



«Actions to protect, conserve and promote biodiversity. Field studies of endemic, endangered and nationally important species of Greece». Funded by the Natural Environment and Climate Change Agency (NECCA)

TITLE

Assessing the conservation status of two stenoendemic Mygalomorph spiders in Crete using ecological and molecular evidence

(Project ID: 11602)

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ABSTRACT

The aim of this proposal is to provide more evidence for the evaluation of two mygalomorph spiders, stenoendemics of western Crete: *Macrothele cretica* Kulczyński, 1903, the single spider species included in the IUCN Red List of Europe (category DD) and of Greece (category VU), and *Chaetopelma lymberakisi* Chatzaki & Komnenov, 2019, a very possible candidate for inclusion in the same list, based on the current knowledge of its distribution. *M. cretica* has been cited scarcely in areas of western Crete. Recent efforts to locate the species outside its known narrow range of distribution were unsuccessful. *C. lymberakisi* shows a peculiar, scattered distribution along the island of Crete, with unclear habitat preferences. However, the recent unsuccessful samplings to relocate the species (except for one location in the mountains of Lefka Ori) and the risks of habitat destruction in the areas where it was located in the past, raises concerns about *Chaetopelma* populations' viability on the island. In order to assign the conservation status of *M. cretica* with more accuracy and gather more information on *C. lymberakisi* for its possible inclusion to a threatened category, we propose a year round inventory which will cover all areas of previous records of the two species and will give evidence on their population size and genetic structure (with respect to *M. cretica*), current occurrence and taxonomic status including molecular evidence (with respect to *C. lymberakisi*). Furthermore, we will conduct GIS modeling to make assumptions on the factors governing their habitat delimitation. Field work will include hand collecting and pitfall trapping, transect lines inspections and in situ data accumulation, as well as genetic analyses of two mitochondrial and two nuclear loci. The study involves important natural reserves of the country and therefore this study is expected to give added value to their conservation merit.
