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-Nuovalucelio) 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.


*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.