

Coneheads (Protura) of Italy: What we know in their 'native' country after a century

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Coneheads collected from all over the territory of Italy were studied by three researchers of Genoa University (Loris Galli, Matteo Capurro and Carlo Torti). 40 species have been identified (belonging to eight genera and four families), six of which are new records for the Italian fauna. The study was published in the open access journal *ZooKeys*.

Coneheads (or Protura) is a group of primitive "insects" whose first species (*Acerentomon doderoi*) was discovered in 1907 by the famous Italian zoologist Filippo Silvestri, among the [small animals](#) collected by the coleopterologist Agostino Doderò from [soil samples](#), taken from the grounds of a small villa in the center of Genoa, Italy. In the two following years Antonio Berlese, another very important [zoologist](#) (friend/foe of Silvestri) analyzed the morphology and anatomy of this strange and still poorly known soil-borne organisms and described a few other new species.

Normally less than 2 mm long, uncolored or pale yellow colored, eyeless, using their well developed forelegs as [sense organs](#) (they lack even the antennae) while they slowly walk between soil's grains, the Coneheads are strongly adapted to their life in soil, litter and mosses where they eat mainly hyphae, contributing to the processes of organic matter degradation and so participating in recycling the nutrients in their ecosystems.

More than a century after their discovery, in the same town they have been collected the first time, the researchers summarize the knowledge

of these animals in Italy, their "native" country. They identified 40 species (belonging to 8 genera and 4 families), 6 of which are new records for the Italian fauna, but it is very likely that many others have yet to be discovered.

The authors created also a taxonomic key to identify the Italian species and drew their distribution maps. Their survey will facilitate further work by zoologists, ecologists and soil scientists and contributes to the knowledge of the Italian biodiversity.

More information: Galli L, Capurro M, Torti C (2011) Protura of Italy, with a key to species and their distribution. *ZooKeys* 146: 19. [doi: 10.3897/zookeys.146.1885](https://doi.org/10.3897/zookeys.146.1885)

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