

Additions to the known herpetofauna of the Island of Ithaki, Ionian Sea, Greece

The key literature dealing with the herpetofauna of Ithaki (WERNER 1894, 1938; CYRÉN 1935, 1941; MAHNERT 1973; KEYMAR 1986; BROGGI 2009) reports the following extant amphibian and reptile species: *Bufo viridis* (LAURENTI, 1768), *Hemidactylus turcicus* (LINNAEUS, 1758), *Mediodactylus kotschy* (STEINDACHNER, 1870), *Tarentola mauritanica* (LINNAEUS, 1758), *Lacerta trilineata* BEDRIAGA, 1886, *Algyroides moreoticus* BIBRON & BORY DE SAINT-VINCENT, 1833, *Algyroides nigropunctatus* (DUMÉRIE & BIBRON, 1839), *Podarcis tauricus* (PALLAS, 1814), *Ablepharus kitaibelii* (BIBRON & BORY DE SAINT-VINCENT, 1833), *Anguis cephallonica* WERNER, 1894, *Dolichophis caspius* (GMELIN, 1789), *Malpolon insignitus* (GEOFFROY SAINT-HILAIRE, 1827), *Zamenis situla* (LINNAEUS, 1758) and *Vipera ammodytes* (LINNAEUS, 1758).

Speculations on the occurrence of further herpetological species were made, e.g., by WERNER (1894), CYRÉN (1935), MAHNERT (1973), and KEYMAR (1986) and refer

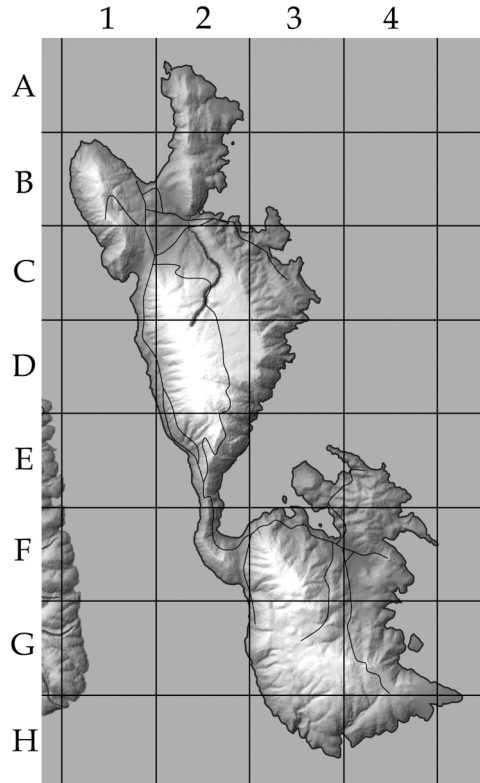


Fig. 1: Map of the Ionian Island of Ithaki. A grid is used to delimit the position of record localities.

Table 1: Reptile and amphibian species currently occurring on Ithaki Island according to the records of the authors. Locations where the species were observed are indicated by grid cells as shown in Fig. 1.

Species	New record	Location (Position of grid cells shown in Fig. 1)
<i>Bufo bufo</i>	X	F3
<i>Bufo viridis</i>		D2
<i>Testudo hermanni</i>	X	B2, C2
<i>Hemidactylus turcicus</i>		throughout the island
<i>Mediodactylus kotschy</i>		D2, E2, E3
<i>Tarentola mauritanica</i>		throughout the island
<i>Algyroides moreoticus</i>		G3, G4
<i>Algyroides nigropunctatus</i>		F3, F4, G4
<i>Lacerta trilineata</i>		B2, C1, F2, F3, G4, H4
<i>Podarcis tauricus</i>		throughout the island
<i>Pseudopus apodus</i>	X	G3, G4
<i>Anguis cephallonica</i>		F2, F4
<i>Ablepharus kitaibelii</i>		F2, G3, G4
<i>Dolichophis caspius</i>		E3, G4
<i>Elaphe quatuorlineata</i>	X	F2, F4
<i>Zamenis situla</i>		F4, G4
<i>Telescopus fallax</i>	X	B1, D2, E2
<i>Malpolon insignitus</i>		throughout the island
<i>Vipera ammodytes</i>		D2, F2, G3, G4

to unidentified *Pelophylax*, *Lissotriton vulgaris* (LINNAEUS, 1758), *Hyla arborea* (LINNAEUS, 1758), *Bufo bufo* (LINNAEUS, 1758), *Testudo hermanni* GMELIN, 1789, an unidentified terrapin, and *Elaphe quatuorlineata* (BONNATERRE, 1790), however, the presence of those species was never confirmed. CYRÉN (1935) pointed to unconfirmed reports about the occurrence of water frogs and terrapins on the island. However, BROGGI (2009) considered the possibility that all amphibian and terrapin species on the island are extinct or at the brink of extinction.

Below, the authors present an update of Ithaki's herpetofauna, including five new species records based on extensive observations over a period of three years (Table 1). The first author visited the island during April 19-22, 2014, while the second is resi-

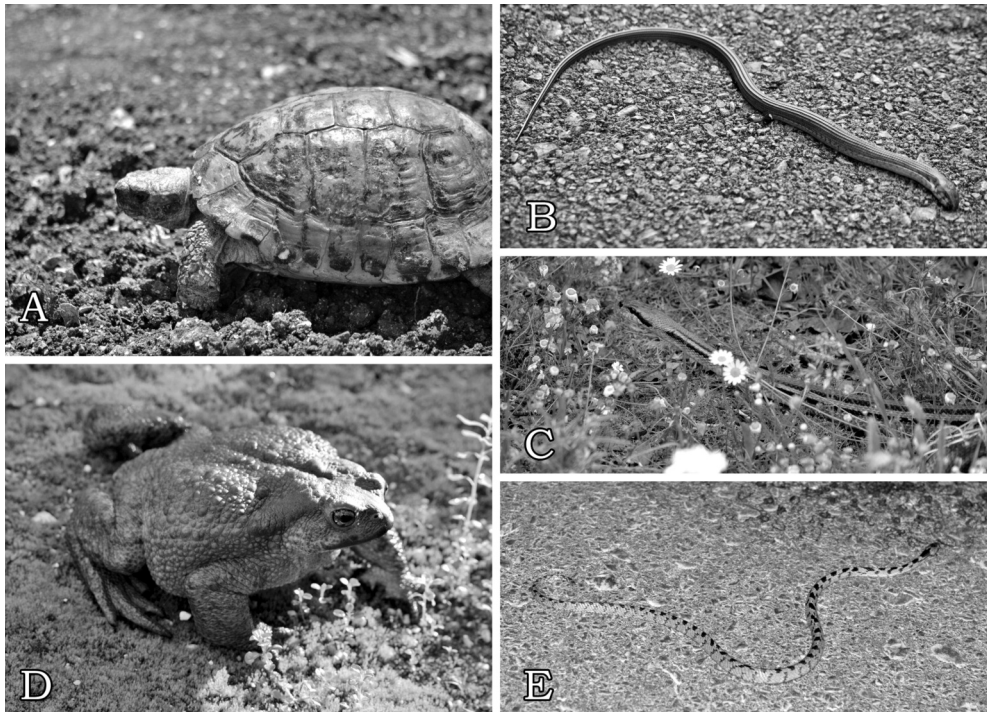


Fig. 2: Photographic records from Ithaki depicting four reptilian and one amphibian species representing first records to the island. A - *Testudo hermanni* GMELIN, 1789, B - *Pseudopus apodus* (PALLAS, 1775), C - *Elaphe quatuorlineata* (BONNATERRE, 1790), D - *Bufo bufo* (Linnaeus, 1758), and E - *Telescopus fallax* (FLEISCHMANN, 1831). All photos by Dimitris Artavanis.

dent of Ithaki, observing and photographing the island's wildlife systematically over the last three years.

With regard to *B. viridis*, the lack of observations confirms the most recent reports by KEYMAR (1986) and BROGGI (2009) on the current decline of this anuran from the island, where it was found earlier by WERNER (1894) and CYRÉN (1935). The authors of the present report failed to spot any signs of the species, be they from alive or dead individuals, eggs or tadpoles, or mating calls during the breeding season. According to locals' claims and anecdotal observations, the toads seem to have suffered a dramatic decline starting in the 1980s and since then the species has been assumed to have gone extinct on the island. Surprisingly, on March 24, 2016, a resident from Stavros village asked for identification of a living anuran found at Anogi and depicted on photographs.

The amphibian, which was clearly an adult specimen of *B. viridis* was released back to the wild shortly after being photographed. A second observation of the species was made by a local resident, who photographed an adult individual at Vathy on September 19, 2016. It seems that the species is still present on Ithaki, possibly in remote and restricted locations, however, apparently in critical danger of extinction. Therefore, habitat restoration and conservation management concerning the toad on the island is urgently required. All natural biota of the island would benefit from such an action plan.

Neither terrapins, water frogs as indicated by CYRÉN (1935), tree frogs nor newts as suggested by KEYMAR (1986) were detected by the authors who thus, assume that, in accordance with BROGGI (2009), none of these taxa should currently be expected to inhabit the island, until further

evidence is presented. The following species represent first records to the island of Ithaki.

Bufo bufo (LINNAEUS, 1758).— The first ever record of the European Common Toad on Ithaki was made on November 9, 2016 by a local resident, north of Vathy (38.37°N, 20.71°E; Fig. 2D). KEYMAR (1986) assumed that the European Common Toad could be possibly present on Ithaki but the species had never been recorded until now. It seems that *B. bufo* is even scarcer on the island than *B. viridis*.

Pseudopus apodus (PALLAS, 1775).— The first European Glass Lizard recorded was a roadkill specimen found by the second author on April 16, 2013, south of Perachori (38.33°N, 20.73°E; Fig. 2B). Since then, six more individuals were observed in the south of the island (Fig. 1 - G4, F4).

Elaphe quatuorlineata (BONNATERRE, 1790).— The first records of Four-lined Ratsnakes were two mating individuals, observed by the second author on April 18, 2015, east of Vathy (38.36°N, 20.74°E, Fig. 2C). Later, eight more individuals were seen in the southern part of the island (Fig. 1 - F2, F4). MAHNERT (1973) assumed the presence of the species based on a monk's description, however, the species' occurrence was not documented by physical evidence, until now.

Telescopus fallax (FLEISCHMANN, 1831).— The first evidence of the European Cat-eyed Snake on Ithaki was provided by the second author on April 28, 2014, west of Exogi village (38.46°N, 20.62°E, Fig. 2D). Since then, two more individuals were observed, all of them in the northern part of the island (Fig. 1 - B1, C2, D2).

Testudo hermanni GMELIN, 1789.— A specimen of Hermann's Tortoise was found by the second author on March 20, 2015, south of Frikes village (38.44°N, 20.66°E, Fig. 2A). The turtle had paint residues, telling us that it was most probably a captive pet at some point, brought to the island by people. More records of this species from the island are required to ascertain if there is a viable native population on Ithaki or the find refers to a single introduced specimen. BROGGI (2009) however, conveyed claims of locals about the presence of tortoises on the island, though rarely seen.

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REFERENCES: BROGGI, M. F. (2009): The herpetofauna of Ithaki (Ithaca, Ionian Islands, Greece).- *Herpetozoa*, Wien; 22 (1/2): 87-90. CYRÉN, O. (1935): *Herpetologisches vom Balkan*.- *Blätter für Aquarien- und Terrarienkunde*, Magdeburg; 46: 129-135. CYRÉN, O. (1941): *Beiträge zur Herpetologie der Balkanhalbinsel*.- *Mitteilungen des Königlich Naturwissenschaftlichen Institutes*, Sofia; 14: 36-152. KEYMAR, F. (1986): *Die Amphibien und Reptilien der Ionischen Region (Griechenland). Analyse ihrer rezenten Verbreitungsmuster und Überlegungen zu ihrer Ausbreitungsgeschichte*.- *ÖHG-Nachrichten*, Wien; (8/9): 8-44. MAHNERT, V. (1973): *Recherches zoologiques dans les îles Ioniennes*.- *Musées de Genève*, Genève; 131: 2-7. WERNER, F. (1894): *Die Reptilien- und Batrachierfauna der jonischen Inseln*.- *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien*, Wien; 44: 225-237. WERNER, F. (1938): *Die Amphibien und Reptilien Griechenlands*.- *Zoologica*, Stuttgart; 94: 1-117.

KEY WORDS: Amphibia: *Bufo bufo*, *Bufo viridis*; Reptilia: *Testudo hermanni*, *Pseudopus apodus*, *Elaphe quatuorlineata*, *Telescopus fallax*; new island records, herpetofauna, Ithaki, Ionian Islands, Greece

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