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The Amphibian and Reptile Species of İğneada (Kırklareli) and its Vicinity

Çetin Ilgaz and Yusuf Kumlutaş
Department of Biology, Faculty of Education,
Dokuz Eylül University, Buca-İzmir, Turkey

Abstract: This study was aimed to describe the herpetofauna of İğneada (Kırklareli) and its vicinity. In the research area, 113 specimens belonging to 14 species from 8 amphibian and reptile families were determined. Two of these anurans, 1 is a tortoise, 1 is a turtles, 7 are lizards and 2 are snakes. *Darevskia praticola pontica* specimens collected in the research area were investigated according to pholidosis characters and morphometric measurements and the known range of this subspecies was also extended.

Key words: İğneada, herpetofauna, *Darevskia praticola pontica*, new locality

INTRODUCTION

The herpetofauna of the Turkey is very rich and diverse. In terms of richness and taxonomic diversity of amphibian and reptile, this area harbors one of the most remarkable amphibian and reptile fauna within the western Palaearctic region, owing to high habitat diversity and zoogeographical factors. Turkey comprises 775.000 km² in Asia (Anatolia) and 4.450 km² in Europe (Thrace), 779.450 km² in total. Although Thrace is comprised a small area in contrast to Anatolia, it is inhabited 9 amphibian and 32 reptile species^[1,2]. The herpetological studies on Thrace are limited in comparison with Anatolia^[3-15].

İğneada located at the Turkey-Bulgaria border by the Black Sea coast includes seasonally inundated longos forests, marshes, freshwater lakes and coastal dunes (Fig. 1). The area was declared as SIT Area status in 1991. In the study area there are five lakes with lush aquatic vegetation. The vegetation, known as longos forests, with abundant marsh areas and found where the Istranca meet the sea, is dominated by arboreal species typical in this area such as oaks (*Quercus robur*, *Quercus hartwisiana*, *Quercus frainetto*, *Quercus petrae* ssp. *petrae*, *Quercus petrae* ssp. *iberica*, *Quercus infectoria* ssp. *infectoria*, *Quercus pubescens*, *Quercus cerris* var. *cerris* and *Quercus cerris* var. *austriaca*) beeches (*Fagus orientalis*, *Fagus sylvatica*) and ash (*Fraxinus ornus* ssp. *ornus*).

İğneada has not been fully studied in terms of its herpetofauna except for in studies on anuran and urodelan species^[16-18]. This study aims to describe the amphibian and reptile species of İğneada and the results will make a valuable contribution to the knowledge on Thrace's herpetofauna.

MATERIALS AND METHODS

A total of 113 amphibian and reptile specimens were evaluated during excursion in 2002 (some specimens were examined and released). Specimens that were examined and released in the research area are shown with asterisk (*) in the list. Specimens were fixed (95%) and preserved (70%) in ethanol after etherisation according to method described by Başoğlu and Baran^[10]. Specimens are kept at Department of Biology, Buca Education Faculty, Dokuz Eylül University. The area in which the specimens were studied is shown in Fig. 1. Identification of the amphibian and reptile species collected from research area was performed by utilizing the available literature^[11,10,11]. Specimens of *Darevskia praticola* were investigated in terms of pholidosis characters and morphometric measurements with dial caliper with an accuracy of 0.02 mm.

Material List

Familia	Species	Material (N)	Localities
Hylidae	<i>Hyla arborea</i> (Linnaeus, 1758)	10	5
Ranidae	<i>Rana ridibunda</i> Pallas, 1771	24	1, 2, 3, 5
	<i>Rana dalmatina</i> Bonaparte, 1838	12	2, 5
Testudinidae	<i>Testudo graeca</i> Linnaeus, 1758	5*	5
Emyidae	<i>Emys orbicularis</i> (Linnaeus, 1758)	3*	7
Lacertidae	<i>Lacerta viridis</i> (Laurenti, 1768)	23	2, 4, 5, 6, 7
	<i>Podarcis muralis</i> (Laurenti, 1768)	11	1, 2, 5, 6
	<i>Podarcis taurica</i> (Pallas, 1814)	6	5, 7
	<i>Darevskia praticola</i> (Eversmann, 1834)	2	5
Anguidae	<i>Anguis fragilis</i> Linnaeus, 1758	1	4
	<i>Pseudopus apodus</i> (Palas, 1775)	1	5
Scincidae	<i>Ablepharus kitaibelli</i> Bibron-Bory, 1833	10	5, 7
Colubridae	<i>Natrix natrix</i> (Linnaeus, 1758)	2*	5, 7
	<i>Natrix tessellata</i> (Laurenti, 1768)	3*	7

Table 1: Pholidosis characters and morphometric measurements of *Darevskia praticola pontica* specimens collected from İğneada

Specimens	1	2	Specimens	1	2
Sex	♂	♂	Sex	♂	♂
Total body length	135.00	----	Tympanics	1	1
Snout-vent length	45.94	53.66	Supralabials	4/4	4/4
Tail length	89.06	----	Sublabials	6/6	6/6
Pileus length	10.86	11.42	Supraciliars	6/6	6/6
Pileus width	6.66	6.82	Supraciliary granules	4/2	4/3
Head length	11.98	12.02	Supratemporals	3/2	3/2
Head width	6.90	7.04	Anal	1	1
Fore legs length	15.02	15.10	Preanals	9	8
Hind legs length	20.32	21.10	Collars	8	7
Distance a/b	a<b	a<b	Temporals	25/25	24/24
Second interparietal	-	+	Gulars	18	17
Masseteric in contact with supratemporals	Yes	No	Dorsals	37	37
Nostrils in contact with rostral	No	No	Transversal series of ventral	24	25
Postnasals	1/1	2/1	Longitudinal series of ventral	6	6
Preoculars	2/1	2/2	Femoral pores	13/12	12/11
Inframaxillars	6/6	6/6	Subdigital lamellae	25/25	24/24

(left/right, +: present, -: absent, a: distance of the lower anterior edge of subocular to tip of snout, b: distance of posterior edge of frontal to the posterior edge of occipital)

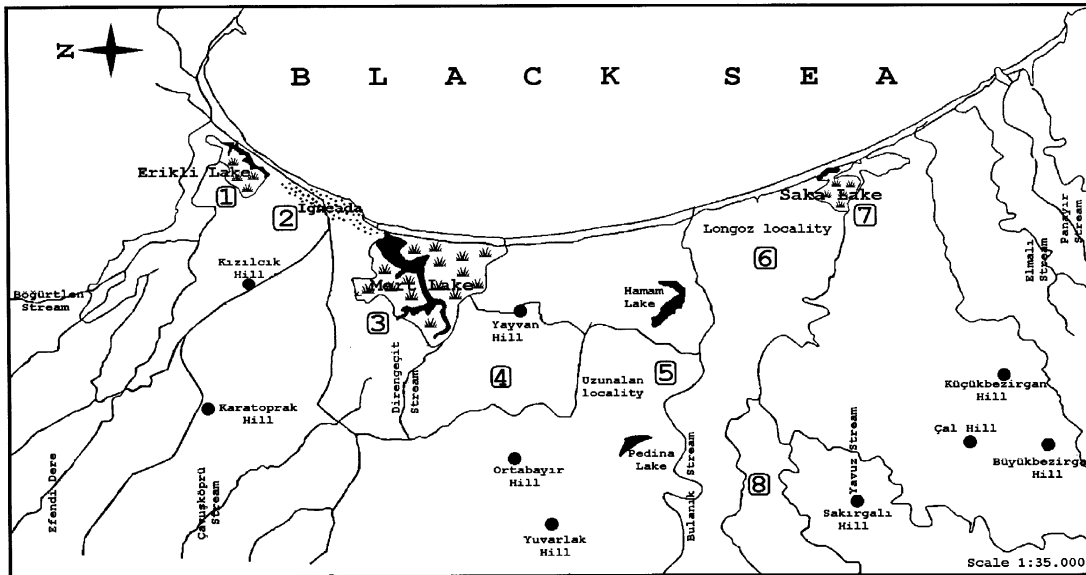


Fig. 1: The research area in which specimens were studied (1: Vicinity of Erikli Lake, 2: Northwestern of İğneada, 3: Vicinity of Mert Lake, 4: between Deringeçit Stream and locality of Uzunalan, 5: between Pedina and Hamam Lakes, 6: Longos locality, 7: Vicinity of Saka Lake, 8: between Yavuz and Bulanık Stream)

RESULTS AND DISCUSSION

Being the doorway to Anatolia for the European amphibians and reptiles, Thrace region is rather rich in terms of herpetofauna. İğneada and its vicinity represents only a small fraction of the Thrace region, however, the number of species identified by field sampling and observations in the study area is 34.2% of the total number of amphibian and reptile species found in Thrace. İğneada and its vicinity are rich in herpetofauna due to abundant fresh water habitats in the area. With respect to herpetofauna, the most important site is the area between

Pedina and Hamam Lakes. 78.6% of the species identified in this study were observed in this area. This area provides suitable habitats for feeding and dwelling of the amphibian and reptile species. The number of identified species was the lowest in the vicinity of Mert Lake (7.1%).

At the end of excursion to the research area, 8 families from 11 genera including 14 species were identified to inhabit the region (2 are anurans, 1 is a tortoise, 1 is a turtles, 7 are lizards and 2 are snakes). Thus the lizard population in the research area has the densest distribution (48.0%) (Fig. 2).

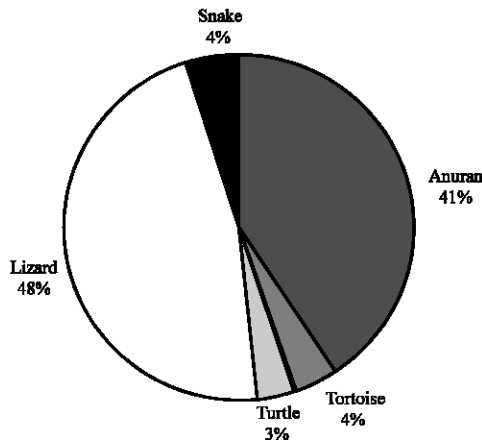


Fig. 2: Percentage of the amphibian and reptile specimens

In the present study, it has not been only given the list of amphibian and reptile species collected from the vicinity of İğneada, but also has been extended the distribution of *Darevskia praticola pontica* in Thrace. *Darevskia praticola pontica* is distributed northeast Serbia, south Romania, east and west Bulgaria, most northwest Turkey and western Caucasus^[9]. *D. p. pontica* was differentiated from nominat form in having 6 pairs of inframaxillar plates^[9,15,19]. *Darevskia praticola pontica* was known only three localities in Thrace^[9,14,15]. It was the first record of this taxon from İğneada and the known range of this subspecies was also extended approximately 50 km. The pholidosis characters and morphometric measurements of *Darevskia praticola pontica* specimens examined in this study were given in Table 1.

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