

The herpetofauna of Alonissos (Northern Sporades, Greece) (Amphibia, Reptilia)

Die Herpetofauna von Alonissos (Nördliche Sporaden, Griechenland)
(Amphibia, Reptilia)

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KURZFASSUNG

Die Nordsporadeninsel Alonissos wird kurz naturkundlich beschrieben. Es werden die bisherige herpetologische Literatur dargelegt und die Neufunde aufgeführt. Es sind dies *Pelophylax ridibundus*, *Testudo marginata*, *Telescopus fallax* und *Zamenis situla*. Auf der Insel wurde eine melanotische Schlange festgestellt, die vermutlich *Hierophis caspius* darstellt. Damit sind bisher 13 Amphibien- und Reptilienarten auf der Insel Alonissos nachgewiesen.

ABSTRACT

The natural history of the island of Alonissos in the Northern Sporades is briefly described. The existing herpetological literature is presented and the new finds listed, namely *Pelophylax ridibundus*, *Testudo marginata*, *Telescopus fallax* and *Zamenis situla*. A melanistic snake, presumably *Hierophis caspius*, was also found. A total of 13 species of amphibians and reptiles has been reported for Alonissos.

KEY WORDS

Amphibia, Reptilia, *Pelophylax ridibundus*, *Testudo marginata*, *Telescopus fallax*, *Zamenis situla*, *Hierophis caspius* melanistic form, new island records, Island of Alonissos, Northern Sporades, Greece

INTRODUCTION

The name Northern Sporades is mainly associated with the tourist islands of Skiathos and Skopelos and not so much with Alonissos the third biggest of the Sporades islands. Covering an area of approximately 64 km², Alonissos lies only about three kilometres north-east of Skopelos and is a long and narrow partly forested island. The bedrock is mainly limestone and the highest point of the central chain of hills is 493 meters above sea level (Kouvouli). The forest dominating the southern part of the island is mainly Aleppo pine (*Pinus halepensis*), and olive groves are also widespread. The pine forests are a substitute for the original oak trees, which were felled to build ships at Roman times. The – often dense – maquis in the center of the island is comprised of *Quercus coccifera*, *Qu. ilex* and *Arbutus unedo*. The northern part of the island is phrygana grazing land. Near Aghios Dimitrios there is a small lagoon (Fig. 1), which dries out in late spring and is an

important stopover habitat for migratory birds (CATSADORAKIS & PARAGAMIAN 2007).

Given the absence of sandy beaches and the island's remote location, Alonissos has remained largely unaffected by mass tourism. It is the only inhabited island located in the freely accessible Zone B of a National Marine Park established in 1992 (SPANGENBERG 2005). Alonissos is also part of a Natura 2000 site (GR 1430004). As a thinly populated island with some 1800 inhabitants living mostly in the south, Alonissos has become an attractive destination to individual nature tourists. The island has 14 well marked paths, with two hiking guides describing the trails (BROWNE 2008; HEITMANN 2006). A nature guide to the Northern Sporades was published by the nature protection organization 'Euronatur' (HUTTER & HAU 2001). Concerning details of its natural history, however, there are only few publications about the island of Alonissos. A number of papers deal with the flora of the



Fig. 1: The only wetland on the island of Alonissos, the lagoon of Aghios Dimitrios.
Abb. 1: Das einzige Feuchtgebiet auf der Insel Alonissos, die Lagune von Aghios Dimitrios.



Fig. 2: A large water reservoir is being constructed in the valley of the Kastanorema stream in the north-west of the island of Alonissos.
Abb. 2: Im Nordwesten der Insel Alonissos im Tal des Kastanoremaabaches wird ein großes Wasser-Retentionsbecken gebaut.



Fig. 3: *Dolichophis caspius* was the most frequently encountered snake on the island of Alonissos.

Abb. 3: *Dolichophis caspius* war die am häufigsten beobachtete Schlange der Insel Alonissos.

smaller off-shore islands of Gioura, Skantzoura, Psathura, Kyra Panagia and Piperi. There is also a publication on orchids of the Northern Sporades, which touches on some aspects of natural history (LOWE 1999). Local natural history also played a role in the feasibility study produced for the national park (MINISTRY OF THE ENVIRONMENT 2002) and in LEGAKIS' (2004) survey of the terrestrial biodiversity of the marine park

The literature

No herpetological study dedicated exclusively to Alonissos is available. Details of record localities on Alonissos were provided by CYRÉN (1935, 1941), BUCHHOLZ & SCHULTZE-WESTRUM (1964), GRUBER & SCHULTZE-WESTRUM (1971), GRILLITSCH & TIEDEMANN (1984), CRUCITI & TRINGALI (1987) and CATTANEO (1998). Neither WERNER (1930, 1938a, 1938b) nor WETTSTEIN (1953, 1957) had visited the island or added substantial new information to the knowl-

edge of its herpetofauna in their standard works on amphibians and reptiles of Greece.

For Alonissos, CATTANEO (1998) listed seven taxa, namely (in his notation) *Cyrtopodion kotschy fuchsi* BEUTLER & GRUBER, 1977, *Hemidactylus t. turcicus* (LINNAEUS, 1758), *Lacerta t. trilineata* BEDRIAGA, 1886, *Podarcis erhardii ruthveni* WERNER, 1930, *Ablepharus k. kitaibelii* (BIBRON & BORY, 1833), *Coluber caspius* GMELIN, 1789 and *Vipera ammodytes meridionalis* BOULENGER, 1903. The addenda to CHONDROPOULOS (1989) also included *Malpolon monspessulanus insignitus* (GÉOFFROY, 1827) reported for Alonissos by CRUCITI & TRINGALI (1987). A query addressed to Augusto CATTANEO (17 July 2009) met with a reference to his work on Skyros, Skopelos and Alonissos (CATTANEO 1998), in which he suggested that CRUCITI & TRINGALI (1987) had confused *M. monspessulanus insignitus* with the Large Whip Snake *Dolichophis caspius* (GMELIN, 1789). The presence of *Malpolon* on nearby Skiathos (BUCHHOLTZ & SCHULTZE-WESTRUM 1964), Skopelos

(WERNER 1938a), Skandzoura and Gioura LEGAKIS (2004), however, should make one hesitate to adopt CATTANEO's view uncritically. GRILLITSCH & TIEDEMANN (1984) mentioned that the presence of *Rana ridibunda* PALLAS, 1771 and *Testudo marginata* SCHOEPPF, 1886 on Alonissos was plausibly reported to them by the local people.

For the neighboring island of Skopelos, CATTANEO (1999, Tab. 4) mentioned eleven taxa, namely (in his notation) *Bufo viridis* LAURENTI, 1768, *Rana ridibunda* PALLAS, 1771, *Mauremys caspica rivulata* (VALENCIENNES, 1833), *Elaphe quatuorlineata* (LACÉPÈDE, 1789), *Malpolon monspessulanus fuscus* (FLEISCHMANN, 1831) and *Elaphe situla* (LINNAEUS, 1758), plus all the species found on Alonissos, except *Dolichophis caspius* and *V. ammodytes*. According to BUCHHOLZ & SCHULTZE-WESTRUM (1964), however, *V. ammodytes* is to be found on Skopelos, and *Hyla arborea* (LINNAEUS, 1758) was observed by Antonia CABELA (Vienna) in 1984 (H. GRILLITSCH, Vienna, in litt.).

The author's observations and other investigations

Our visit to Alonissos took place on 13 - 25 April 2009. The weather was cool and wet at times, which was a disadvantage for herpetological field work. In spite of the heavy rainfalls reported by locals for the 2008/09 winter, no flowing or standing water was found on the island apart from the above-mentioned lagoon. Most of the springs were encased. In the northeast of Alonissos, to cope with the low summer rainfall, a dam was being constructed across the bed of the Kastanorema stream (Fig. 2), creating a freshwater reservoir. This huge structure built with EU funding is very much a foreign body in this Arcadian landscape.

With the exception of the Nose-horned Viper *V. ammodytes*, all the previously reported species were found in the course of our visit to the island. *Hemidactylus turcicus* was seen on the very first day on our walk up to the Aristotle Studios in the bay of Roussoum Gialos near Patitiri, and several more finds were made under various well covers. Kotschy's Gecko *Cyrtopodion kotschy*, on the other hand, was seen only once, on April 23, in a stone wall of an ab-

andoned olive grove located to the north of Tourkovighia Hill (path no. 8). It is worth noting that, in the Aegean Archipelago, Kotschy's Gecko can be rare on the main island and yet is frequently seen on the smaller offshore neighboring islets (for Lipsi, see BROGGI 2008). Erhard's Wall Lizard *P. erhardii* was to be found everywhere on the island, but only very sporadic sightings of the Balkan Green Lizard *L. trilineata*, were made. The Snake-eyed Skink *A. kitaibelii*, was a common sight, especially in the pine forests. Because of the cool weather, few snakes were seen apart from the Large Whip Snake *D. caspius*, which was common. According to Jannis VLAIKOS, an expert on the island's natural history, hedgehogs were released on Alonissos by a hôte-lier in 1967 in an attempt to reduce the snake populations and has since spread across the whole island. Several specimens of the Eastern Hedgehog (*Erinaceus concolor*) were found run over on the island's roads, and a living hedgehog was sighted by the lagoon near Aghios Dimitrios.

Dolichophis caspius (Fig. 3) is either more resistant to the cold or simply occurs more frequently on Alonissos than other snake species. At all events, it was found about a dozen times throughout the island, either in the terrain, basking in the warmth of the roads or as traffic casualties. The longest specimens must have been more than 1.5 m long.

Near Kalamakia we observed a Marsh Harrier (*Circus aeruginosus*) capture and fly away with an unmarked snake about 80 cm in length. In spite of the disturbance we caused, the bird did not abandon its prey but simply flew further away. On April 19, a 40-50 cm long snake was found under a stone in an olive grove near Patitiri in the south of the island. Our first impression was that this was a melanistic juvenile of the genus *Dolichophis*. At certain angles of light it was possible to make out regular banding on the young snake's back. The smooth-scaled snake had a head that was little wider than the neck and a uniformly light yellow belly. A number of photographs were taken (Fig. 4). In my opinion the snake was a Large Whip Snake (*D. caspius*), however, according to ŠČERBAK & BÖHME (1993), melanistic forms of this species had

not been reported. CATTANEO (1998), on the other hand, pointed to the presence of melanistic *D. caspius* on Alonissos.

The opinions of various experts consulted with regard to the correct classification of the snake on the photographs can be summarized as follows: Heinz GRILLITSCH (Natural History Museum Vienna) supported my classification (e-mail dated 2009.7.24) with a residual element of uncertainty in that he pointed to the occurrence of *Hierophis gemonensis/laurenti* (LAURENTI, 1768) in the region (e.g. nearby mainland and Aspronisi, SCHULTZE-WESTRUM 1964; HENLE 1993), and of the dark individuals of the taxon *gyarosensis* on the island of Gaidaros, 200 km to the south of Alonissos (MERTENS 1968; BÖHME 1993; UTIGER & SCHÄTTI 2004). For Beat SCHÄTTI, a recognized *Coluber* sens. lat. expert (e-mail dated 7.9.2009), the veiled dorsal markings would suggest *Dolichophis jugularis* (LINNAEUS, 1758). It must be remembered, however, that the nearest occurrence of this species is in Anatolia and the Dodecanese. In May 2009 Mrs. Waltraud ALBERTI of Mourtero on Alonissos sent me photographs of another dark snake that had been run over, which I also considered to be *D. caspius* whereas H. GRILLITSCH (e-mail dated 2009.9.15) again was not absolutely sure whether the photographs undoubtedly represented *caspius*. Thus some uncertainty remains, all the more so as no genetic analyses have been performed. Further investigations are required.

New finds on Alonissos

Pelophylax ridibundus (PALLAS, 1771). The Lake Frog belongs to the herpetofauna of the island of Skopelos immediately to the north-west of Alonissos (CATTANEO 1999). It is also said to occur on the eastern off-shore island of Kyra Panagia (Ministry of the Environment 2002). According to GRILLITSCH & TIEDEMANN (1984), local residents stated that the Lake Frog was to be found on Alonissos, too. This was confirmed by elderly islanders, who said the frog used to be present in very large numbers. With regard to the occurrence of *Pelophylax ridibundus*, the authors of the management plan for the National Marine Park (Ministry of the Environment 2002) wrote,

“It is believed that they occur on Alonissos.” At our meeting on 16 April 2009, National Park Manager Vasilis KOUROUTOS said that he had heard locals speak of a site around Aghios Dimitrios. One of the members of our party, Christian BURRI, was convinced that he had heard frog calls near path no. 11, south of the dry Kasanorema stream bed, i.e. in the vicinity of Aghios Dimitrios on April 21. A follow-up visit to the dry Kasanorema failed to locate any Lake Frogs, as did a visit to the lagoon near Aghios Dimitrios. We also received a report of the presence of the Lake Frog in the little valley to the north-west of Patitiri, along path no. 4, in the direction of Chora. Jannis VLAIKOS, manager of the local fishing co-operative and a member of the National Park Council, told us that about 50 specimens of the Lake Frog had been brought from neighboring Skopelos and released there in the 1950s in an attempt to control the mosquitoes. According to J. VLAIKOS, the population flourished in the wet valley above Patitiri until the 1980s but then declined when ground water pumps replaced the old open cisterns for irrigation purposes. However, he reported seeing a dead frog on the road to Patitiri in 2008. It is apparent that the change-over in the irrigation system is causing problems for the amphibians on Alonissos, too, and that the Lake Frog is in danger of extinction on the island.

Testudo marginata SCHÖEPPF, 1886. GRILLITSCH & TIEDEMANN (1984) quoted local informants as saying that a few specimens of the Marginated Tortoise were to be found “in the mountains”. The authors of the management plan for the National Marine Park (Ministry of the Environment 2002) also said that they heard of sightings. The presence of the Marginated Tortoise on Alonissos was confirmed by our expedition. On April 16, in a location level with the bay of Kaliva Stamatou to the north of Aghios Dimitrios, on the inland side of the path at about 50 m above sea-level, our party heard noises made by tortoises and found a big male with a 35 cm long carapace (Fig. 5) courting a female with a carapace length of about 20 cm. However, that was the only sighting made during our visit to the island. It should also be mentioned that this species was reported for the smaller neighboring island of Kyra Panagia by KOCK & STORCH (1979).



Fig. 4: A melanistic juvenile snake from the island of Alonissos, tentatively identified from its photograph as *Dolichophis caspius*. Further investigations are required.

Abb. 4: Eine melanistische Jungschlange von der Insel Alonissos wurde nach dem Photo vorläufig als *Dolichophis caspius* bestimmt. Weitere Untersuchungen sind erforderlich.

Telescopus fallax (FLEISCHMANN, 1831). Mrs. Waltraud ALBERTI in Mourtero near Aghios Dimitrios spent the last fifteen years with her husband on Alonissos, where

she organizes walking holidays and holds herb seminars. Mrs. ALBERTI provided us with photographs of reptiles taken in Mourtero. Two of them showed snakes that could be clearly identified as European Cat Snakes. This is the first evidence of this species in the chain of islands from Skiathos and Skopelos to Alonissos, whereas it was already known from Skyros (CATTANEO 1998; GRILLITSCH & GRILLITSCH 1999).

Zamenis situla (LINNAEUS, 1758). Mrs. ALBERTI also reported an observation of a Leopard Snake near her house. Her description of the pronounced and colourful markings of this snake was unequivocal, and must be considered credible. Nonetheless, her observation needs additional confirmation.

In addition to the Large Whip Snake, the Nose-horned Viper *V. ammodytes*, also occurs in Mourtero, as confirmed by subsequently received photographs.

The present report raises the number of recorded taxa on Alonissos to thirteen (*Hyla* and *Z. situla* included). On Alonissos, one should also look for *Elaphe sauromates* (PALLAS, 1811), which exists on the neighboring islands of Skopelos, Skyros (e.g. CATTANEO 1998) and Kyra Panagia (LEGAKIS 2004). As already mentioned *Malpolon monspessulanus* was recorded from a number of neighboring islands. Its presence on Alonissos should be confirmed by a voucher to rebut the doubts raised by CATTANEO (1998). The presence on Alonissos of *Mauremys caspica*, which is found on Skiathos and Skopelos, must be considered very unlikely as no suitable biotopes were found there. This should also be considered for the presence of the Green/Variable Toad.

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Fig. 5: The presence of *Testudo marginata* on the island of Alonissos was confirmed by this specimen observed north of Aghios Dimitrios.

Abb. 5: Vorkommensnachweis von *Testudo marginata* auf der Insel Alonissos durch den Fund dieses Exemplars nördlich Aghios Dimitrios.

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