



**«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)**

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## **TITLE**

**Threatened Biodiversity: Re-assessing Skyros wall lizard taxonomy and conservation using cutting-edge science**

(Project ID: 12628)

## **PRINCIPAL INVESTIGATOR**

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## **ABSTRACT**

In an era of biodiversity loss, the application of new technologies could be instrumental in refining conservation strategies to protect and preserve the highest possible levels of it in nature. Advances in the field of molecular genomics offer new tools to identify hidden diversity and diagnose new species that otherwise would have been overlooked. PROTECT will study the narrowly endemic Skyros wall lizard *Podarcis gaigeae*, listed as VU by IUCN. Two subspecies are recognized: the nominotypical subspecies *P. g. gaigeae* on Skyros Archipelagos and *P. g. weigandii* on Piperi islet (Alonissos; 4 km<sup>2</sup> area). While ample ecological, physiological and genetic data exist for *P. g. gaigeae* - available in the PI's lab -, Piperi population has been entirely neglected, because of its geographic isolation. Thus, its ecology, life-history and taxonomy remain unknown and targeted conservation and management actions (CMA) seems essential. Within species, the identification and protection of genetically distinct local populations is crucial for conservation to maximize species evolutionary potential and minimize its extinction risks. PROTECT is designed around 3 complementary work packages (WP) that fit perfectly with the ELIDEK-OFYPEKA call aiming to 1) carry out an extensive field survey to provide the first best possible data on the endemic lacertid *P. g. weigandii*, 2) investigate how within-species diversity relates with properties of biodiversity, 3) integrate genetic, ecological and evolutionary principles to re-evaluate the taxonomy and reassess CMA of the focal (sub)species and 4) implement the knowledge gained to enable effective societal responses and policy making (WP3). To achieve these goals, PROTECT uses ecological trait (WP1) and genomic (WP2) information. There is no doubt that upon completion of the project, we will gain unprecedented knowledge on the ecology, taxonomy and threats of this unknown, unique lacertid with applications on the ground for better CMA.

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