

# Rediscovery of *Geophilus carpophagus* Leach (Chilopoda: Geophilomorpha) from Finland

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*Geophilus carpophagus* Leach, 1815 has long been listed as regionally extinct from Finland. Here we report its rediscovery after decades of absence.

Keywords: *Geophilus carpophagus*, Chilopoda, Finland

## Introduction

*Geophilus carpophagus* Leach, 1815 is one of the most common chilopods in the Western Palearctic and is widely encountered throughout northern Africa up to northern Europe (Bonato & Minelli 2011). It is part of the *carpophagus* species-complex that in addition to the nominal species includes the closely-related *G. arenarius* Meinert, 1870 from Algeria and *G. easoni* Arthur, Fodai, Kettle, Lewis, Luczynski & Minelli, 2001 from Great Britain (Bonato & Minelli 2011). In the Nordic countries *G. carpophagus* is recorded from Denmark, Southern Norway and Southern Sweden (Andersson 2005; Andersson 2014). From Finland it has been found from a single southwestern locality in the mid 20th century. However, there have been no records since the mid 1980s and the species was given the status of regionally extinct (RE) in the latest national evaluation of red-listed species (Mannerkoski et al. 2010).

*G. carpophagus* was first recorded in 1959 from a rocky seashore in southwestern Finland (Lehtinen 1961) and this locality has remained the only known locality of the species in Finland. In

this year and the following years it was found in considerable numbers under small stones and the carpets of *Arctostaphylos uva-ursi* and *Vaccinium vitis-idaea* that form the principal ground vegetation in the pine forest delineating the stony beach. *G. carpophagus* was subsequently searched for in the mid 1980s during the first national evaluation of threatened species but without success (Rassi et al. 1986). The species was not found during the next three red-list evaluations and it has been classified as regionally extinct (Mannerkoski et al. 2010; Rassi et al. 1992; 2001).

## Methods

Fieldwork was conducted in Parainen, Mustfinnö, Taipaleenranta, June 29th, 2015. The habitat (Fig. 1) is a rocky, cobblestone beach without vegetation extending ca. 20 m landward from the shoreline and delineated by a pine forest. Except for the small functioning dockyard in the near vicinity, the habitat still very accurately resembles that described in Lehtinen, 1961.

Chilopods were searched for by hand under stones and under the ground vegetation in

the pine forest directly adjacent to the shore. Being the largest (up to 60 mm in length) geophilomorph species in Finland and the only one with greenish colouration, *G. carpophagus* can be easily identified in the field without using a microscope.



▲ Figure 1. One of the authors (Lehtinen) turning stones in the *Geophilus carpophagus* habitat.

► Figure 2. Two *Geophilus carpophagus* specimens, one coiled around a cluster of eggs.



## Results and discussion

During approximately two hours of searching we found four *G. carpophagus* specimens, all under one stone close to the forest line (Fig. 1). One specimen had burrowed a small hole in the moist sand under the stone and was coiled around a cluster of eggs (Fig. 2). Three others were found walking on the sand under the same stone.

Based on the specimens and the eggs we found, we can now confirm that there seems to be a viable, but not abundant, population of *G. carpophagus* living in the same habitat where it was found for the very first time in 1959. Since this is the only known locality of the species in Finland, it would be justifiable to protect the habitat.

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