

## ARAŞTIRMA MAKALESİ/RESEARCH ARTICLE

### HERPETOFAUNA OF SPİL MOUNTAIN (MANİSA) AND ITS VICINITY: RESULTS OF FIELD SURVEYS

Yusuf KUMLUTAŞ<sup>1</sup>, Çetin ILGAZ<sup>1</sup>, S. Hakan DURMUŞ<sup>1</sup>

#### ABSTRACT

This study describes the herpetofauna of Spil Mountain National Park and its vicinity. In the area, a total of 70 specimens from 13 species were identified. Of these, 1 belongs to anurans, 1 belongs to tortoise, 4 belong to snakes and 7 belong to lizard group.

**Key Words:** Herpetofauna, Ecology, Spil Mountain, Manisa.

### SPİL DAĞI (MANİSA) VE CİVARININ HERPETOFAUNASI: ARAZİ ÇALIŞMASININ SONUÇLARI

#### ÖZ

Bu çalışmada, Spil Dağı (Manisa) ve civarındaki kurbağa ve sürüngen türleri tespit edilmiştir. Bölgede toplam 70 numune 13 tür altında toplanmıştır. Bunlardan 1 tanesi kuyruksuz kurbağa, 1 tanesi kaplumbağa, 4 tanesi yılan ve 7 tanesi de kertenkele grubuna aittir.

**Anahtar Kelimeler:** Herpetofauna, Ekoloji, Spil Dağı, Manisa.

## 1. INTRODUCTION

Previous studies on the herpetofauna of Turkey were mostly focused on a certain species or a species group (Peters, 1964; Daan, 1967; Flind and Hemmer, 1968; Zaloğlu, 1968). In recent years, however, a detailed survey of amphibians and reptiles of a specific region is especially preferred by native and foreign scientists (Uğurtaş, 1989; Franzen, 1990; Baran et al., 1992; Winden and Bogaerts, 1992; Baran et al., 1994; Baran et al., 1997; Öz et al., 1998; Kumlutaş et al., 1998). These kind of studies expose the taxonomy and ecology of the animals living in the region as well as the fauna of the region. Accordingly, the information gaps on the Turkish herpetofauna can be completed by uniting these kind of studies.

The research area Spil Mountain and its vicinity has been designated as "National Park" in 1969. This mountain is located at the south of Vilayet Manisa and

covers nearly 6895,5 hectares. The highest peak of the mountain is 1517 m. Due to National Park status, the area is well protected and the Mediterranean forest and Alpine zone vegetation of the Park well developed. Consequently, dense amphibian and reptile populations were observed. Only flora and vegetation studies were carried out in the region (Duman, 1985) where as there were no information on the reptilian fauna. It is therefore, carries great importance to determine the amphibian and reptile species and to give distribution and ecological features of the region since the region is designated as National Park.

## 2. MATERIALS AND METHODS

Specimens were collected during the excursions carried out on different dates. All the material were caught by hand and carried to laboratory in cloth bags. Colorful slides of some specimens were taken and then all were fixed.

<sup>1</sup> Dokuz Eylül University, Buca Education Faculty, Department of Biology, Buca-İzmir -TURKEY.  
E-mail: yusuf.kumlutas@deu.edu.tr Fax : + 90-232-4204895

The fixing fluid is 3 cc 40 % formolin, 97 cc 70 % ethyl-alcohol for frogs; 9 cc 40 % formolin 91 cc 70 % ethyl-alcohol for tortoises, lizards and snakes.

The injected specimens were shaped properly and covered with cotton with alcohol and then they were left in nylon bags for 24 hours for constant protection, and then they were taken into jars containing 70 % ethyl-alcohol.

### 3. RESULTS

#### Bufonidae

##### *Bufo viridis* (LAURENTI,1768) N:1

(09.05.1997, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** Nearly distributed all parts of Turkey. In addition, it spreads in Northern Africa, Mediterranean countries, middle and Southern Europe and from western Asia to Mongolia

**Ecology:** This nocturnal species shelters in the daytime under stones or within subterranean burrows in gardens or open fields. The specimen was found near a small pound.

#### Testudinidae

##### *Testudo graeca* (LINNAEUS, 1758) N:1

(01.04.1998, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** Widespread in Turkey. Its range extends from North Africa, to South Europe and Southwest Asia with a vertical distribution to 2000 m.

**Ecology:** Lives in arid rocky and sandy areas with bushy vegetation, in cultivated fields and gardens. The specimen was found among scrubs in a pine forest while wandering around.

#### Agamidae

##### *Laudakia stellio* (LINNAEUS, 1758) N:3

(09.05.1997, 01.05.1998, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** Turkey (West, South, Middle and Southeast Anatolia), Southwestern part of Asia, North Africa and Southeastern Europe.

**Ecology:** Especially seen in stony biotopes and between the stone-walls of gardens.

#### Amphisbaenidae

##### *Blanus strauchi* (BEDRIAGA,1884) N:6

(01.05.1998, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** Inhabits some Aegean Islands, Turkey (southern part of West Anatolia, South and southeast Anatolia), Syria and north Iraq with a vertical distribution to 1400 m.

**Ecology:** Sometimes seen within or at the edges of woods. Lives under stones or in soil within sparsely vegetated areas. The specimens were caught under the stones within bushy areas.

#### Gekkonidae

##### *Hemidactylus turcicus* (LINNAEUS,1758) N:1

(09.05.1997, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** Known from Mediterranean and Black Sea coastal regions to India with a vertical distribution to 1000 m. Found in all coastal zones of Turkey.

**Ecology:** Lives under stones, in crevices of rocks, in houses and ruins. Especially active at night. The specimen was caught while bathing within the ruins.

#### Lacertidae

##### *Lacerta trilineata* (BEDRIAGA, 1886) N:6

(09.05.1997, 01.05.1998, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** This species has a cosmopolitan distribution in Turkey with a vertical distribution to 1500 m. Its range extends from the Adriatic Sea coasts to Balkan countries, Caucasia, southwest Iran, Syria and Israel.

**Ecology:** Usually shelters between the roots and trunks of bushy vegetation. This species is mostly observed within the bushy vegetation which close to water.

##### *Lacerta danfordi* (GUNTHER,1876) N:2

(09.05.1997, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** Inhabits in Turkey (southern and western part of Anatolia) and some Aegean Islands with a vertical distribution up to 1200 m.

**Ecology:** Inhabits rocky areas and loose stone walls in forested or wooded areas not much far from water.

***Ophisops elegans* (MENETRIES, 1832) N:11**

(09.05.1997, 01.05.1998, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** It has a widespread in Turkey except the Black Sea coastal region. In addition its range extends from southern Balkan countries, Aegean and Mediterranean Islands to southwest Asia and Punjab in north India.

**Ecology:** Usually inhabits open plains with sparse vegetation specimens were found at the sides of the paths and crop fields and in the meadows.

**Scincidae*****Ablepharus kitaibellii* (BIBRON-BORY, 1833) N:1**

(01.04.1998, Leg. Y. Kumlutaş, S. H. Durmuş, Ç. Ilgaz)

**Distribution:** Turkey (Thrace, west, south and central Anatolia) Balkan countries, Aegean islands and southwest Asia.

**Ecology:** Lives in open spaces with short bushy plants and marquis or sparse tree. The specimen was found while dwelling around the leaves.

**Colubridae*****Coluber jugularis* (LINNAEUS, 1758) N:1**

(09.05.1997, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** Inhabits in southern part of Turkey (up to İzmir in the north) and southeast Anatolia, Syria, Iraq, Lebanon, Jordan and Israel.

**Ecology:** Hides under stones and in rodent galleries. Lives in rocky river banks, rock-stony slopes, plains fields and swamps. The specimen was caught about 1000 m. altitude.

***Eirenis modestus* (MARTIN, 1838) N:25**

(09.05.1997, 01.05.1998, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** This species has a cosmopolitan distribution in Turkey. It is also found in Caucasia, Northwest Iran, Syria, Lebanon and Cyprus.

**Ecology:** This species has a vertical distribution up to 2000 m. It was very densely observed in the research field. Specimens were found under stones in rocky areas with sparse vegetation. Designed and undersigned specimens were found in the some biotope.

***Elaphe situla* (LINNAEUS, 1758) N:1**

(09.05.1997, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** In habits in Turkey (north and west Anatolia), South Italy, Balkan Countries, Aegean Islands, Caucasus and Crimea Peninsula.

**Ecology:** Usually seen in stony, bushy habitat also frequents gardens, field edges, barns, even houses. It is, therefore, called as "house snake" as well.

**Typhlopidae*****Typhlops vermicularis* (MERREM, 1820) N:11**

(09.05.1997, Leg. Y. Kumlutaş, S.H. Durmuş, Ç. Ilgaz)

**Distribution:** Widespread in almost all regions of Turkey. Its range extends from South Yugoslavia to Bulgaria, Albania, Greece and Afghanistan to the east.

**Ecology:** The species-known as the "blind snake" inhabits under the stones in the slopes with sparse vegetation. All specimens were found under stones.

**4. CONCLUSION AND DISCUSSION**

A total of 13 species (7 lizards, 4 Snakes, 1 tortoise and 1 anuran) belong to 9 families were determined in the research area. The snake population was the densest (N: 38) among the others while lizards (N: 30), frogs (N: 1) and tortoise (N: 1) follow in order. The most common species was *Eirenis modestus* (Colubridae) in the area. This research detected the richness of the reptile fauna in the Spil Mountain. In addition, having given the distribution areas as well as the ecological features, the information gaps on the herpetofauna of Aegean Region tried to have been completed.

**REFERENCES**

- Baran, İ., Yılmaz, İ., Kete, R., Kumlutaş, Y. and Durmuş, S.H. (1992). Batı ve Orta Karadeniz Bölgesinin Herpetofaunası. *Doğa Tr. J. of Zoology*, 16, (3), 275-288.
- Baran, İ., Kumlutaş, Y., Kaska, Y. and Türkozan, O. (1994). Research on the Amphibia, Reptilia and Mammalia Species of the Köyceğiz-Dalyan Special Protected Area. *Doğa Tr. J. of Zoology*, 18, (4), 203-219.
- Baran, İ., Tosunoğlu, M., Kaya, U. and Kumlutaş, Y. (1997). Çamlıhemşin (Rize) Civarının Herpetofaunası Hakkında. *Doğa Tr. J. of Zoology*, (21), 409-416.

Daan, S. (1967). Variation and Taxonomy of the Hardun **Agama stellio** (LINNAEUS, 1758) (Reptilia, Agamidae). Beafortia. *Zool. Mus. Univ. Amsterdam* 172 (14), 109-134.

Duman, H. (1985). *Manisa Dağı (Spil Dağı) Milli Parkı'nın Flora ve Vegetasyonu Üzerine Bir Çalışma*. Yüksek Lisans Tezi. Gazi Üniversitesi Fen Bilimleri Enstitüsü, Ankara.

Flindt, R. and Hemmer, H. (1968). Über **Bufo viridis** im Vorderen Orient. *Senckenbergiana Biol.* (49), 99-106.

Franzen, M. (1990). Die Eidechsenfauna (Lacertidae) der Türkei. *Die Eidechsen*, Bonn, (1), 3-9.

Kumlutaş, Y., Tok, C.V. and Türkozan, O. (1998). The Herpetofauna of Ordu-Giresun Region. *Doğa Tr. J. of Zoology*, (22), 199-201.

Öz, M., Kumlutaş, Y., Durmuş, S.H., Düşen, S., Türkozan, O. and Tunç, R. (1998). *Batu Torosların Herpetofaunası*. XVI. Biyoloji Kongresi, (3), 158-168, Samsun.

Peters, G. (1964). *Studien zur Taxinomie. Verbreitung und Ökologie der Samaragdeidechsen 3. Die Orientalischen Populationen von Lacerta trilineata*. Mitt. Zool. Mus. Berlin, (40), 186-249.

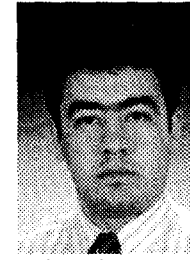
Uğurtaş, İ.H. (1989). Bursa-Uludağ Bölgesinin Herpetofaunası. *Doğa Bilim Dergisi*, TBTA Ankara. (13), 241-248.

Winden, J. and Bogaerts, S. (1992). *Herpetofauna of the Göksu Delta, Turkey. Report 311*. Department of Animal Ecology Univ. of Nijmegen, Netherlands. 144 pp.

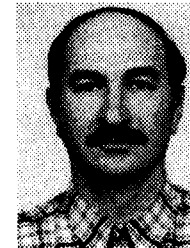
Zaloğlu, S. (1968). Taxonomy of the Genus **Blanus** (Amphisbaenidae. Reptilia) in Turkey. *Sci. Rep. Fac. Sci. Ege Univ. İzmir*, (57), 1-15.



**Yusuf Kumlutaş**, was born in İzmir in 1963. He was graduated from primary, secondary and high schools in İzmir. He was graduated from Science Faculty of Ege University in 1985 and received Ph.D. degree in 1993. He was appointed as an assistant professor in 1995 and as an associate professor in 1998. He is now working at Buca Educational Faculty, Dokuz Eylül University.



**Çetin Ilgaz**, was born in Kaman in 1972. He was graduated from primary, secondary and high schools in İzmir. He was graduated from Biology Department, Buca Education Faculty, Dokuz Eylül University in 1994 and received M.Sc. degree in 1998. He was appointed as a research assistant at Buca Education Faculty in 1999.



**Salih Hakan Durmuş**, was born in İnegöl in 1962. He was graduated from Science Faculty of Ege University in 1986, received M.Sc. degree in 1989 and Ph.D. degree in 1998. He has been working as a teaching assistant at Buca Educational Faculty since 2000.