) in October 2014. Wasps were killed by immersion in absolute ethanol and kept at -20 C° until they were processed in the laboratory. The sex of each specimen was verified through observation with a stereomicroscope and 20 were selected for the DNA extraction, 10 of each sex.

Accepted by G. Gibson: 15 Oct. 2015; published: 6 Nov. 2015