

THE HERPETOFAUNA OF THE UNINHABITED ISLANDS OF THE SPETSAI/HYDRA ISLAND COMPLEX, GREECE

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INTRODUCTION

Between the autumn of 1969 and the summer of 1971 a series of investigations were carried out on islands/islets in the Argo-Saronic Gulf. The author has already written a number of reports on this area (Clark 1967, 1969, 1970, 1972, 1989) which is seldom referred to in herpetological literature. The last named paper was a general checklist of the islands and adjacent mainland and did not go into details of micro-distribution. In this account I have selected the region bounded by the inhabited islands of Spetsai and Hydra; these are referred to in the text where necessary but the thrust is on the uninhabited islands. Descriptions of the localities are given, a species account and some taxonomic discussion. Of interest is the existence of a distinct race of *Lacerta trilineata* on Stavronissos, the abundance of *Tenuidactylus kotschy* on the miniscule islets and colour variant of *Coluber gemonensis* on Dhokòs.

The islands vary in size from little more than above water rocks and reefs under 100m. long, to substantial masses of land with peaks of up to nearly 300m. above sea-level.

It should be noted that in Clark (1989) two island localities were given in error: Kartèli and Vèntzna. These islands were not visited and the localities should have read Tagàri and Strongylò. This correction has been made with reference to Greek maritime charts.

LOCALITY DESCRIPTION

AGIOS IOANNIS: a low island sloping up to the highest point, 9.5m. on which a chapel is built. Not very rocky with much low shrub cover.

MICRO IOANNIS: a small satellite to Agios Ioannis. Maximum elevation 6m. with a small area of dense undergrowth. The shoreline is strewn with small rocks and stones. Both these islands lie to the east of Spetsopùla.

TRIKKERI: a substantial island, butterfly-shaped the two halves joined by a narrow neck. Trikkeri lies about 8 km. east of Spètsai, is 1.8 km in length and has a maximum elevation of 127m. The landscape is rocky with areas of scrub and a few stunted trees.

STAVRONISSOS: steep and rocky with vertical cliffs on its eastern and southern sides. The top of the island is a small plateau with an elevation of 111m. There is some vegetation and the remnants of hillside terracing. The island is approximately 700m x 500m and lies 76km off the south-west extremity of Hydra.

ASTERI: a low reef 6m broad and 84m long. A little vegetation in protected hollows but in rough weather the islet is nearly swept by waves.

DHRAPI: rather larger than Astèri, conical with a circumference of about 1km. Maximum elevation 15m.

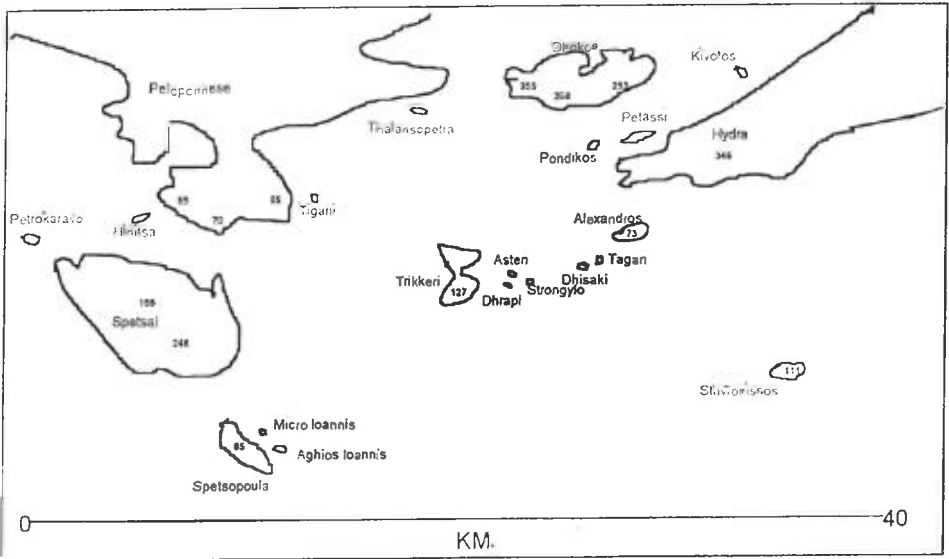


Fig. 1. Map of the Spetsai/Hydra Island Complex

STRONGYLO: the largest of this group, rugged and steep. Maximum elevation 38m. Astèri, Dhràpi and Strongylò lie about 1.5km, east of Trikkeri.

ALEXANDROS: long and steep and about the same area as Stavrònissos with a narrow, flat central ridge. A ruined building stands on the highest point at 73m.

TAGARI & DHISAKI: a pair of tiny islets separated by a narrow, rock-studded channel. Both these and neighbouring Alèxandros lie close to the western point of Hydra and east of Trikkeri.

PONDIKOS: narrow and steep-to with considerable scrub cover. Maximum elevation 34m.

PETASSI: precipitous and rocky up to a narrow central spine. Both Pondikòs and Petàssi are situated off the east coast of Hydra in Stenòn Petàssi.

KIVOTOS: one of a pair of islets with evidence of former use in the presence of a small chapel and some ruined walls. Kivotòs is to be found between Petàssi and the port of Hydra.

DHOKOS: the largest of the islands. Dhokòs is 8 km in length and about 2.5km at its broadest point. The southern side has vertical cliffs which fall abruptly away from the summit of 293m. There are extensive olive groves but the small settlement is now nearly deserted. Otherwise the island is densely covered with scrub and is rocky with deep crevices.

TIGANI: a comparatively well vegetated islet with low scrub and bushes and a few Aleppo pines. Maximum elevation 24m.

THALASSOPETRA: a steep-sided islet with difficult access. Rock and earth banks which are heavily eroded.

HINITSA: low, undulating and well vegetated with a maximum elevation of 17m. These three islands lie close to the mainland coastline.

PETROKARAVA (BOURBOULO): this islet, 1.5 km off the north west point of Spetsai, is steep, rocky and difficult to explore though there is a rough path up to an automatic beacon. Maximum elevation 22m.

Although the islands in question are uninhabited, or in many cases uninhabitable, some are used for seasonal grazing of sheep and goats. The animals are largely left unattended although on Trikkeri a shepherd was in residence, in April 1971. No reptiles were found on Hinitisa nor on Alèxandros.

Localities are shown in Fig. 1.

SPECIES ACCOUNT

TESTUDINIDAE

Testudo m. marginata Schoepff 1792 Marginated Tortoise

Distribution. Dhokos. 2 adults and 2 juveniles 20.11.69 and the species was found to be common on the island on re-visits in March and May 1971. The species does not occur on other islands, but is abundant on Spetsai. Both the juveniles as well as one of the adults had a prominent thigh tubercle. It is possible to misidentify juveniles as *T. graeca ibera* on account of this feature though the flared-out carapace is a characteristic that serves to identify adult *T. marginata*. (Fig. 2).

GEKKONIDAE

Hemidactylus t. turcicus (Linnæus) Turkish Gecko.

Distribution. Dhokòs. A single specimen, a female, was caught under the cover of a cistern near a deserted building. Another example was seen at the same locality.

Tenuidactylus kotschyi subsp. (Steindachner 1870). Naked Fingered Gecko.

Distribution. Ubiquitous. 103 examples were collected, 82 adults and 21 juveniles, the majority – all except nine – in November. It was generally found in hiding under stones and on Dhrapi eight were disclosed under one boulder. It was further identified on Trikkeri from numerous examples seen in the open. It was especially common on Agios and Mikos Ioannis (28), Dhrapi (20), Asteri (16) and Pondikos (12). The duration of time spent on the tiny islets was an hour or less so this gives some indication as to the population densities. More examples were found on Dhrapi in 30 minutes than on Spetsai over a period of several months.

There is some variation in the colouring and patterning, which would appear to be linked with the islet/island groupings:

- Dorsal barrings:** bold (Agios/Mikro Ioannis)
faint or nearly absent (other localities)
- Venter:** Dull white minutely and densely black spotted (Tigani, Thalassòpetra Petrokàravo).
white with lighter black dotting (Pondikòs, Petàssi, Stavrònissos).
immaculate white with minute dark dustings (Dhokòs, Tagàri, Dhisàki).
yellow, minutely and densely black dotted (Dhràpi, Astèri, Strongylò).



Plate 1. *Testudo marginata*



Plate 2. *Lacerta erhardii livadiaca*

On one specimen from Tigani the dorsal barrings are replaced by three longitudinal stripes and there is a tendency for this condition in the presence of nape stripes in geckos from Agios Ioannis.

Diagnostic data is summarised in Table 1. On islands where samples are reasonable the data is listed separately. The dorsal tubercle keeling is weakly developed, the interspaces no wider than the tubercles themselves as in the case in all populations from the Argo-Saronic Gulf islands examined by the author.

LACERTIDAE

Lacerta t. trilineata Bedriaga 1881. The Balkan Green Lizard.

Distribution. Dhokos. Sight identified on 20.11.69 and 23.05.70. Three adult males and two juveniles were caught on 11/12.03.71 and a gravid female on 24.05.71. In all respects these were typical for the nominate form: adults had a bright green dorsum minutely black dotted; belly white or cream and the throat/chin yellow; pileus Olive/grey with green vermiculations (males), female nearly black with yellow/green flecks. Juveniles were dark chocolate with three longitudinal dorsal yellow stripes, the vertebral line broken in one individual. There was a row of lateral spots. This species was fairly common and encountered on all visits to the island.

Lacerta trilineata new subsp.

Distribution: Stavronissos. Green Lizards from this island differed in a number of characters from the nominate form as tested in combined samples from the Argo-Saronic Gulf islands of Salamis, Aegina, Hydra, Dhokos, Spetsai, Plateia and Ipsili: The most striking difference was in appearance: lizards from Stavronissos were either sombre grey/green heavily overridden with darker grey so that the ground colour was nearly obliterated. In one male and one female the ground was a brighter green, the normal minute black dotting typical of the nominate form replaced by an irregular coarse patchwork. Otherwise meristic differences were found in the number of supraciliaries, supraciliary granules and dorsals: Table 2. Note that the supraciliary, supraciliary granule and dorsal counts are low in the Stavronissos form. In addition there was a difference in the submaxillaries (not shown in Table 2). The Stavronissos population invariably had four scales in each series. On the other islands either five or four large and one small, occasionally six.

Three visits were made to Stavronissos. On the first occasion two males and two females were caught and a further six seen (19.11.69). On 10.06.70 two males one female and one juvenile were secured and an additional three lizards seen. The last visit was on 18.06.71 when a further two males were caught. Most of the lizards were observed on the summit plateau where there were plenty of bushes and scrub in which they took refuge, as well as amongst rock piles and crevices.

Podarcis erhardii livadiaca (Werner 1902) Erhard's Wall Lizard

Distribution. Petassi. This is the only small lacertid that occurs and is also found on neighbouring Hydra. Petassi was visited on three occasions: 19.11.69, two specimens seen; 10.06.70, nothing seen; 19.06.71 four adult males and two females caught. An analysis of the Wall Lizards from Hydra, Petassi, Attica and Agios Gedgios is in preparation and publication intended at a future date. This species was photographed on Hydra in April 1993. (Fig. 3).

SCINCIDAE

Ablepharus k. kitaibelli Bibron & Bory 1833. The Snake-Eyed Skink

Distribution. Agios Iòannis, Tigàni, Dhokòs, Petàssi. This species has had some success on the small islands but not to the same extent as *T. kotschyi*. Two adult males were taken on Agios Iòannis, a female from Tigàni, a male from Dhokòs. It was sight identified on Petassi. Quite possibly it occurs on more of the islands than those listed here.

COLUBRIDAE

Coluber g. gemonensis (Laurenti 1768)

Distribution. Trikkeri, Dhòkos, Stavronissos. Common on all these islands. For details see Table 3.

Most specimens were normally coloured and patterned but in two males from Dhokos the colouring and markings were unusual and distinctive. The ground colour was plain grey dorsally and silver grey dorso-laterally. The dorsum had bold black bars which were either single or offset. These bars extended down to the mid-lateral zone with additional black markings below. These markings gradually became reduced posteriorly and confined to scale edges giving a striped pattern. On one example the venter had large black spots on the outer scale edges and a single row of smaller black spots either side of the mid-line which was speckled with black, this continuing down the tail as a continuous line. In a female from Dhokos the dorsum had large black markings down its length but not in the form of organised bars.

As had already been remarked on (Clark, 1989) the distribution of *C. gemonensis* in the area is unpredictable. The species is absent from the islands of Spetsai and Hydra as well as from Poros. On the mainland it is also absent in the Argolid peninsula, but occurs at Mycenae and then widely through the rest of the Peloponnese both at low and higher altitudes. Its survival on the three islands in question is due to the lack of competition from other species in a limited area. On Trikkeri and Stavronissos it is the only snake and on Dhokos, a considerably larger island, it is sympatric with *C. najadum dahlia*.

Coluber najadum dahlia Dahl's Whip Snake

Distribution. Dhokos. Two cast skins were identified on 20.11.69 and three live snakes sight identified on 23.05.70. This snake occurs on Spetsai but has not been recorded from Hydra. No evidence was found of its presence elsewhere.

Table 1
Data on *Tenuidactylus kotschyi*

Locality	Ventrals R	Ventrals M	Ventrals SD	Tubercles R	Tubercles M	Number
A	24-29	26.50	01.57	10-13	12	28
B	21-28	23.90	01.53	11-14	12	39
C	23-26	24.25	01.04	11-13	12	8
D	21-27	24.67	02.07	11-12	12	6
E	23-27	25.58	01.08	10-13	12	12
F	21-29	24.99	01.75	10-14	12	138

Locality legend to Table 1: A Agios/Mikro Iòannis B Astèri, Dhràpi, Strongylò C Tigani, Thalassòpetra D Petrokàravo E Pondikòs F All Saronic Gulf localities.

Table 2
Data on *Lacerta trilineata*

Locality	D/R	D/M	D/SD	S/R	S/M	S/SD	G/R	G/M	G/SD	No.
A	47-54	49.50	2,44	4-8	5,71	8.86	4-12	7,87	2,43	30
B	43-49	46.33	1,97	3-5	4	0.74	1-7	3,36	2,1	10
C	47-55	49.41	0,55	5-7	5,6	0.55	6-14	9,55	1,95	17
D	47-58	51.72	3,13	4-7	5,65	0.74	7-11	8,1	1,58	11
E	48-53	49.90	1,7	5-6	5,5	0.50	7-14	9,56	2,03	10

Legend to localities: A Saronic Gulf Islands B Stavronissos C Attica D Peloponnese E Central and South Euboiia.

Legend to Characters: D/R Dorsal range D/M Dorsal mean D/SD Dorsal standard deviation S/R Supraciliary range S/M Supraciliary mean S/SD Supraciliary standard deviation G/R Granule range G/M Granule mean G/SD Granule standard deviation No. Number of lizards in sample.

Table 3
Data on *Coleber gemonensis*

Locality	Date	Sex	A	B	C	D
Stavrònissos	19.11.69	male	264	117	172	110
	27.02.70	male	630	280	172	104
	27.02.70	female	625	172	183	62+
Dhokòs	20.11.69	male	505	220	181	103
	23.05.70	male	750	162+	169	48
	23.05.70	male	547	246	170	101
	23.05.70	male	488	223	169	98
	24.05.71	male	486	223	166	101
	08.06.71	male	443	203	171	102
	11.03.71	female	630	171+	183	64
	07.06.71	female	585	227	181	96
Trikkeri	07.02.70	male	267	125	171	112
	08.04.71	male	235	100	171	106
	08.04.71	male	488	224	169	105
	08.04.71	female	553	230	178	99
	08.04.71	female	491	207	178	99

- A** Body length mm.
B Tail length mm.
C Subcaudals x 2
D Ventrals anal divided
E Dorsals
+ Tail damaged

SUMMARY

The following species were found on the uninhabited islands: *Testudo m. marginata* (Dhokòs); *Hemidactylus t. turcicus* (Dhokòs), *Tenuidactylus kotschy* (ubiquitous); *Ablepharus k kitaibelli* (Agios Iòannis, Tigàni, Petàssi, Dhokòs); *Lacerta t. trilineata* (Dhokòs); *Lacerta trilineata new subsp.* (Stavrònissos); *Podarcis erhardii livadiaca* (Petàssi); *Coluber g. gemonensis* (Trikkeri, Stavrònissos, Dhokòs); *Coluber najadum dahlii* (Dhokòs). Trinomial nomenclature is given in all species except where taxonomic uncertainty exists: *Tenuidactylus kotschy*.

REFERENCES

- Clark, R.J. (1967). Herpetofauna of the islands of the Argo-Saronic Gulf, Greece. *Proceedings of the California Academy of Sciences 4th. series. XXXV* (2) 23-36.
- Clark, R.J. (1969). A collection of snakes from Greece. *British Journal of Herpetology* 4(30) 45-48.
- Clark R.J. (1970). A further contribution to the herpetofauna of the islands of the Argo-Saronic Gulf, Greece. *British Journal of Herpetology* 4(7) 185-188.
- Clark, R.J. (1972). New locality records for Greek Reptiles. *British Journal of Herpetology* 4(11) 311-312.
- Clark, R.J. (1989). A checklist of the Herpetofauna of the Argo-Saronic Gulf District Greece. *British Herpetological Society Bulletin* 28 8-24.