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Short Communication

The Amphibian and Reptile Species of Kazdağı National Park

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Abstract: The amphibians and reptiles of Kazdağı in western Anatolia were investigated. In the study area, 190 specimens belonging to 34 species from 15 amphibian and reptile families were determined. Three of these species are urodelan, 5 are anurans, 2 are turtles, 1 is a tortoise, 12 are lizards, and 11 are snakes. *Rana dalmatina* Bonaparte, 1840, *Anguis fragilis* Linnaeus, 1758, and *Podarcis sicula* (Rafinesque, 1810) were recorded at Kazdağı for the first time.

Key Words: Kazdağı, herpetofauna, *Rana dalmatina*, *Anguis fragilis*, *Podarcis sicula*, new locality

Kazdağı Millî Parkı'nın Kurbağa ve Sürüngen Türleri

Özet: Bu çalışmada, Batı Anadolu'da bulunan Kazdağı'nın amfibi ve sürüngen türleri araştırılmıştır. Araştırma bölgesinde, 15 amfibi ve sürüngen familyasından 34 türe ait 190 örnek tespit edilmiştir. Bunlardan 3 tanesi kuyruklu kurbağa, 5 tanesi kuyruksuz kurbağa, 2 tanesi su kaplumbağası, 1 tanesi kara kaplumbağası, 12 tanesi kertenkele ve 11 tanesi de yılan türlerine aittir. *Rana dalmatina* Bonaparte, 1840, *Anguis fragilis* Linnaeus, 1758 ve *Podarcis sicula* (Rafinesque, 1810) Kazdağı'ndan ilk defa kaydedilmiştir.

Anahtar Sözcükler: Kazdağı, herpetofauna, *Rana dalmatina*, *Anguis fragilis*, *Podarcis sicula*, yeni lokalite

Although some previous studies on the amphibians and reptiles of western Anatolia have been published (Budak, 1976; Öz, 1982; Uğurtaş, 1989; Kumlutaş, 1993; Tok, 1996; Baran and Atatür, 1998; Türkozan et al., 2001; Kumlutaş et al., 2004a, 2004b; Kumlutaş et al., 2007), there is limited information on the herpetofauna of the high mountains in this region. The herpetofauna of the high mountains in western Anatolia have not been investigated in detail except for the Honaz, Yamanlar, Spil, Bozdağ, and Murat mountains (Doğaç, 1998; Kumlutaş et al., 2000, 2001; Özdemir and Baran, 2002; Kumlutaş, 2004a).

There are 33 national parks in Turkey. Kazdağı National Park in Balıkesir and Çanakkale provinces was founded in 1993 (Figure). Kazdağı National Park serves as an important refugium for fauna that escaped from Europe during glacial periods (Demirsoy, 2002). Biodiversity is poorly understood and under surveyed in many of Turkey's national parks, including Kazdağı.

Since there is no comprehensive study on the herpetofauna of Kazdağı, we hope that our results will make a valuable contribution to knowledge about Turkey's herpetofauna and wildlife.

A total of 190 amphibian and reptile specimens were collected during our excursions in 1998 and 2006 (some specimens were examined and released). Specimens that were examined and released in the study area are shown with an asterisk (Table). The specimens were fixed using traditional processes. Specimens are kept at Uludağ University, Faculty of Arts and Sciences, Department of Biology. The area where the specimens were studied is shown in the Figure.

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Table. The list of Amphibian and Reptile Species in Kazdağı National Park.

Family	Species	Material (N)
Salamandridae	*Triturus karelinii* (Strauch, 1870)	5
	Triturus vulgaris (Linnaeus, 1758)	18 + 1*
	Triturus vittatus (Jenyns, 1835)	12
Hylidae	*Hyla arborea* (Linnaeus, 1758)	8 + 1*
Ranidae	*Rana ridibunda* Pallas, 1771	7 + 15*
	Rana dalmatina Bonaparte, 1840	5
Bufonidae	*Bufo bufo* (Linnaeus, 1758)	3 + 1*
	Bufo viridis (Laurenti, 1768)	2 + 1*
Emydidae	*Emys orbicularis* (Linnaeus, 1758)	3 + 1*
Bataguridae	*Mauremys rivulata* (Valenciennes, 1833)	1 + 2*
Testudinidae	*Testudo graeca* Linnaeus, 1758	2 + 3*
Anguidae	*Anguis fragilis* Linnaeus, 1758	7
	Pseudopus apodus (Pallas, 1775)	1+1*
Gekkonidae	*Hemidactylus turcicus* (Linnaeus, 1758)	1
	Cyrtopodion kotschyi (Steindachner, 1870)	3
Lacertidae	*Podarcis muralis* (Laurenti, 1768)	10 + 11*
	Podarcis sicula (Rafinesque, 1810)	1
	Lacerta viridis (Laurenti, 1768)	12 + 3*
	Lacerta trilineata Bedriaga, 1886	1 + 2*
	Anatololacerta danfordi (Günther, 1876)	7
	Ophisops elegans Menetries, 1832	3 + 3*
Agamidae	*Laudakia stellio* (Linnaeus, 1758)	2 + 1*
Scincidae	*Ablepharus kitaibellii* (Bibron-Bory, 1833)	2
Typhlopidae	*Typhlops vermicularis* Merrem, 1820	1
Colubridae	*Hierophis caspius* Gmelin, 1789	4 + 1*
	Platyceps najadum (Eichwald, 1831)	1
	Natrix natrix (Linnaeus, 1758)	5 + 1*
	Natrix tessellata Laurenti, 1768	5 + 1*
	Coronella austriaca (Laurenti, 1768)	4
	Malpolon monspessulanus (Hermann, 1804)	1
	Telescopus fallax (Fleischmann, 1831)	1
	Zamenis situla (Linnaeus, 1758)	1
	Eirenis modestus (Martin, 1838)	1
Viperidae	*Vipera xanthina* (Gray, 1849)	1

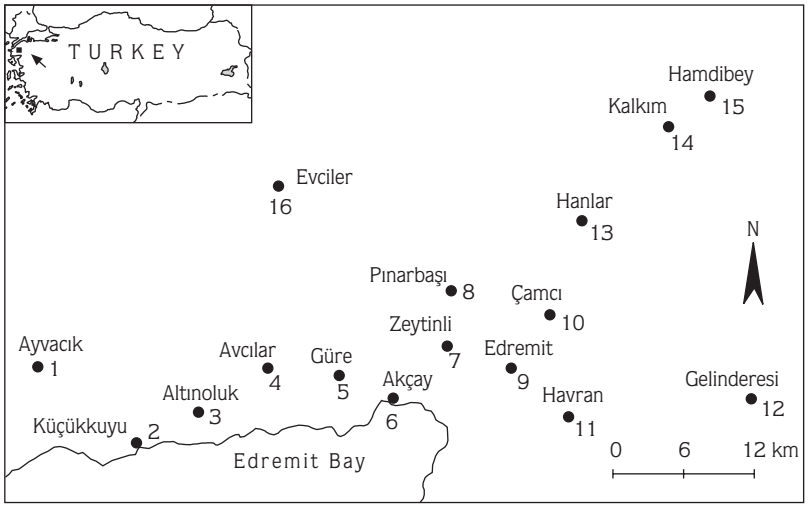

Figure. The localities in which the specimens were collected.

Triturus karelinii (6, 14); *Triturus vulgaris* (14); *Triturus vittatus* (14, 16); *Hyla arborea* (4, 7, 8, 14); *Rana ridibunda* (2, 4, 7, 14); *Rana dalmatina* (8, 10,14); *Bufo bufo* (1, 4); *Bufo viridis* (3, 9, 14); *Emys orbicularis* (5, 10, 11, 14); *Mauremys rivulata* (14, 16); *Testudo graeca* (4, 10, 13); *Anguis fragilis* (3, 14, 16); *Pseudopus apodus* (2, 7); *Hemidactylus turcicus* (4); *Cyrtopodion kotschyi* (9); *Podarcis muralis* (4, 7, 11, 13, 14); *Podarcis sicula* (15); *Lacerta viridis* (4, 13, 14); *Lacerta trilineata* (10, 13); *Anatololacerta danfordi* (5, 13); *Ophisops elegans* (1, 7, 13); *Laudakia stellio* (4, 7, 13); *Ablepharus kitaibellii* (1); *Typhlops vermicularis* (14); *Hierophis caspius* (4, 5, 7, 14); *Platyceps najadum* (11); *Natrix natrix* (4, 7, 8, 12, 14); *Natrix tessellata* (4, 5, 7, 13); *Coronella austriaca* (1, 7, 13, 14); *Malpolon monspessulanus* (11); *Telescopus fallax* (4); *Zamenis situla* (7); *Eirenis modestus* (7); *Vipera xanthina* (7).

Identification of the amphibian and reptile species was performed by utilizing the literature (Başoğlu and Baran, 1977; Leviton et al., 1992; Baran and Atatür, 1998).

In detailed excursions to the research area, 15 families from 27 genera including 34 species were identified to inhabit the region (3 are urodelan, 5 are anurans, 1 is a tortoise, 2 are turtles, 12 are lizards, and 11 are snakes). Thus, the lizard population in the research area has the highest distribution (N: 62) in comparison with anurans (N: 43), urodeles (N: 36), snakes (N: 28), and tortoises (N: 12).

The importance of this study lies in the discovery of *Rana dalmatina*, *Anguis fragilis*, and *Podarcis sicula* in the research area. Specimens of *Rana dalmatina*, *Anguis fragilis*, and *Podarcis sicula* were collected for the first time from Kazdağı.

Rana dalmatina is distributed in Middle and E Europe, Caucasus, and N Iran. It is also found in Thrace and northern parts of Anatolia in Turkey (Baran and Atatür, 1998). It is pointed out that the southern border of distribution of this species is in Bursa and Kilitbahir (Uğurtaş, 1989; Özeti and Yılmaz, 1994). In this study, by recording *R. dalmatina* in Kazdağı, the southern border of distribution of this species was clarified.

Anguis fragilis is widespread in the majority of Europe and N Asia. It is also found in the Black Sea costal strip in Turkey. The southern border of the distribution area of this species is Kızılcahamam (Başoğlu and Baran, 1977). By recording *A. fragilis* in Kazdağı, the distribution area of the species was observed in far western and southern borders.

The range of *Podarcis sicula* includes S Europe, NW Turkey, and an isolated colony in Philadelphia (USA). It is found in Turkey, in urban İstanbul, on some islands in the Sea of Marmara, and in Bursa (Başoğlu and Baran, 1977; Uğurtaş et al., 2000). It is of considerable importance to note that the distribution area of this species has been extended to Kazdağı.

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