

First record of *Stellagama stellio* (Linnaeus, 1758) from Crete, Greece

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The Rough-tailed Agama, *Stellagama stellio* (Linnaeus, 1758), belongs to the family Agamidae which includes 54 genera and more than 330 species (Ozdemir et al., 2011). The recently segregated (Baig et al., 2012) genus *Stellagama* is monotypic, containing only one species, *S. stellio*. Although the infra-specific taxonomy of *S. stellio* is incompletely assessed (Almog et al., 2005; Crochet et al., 2006; Baig et al., 2012), seven subspecies are presently recognized: *S. s. brachydactyla* (Haas, 1951) (Jordan, Saudi Arabia, Sinai, Israel), *S. s. cypriaca* (Daan, 1967) (endemic to Cyprus), *S. s. daani* (Beutler and Frör, 1980) (Greece, Turkey), *S. s. picea* (Parker, 1935) (Jordan, Syria, Saudi Arabia), *S. s. salehi* (Werner, 2006) (Sinai, Israel), *S. s. stellio* (Linnaeus, 1758) (Greece, Turkey, Syria, Lebanon, Israel, Jordan) and *S. s. vulgaris* (Sonnini and Latreille, 1802) (Egypt, probably Sinai) (Baig et al., 2012). Like their taxonomy, the distribution of several *S. stellio* subspecies remains unclear.

The Greek populations of *S. stellio* comprise two subspecies. *S. s. stellio* presents a discontinuous distribution (Fig. 1), located in five islands of the central Cyclades (Delos, Mikro Rhematiaris, Mykonos, Rinia and Tinos) and in Corfu (Crochet et al., 2006) and Paxi Islands (Sowig and Sowig, 1989) (Ionian Sea) where it was introduced, while its next known population can be found in central Turkey (Baran and Atatür, 1998). *S. s. daani* has a wider distribution range within Greece (Fig. 1), that includes a few islands of the central Cyclades (Paros, Naxos, Despotico, Antiparos), the majority of the islands of the eastern Aegean and an introduced population around Thessaloniki (Northern

Greece) (Valakos et al., 2008). This subspecies presents a continuous distribution through the coasts of west Turkey, although the southeastern boundary of its range is not resolved yet (Ozdemir et al., 2011; Baig et al., 2012).

Although several studies have been conducted on Cretan reptiles, there is no record of *S. stellio* on the island of Crete. The only reference on the presence of agamids in Crete regards a fossil tibia bone from late Pleistocene found in Simonelli Cave in Rethymno, which according to Mangili (1980) probably belongs to a member of the genus *Uromastix*, even though the genus *Agama* was also considered (Mangili, 1980). However, Delfino et al. (2008) questioned the validity of this identification, suggesting “*Lacertilia*” instead.

On the 12 January 2014, around 11am, during a sunny and hot -for the season- day (~18°C) we visited a site on the airport ring road of Sitia (East Crete, Lasithi prefecture), in 1km distance outside the city (35.2151°, 26.1125°), to verify the validity of a resident’s report about seeing the Rough-tailed Agama at this locality. We indeed spotted a well-established population of *S. stellio* containing all age classes. This is the first confirmed record of the species on the island of Crete. A month later, 12 February, an NHMC field technician, George Alexandrakis, visited the same locality and collected two male, sub-adult specimens, (Fig. 2-A), along with photos of the animal in the field (Fig. 2-B).

Morphological examination of the *S. stellio* specimens from Sitia showed that they probably belong to *S. s. daani*, which inhabits the areas of the species distribution (south Dodecanese) nearest to Crete. There are two possible explanations for the species distribution in the Aegean:

- The vicariant formation of two subspecies from a single population after the flooding of the Ägäis (Brammah et al., 2010),
- The recent translocation of *S. s. stellio* (from or but most possibly to) the central Aegean.

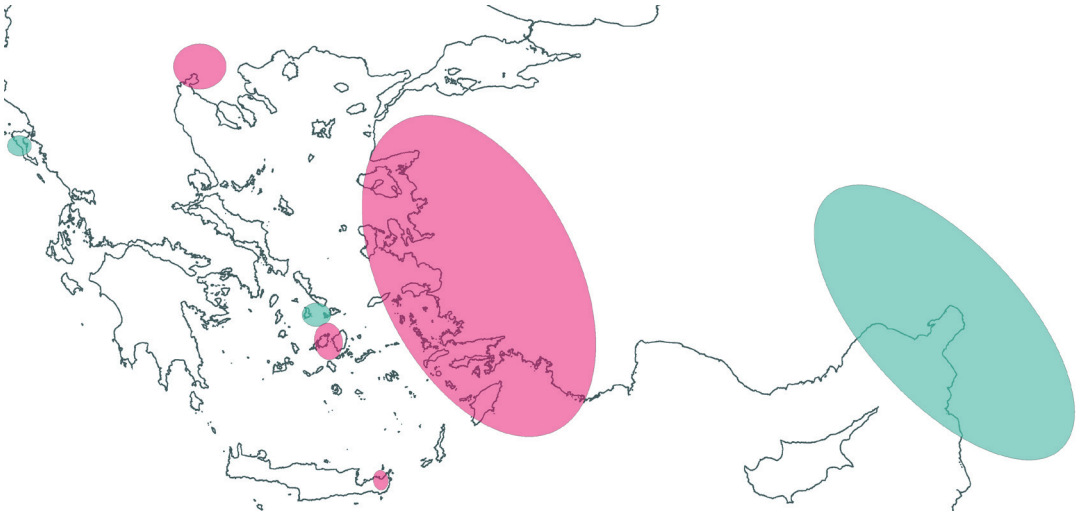


Figure 1. Approximate geographic distributions of the *S. stellio* subspecies that occur in Greece (red for *S. s. daani* and blue for *S. s. stellio*).

Given the species current distribution, its known susceptibility to intentional or unintentional human translocation (Crochet et al., 2006) the currently reported finding, and Crete's susceptibility to host alien species (Lymberakis and Poulakakis, 2010), the latter

hypothesis appears as most plausible. However, it is hard to eliminate possible explanations since more data are required. A phylogeographic work in preparation (Karameta, pers. com.) may provide useful insight on this riddle.

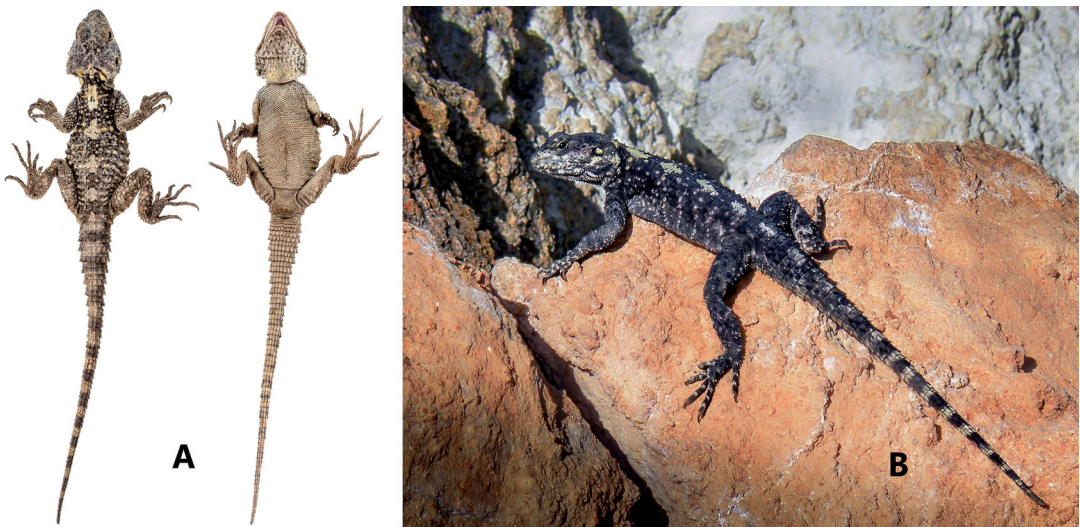


Figure 2. (A) Male, sub-adult specimen of *S. stellio* from Sitia. Lab photo by Apostolos Trichas; (B) *S. stellio* from Sitia. Field photo by George Alexandrakis.

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