

Beyond the First Glimpse: A Comprehensive Reappraisal of Reptile Diversity in Ordu Province, Türkiye

Mehmet Kürşat Şahin*

Abstract

Located at the intersection of major biogeographic zones, Ordu Province in northeastern Türkiye hosts a mosaic of ecosystems shaped by complex topography and climatic gradients. Despite this ecological richness, its reptile fauna has remained poorly documented. In this study, an extensive field survey was conducted between October 2016 and October 2018, covering diverse habitats from coastal lowlands to montane forests. A total of 165 occurrence records were compiled, representing 15 reptile species across three orders and eight families. Among these, *Darevskia rudis* was the most frequently encountered species, widely distributed across elevations and habitat types. Notably, the study confirmed the presence of range-restricted or conservation-sensitive species, including *Vipera berus*, *Darevskia clarkorum*, *Testudo graeca*, and *Emys orbicularis*. Chorotypic analysis revealed that Turano-Mediterranean, Armeno-Anatolian endemic, and European elements dominate the assemblage, highlighting Ordu's role as a biogeographic transition zone. This work represents the first comprehensive reptile inventory for the province and provides essential baseline data for future ecological studies and conservation planning. Given the increasing anthropogenic pressures in the region, the need for long-term monitoring and public engagement is emphasized to ensure the persistence of this unique herpetofaunal community.

Keywords: Reptilia, biodiversity inventory, zoogeography, chorotype analysis

*Corresponding author: yasambilimci.kursat@gmail.com

1. Introduction

Türkiye is one of the richest countries in terms of herpetofaunal diversity within the Palearctic realm, harboring approximately 145 reptile species, which is nearly equivalent to the entire European continent (Kurnaz, 2020; Speybroeck et al., 2020; Yaşar et al., 2021). This remarkable diversity stems from the country's unique geographical location at the crossroads of three major biogeographic realms—Asia, Europe, and Africa—and the presence of three global biodiversity hotspots: the Caucasus, Irano-Anatolian, and Mediterranean regions (Mittermeier et al., 2011). Türkiye's varied topography, tectonic complexity, and wide range of climatic and vegetational zones have fostered both high species richness and a significant rate of endemism (Ambarlı et al., 2016). Over the past century, herpetological studies in Türkiye have generally followed two major trends: species-specific or group-focused ecological and evolutionary studies (e.g., Arribas et al., 2022; Güçlü et al., 2014; Kafimola et al., 2023; Kurnaz et al., 2019; Özdemir et al., 2009), and regional surveys aimed at documenting local herpetofauna (Afsar & Tok, 2011; Akman et al., 2018; Arslan et al., 2018; Bozkurt et al., 2022; Candan et al., 2020; Erişmiş, 2017; Eser & Erişmiş, 2014; Kumlutaş et al., 2011, 2015, 2017; Sarıkaya et al., 2017; Yıldız et al., 2024). However, despite an increasing number of localized studies in recent decades, several provinces remain insufficiently explored from a herpetofaunistic perspective (Baran et al., 2006; Kumlutaş et al., 1998).

The Black Sea Region of Türkiye presents a particularly interesting biogeographic setting due to its transitional role between Euro-Siberian and Irano-Anatolian floristic zones (Ambarlı et al., 2016; Sindaco et al., 2000). This region harbors a variety of forested, riparian, montane, and coastal ecosystems, which provide habitat for a wide range of amphibian and reptile species, including several endemics and species with restricted distributions (Baran et al., 2021; Ravkin et al., 2010; Sindaco et al., 2000). However, while areas such as the Western and Central Black Sea regions have received some attention, the northeastern coastal provinces—particularly those with complex topography and steep elevational gradients—are still underrepresented in herpetological inventories (Akman et al., 2020; Şahin & Afsar, 2018). These ecological gradients are of particular interest for understanding altitudinal distribution limits, habitat connectivity, and microendemism, especially in the face of changing land use and climatic pressures (Ambarlı & Bilgin, 2014; Gül et al., 2015; Reading & Jofré, 2015).

Ordu Province, situated on the mid-eastern Black Sea coast of Türkiye, exemplifies this ecological and topographical richness. Extending from sea level along its rugged coastline to elevations exceeding 2,000 meters in the inland Canik Mountains, Ordu encompasses a mosaic of ecosystems—from humid coastal forests and river valleys to highland meadows and subalpine zones (Ministry of Culture and Tourism, 2025; Turoğlu & Dölek, 2011). Despite this environmental heterogeneity and its strategic location along a major faunal transition zone, the reptile fauna of Ordu has not been comprehensively surveyed to date. Two early studies contributed to the initial understanding of reptile diversity in the region: Sevgili et al. (2016) documented species within the urban environments of Ordu, while Kumlutaş et al. (1998) provided a broader faunistic overview of the herpetofauna in the Ordu–Giresun region, forming the baseline for subsequent biodiversity assessments. Most existing records are either outdated, incidental, or embedded within broader regional studies lacking detailed locality data (Bodenheimer, 1944; Baran et al., 1992; Mulder, 1995). In light of this knowledge gap, the present study aims to provide the first systematic inventory of reptilian species in Ordu Province. This will not only contribute to filling a significant gap in Anatolian herpetology but also support conservation planning and biogeographical assessments in this ecologically sensitive region.

2. Materials and Methods

Field studies were conducted across the entire Ordu Province, located in the mid-eastern Black Sea Region of Türkiye. The province covers an area of approximately 5,952 km² and lies between 37°00' and 38°06' E longitudes and 40°18' and 41°21' N latitudes (Ministry of Culture and Tourism, 2025). 30 field survey days between October 2016 and October 2018, a total of 165 reptile occurrence records were obtained through direct field observations and specimen captures. Specimens were identified in accordance with standard herpetological literature (e.g., Baran et al., 2021; Yaşar et al., 2021). Most individuals were released at the site after identification. GPS coordinates of all localities were recorded using a Garmin Etrex e30 in UTM format.

Capture techniques varied depending on habitat type and species behavior. Terrestrial species were captured by hand or with soft nets during active searching, while semi-aquatic species were collected using scoop nets or by hand. Some individuals, especially lacertid and scincid lizards, were temporarily transferred to the laboratory for detailed identification using pholidosis and morphological traits. The conservation status of each species was assessed based on the criteria of the IUCN Red List, the Bern Convention, and CITES. Additionally, zoogeographical analysis was performed by assigning species to major chorotypes following the classification system proposed by Vigna Taglianti et al., 1999.

3. Results

A total of 165 reptile occurrence records were documented during fieldwork conducted between October 2016 and October 2018 throughout Ordu Province, Türkiye. These observations correspond to 15 reptile species from 13 genera, and 8 families (Table 1, Figure 1, Supplementary Table 1). Among these, 6 species are lizards, and 2 are turtle and tortoise, while 7 species of snakes were also recorded.

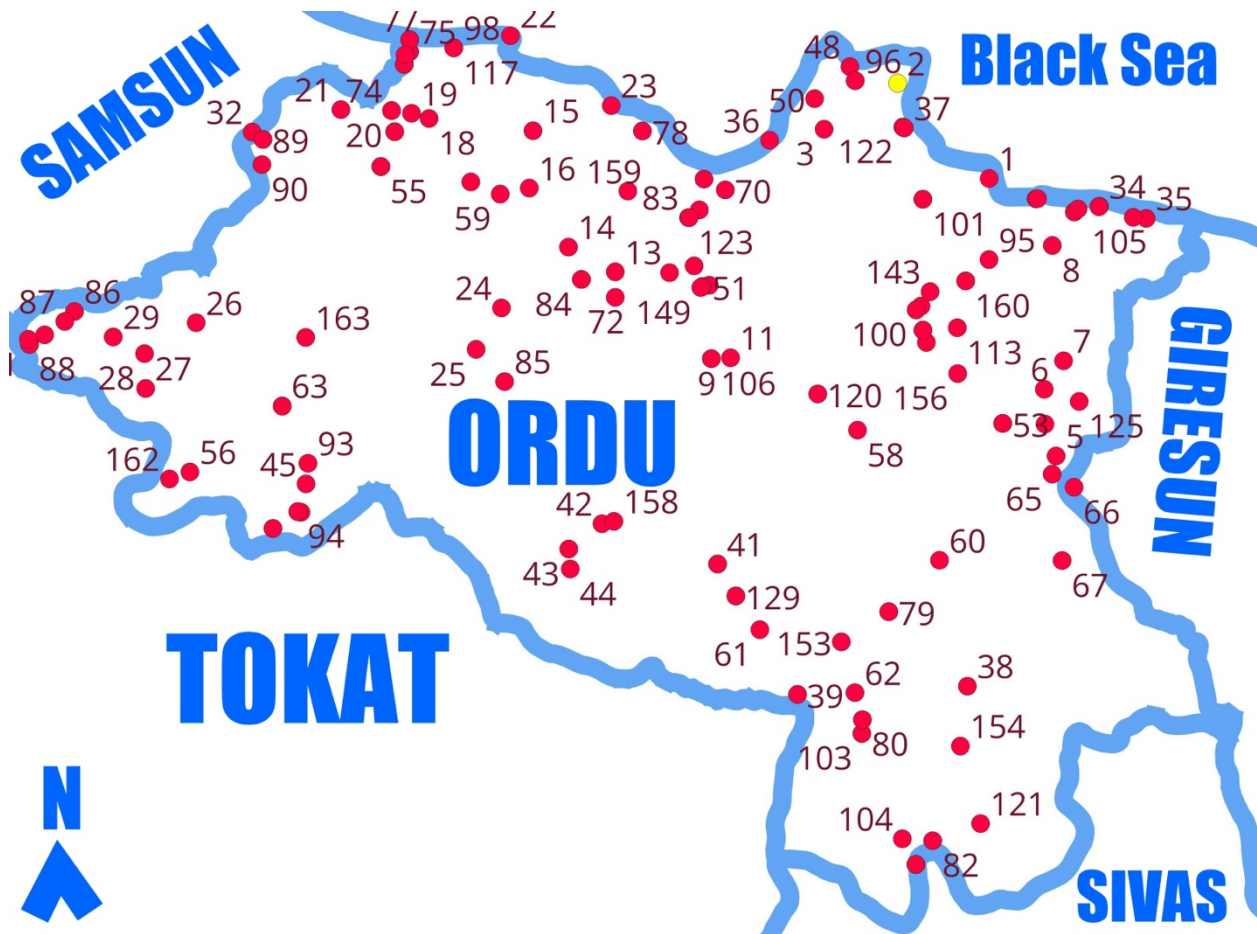


Figure 1. Reptile species distribution in Ordu Province (corresponding numbers are given in Supplementary Table 1)

The most frequently encountered species was *Darevskia rudis*, with 65 unique locality records distributed across a wide elevational and geographic gradient from coastal hills to highland forests. Other common species included *L. viridis* (35 localities), *A. colchica* (16 localities), and *N. tessellata* (13 localities). Less frequently encountered taxa were *P. parva*, *A. chernovi*, *D. caspius*, *Z. longissimus*, *V. meridionalis*, *V. berus*, and the testudines *T. graeca* and *E. orbicularis*.

Two species with limited Anatolian distributions, *V. berus* and *D. clarkorum*, were also recorded within the study area. Especially the explore of *D. clarkorum* represents notable range confirmation for this narrowly distributed taxon in the eastern Black Sea Region.

According to the IUCN Red List, *D. clarkorum* is categorized as Endangered (EN), *T. graeca* is categorized as Vulnerable (VU), and *E. orbicularis* and *V. meridionalis* as Near Threatened (NT). The remaining species are listed as Least Concern (LC) or have Not Evaluated (NE) status. All species are under protection under either Appendix II or Appendix III of the Bern Convention, while *T. graeca* is additionally listed in CITES Appendix II.

Chorotypic classification based on zoogeographical origins, following the frameworks of Vigna Taglianti et al. (1999) and Sindaco et al. (2000), indicated that the dominant chorotypes among the recorded species were Turano-Mediterranean, Armeno-Anatolian endemic, and European, collectively comprising the majority of the assemblage. Additionally, several species were assigned to Caucasian-origin chorotypes, reflecting the region's transitional biogeographic position between the Caucasus and Anatolia (Table 1).

This study constitutes the first comprehensive inventory of the reptile fauna of Ordu Province and documents several species with both widespread and localized distributions. The high number of *D. rudis* records, in particular, reflects the suitability of the region's montane and forest-edge habitats for this species.

Additionally, the presence of both Mediterranean and Euro-Siberian chorotypes highlights the biogeographic transitional nature of Ordu's herpetofauna.

Table 1. Reptile species of Ordu province

Order	Family	Species	IUCN Status	Bern Appendix	CITES	Chorotype	Observation point
Squamata	Lacertidae	<i>Darevskia rudis</i>	LC	III	-	Ponto-Caucasian endemic	1 – 64, 67
Squamata	Lacertidae	<i>Darevskia clarkorum</i>	EN	II	-	Kolkhidian endemic	65 – 66
Squamata	Lacertidae	<i>Lacerta viridis</i>	LC	II	-	E-European	68 – 102
Squamata	Lacertidae	<i>Parvilacerta parva</i>	LC	II	-	Armeno-Anatolian endemic	103 – 104
Squamata	Anguidae	<i>Anguis colchica</i>	NE	III	-	European	105 – 120
Squamata	Scincidae	<i>Ablepharus chernovi</i>	LC	III	-	Armeno-Anatolian Endemic	121
Squamata	Natricidae	<i>Natrix natrix</i>	LC	III	-	Centralasiatic-European-Mediterranean.	122 – 133
Squamata	Natricidae	<i>Natrix tessellata</i>	LC	II	-	Centralasiatic-European	134 – 146
Squamata	Colubridae	<i>Coronella austriaca</i>	LC	II	-	European	147 – 152
Squamata	Colubridae	<i>Dolichophis caspius</i>	LC	III	-	Turano-Mediterranean	153 – 154
Squamata	Colubridae	<i>Zamenis longissimus</i>	LC	II	-	S - European	155 – 156
Squamata	Viperidae	<i>Vipera meridionalis</i>	NE	II	-	Euro-Siberian	157 – 159
Squamata	Viperidae	<i>Vipera berus</i>	LC	III	-	Euro-Siberian	160 – 161
Testudines	Testudinidae	<i>Testudo graeca</i>	VU	II	II	Turano-Mediterranean	162 – 163
Testudines	Emydidae	<i>Emys orbicularis</i>	NT	II	-	Turano-European-Mediterranean	164 – 165

4. Discussion

This study presents the first province-wide faunistic survey of reptiles in Ordu Province, located in the mid-eastern Black Sea Region of Türkiye. A total of 15 reptile species belonging to 8 families were recorded during field surveys conducted. Prior to this study, the reptile fauna of Ordu was largely undocumented, with only incidental or regional records reported within broader herpetological surveys of the Black Sea region (e.g., Çevik & Kumlutaş, 1999; Kumlutaş et al., 1998; Sevgili et al., 2016; Tok & Kumlutaş, 1996). These findings reveal that Ordu harbors a moderately rich and ecologically diverse reptile assemblage, reflective of its position as a biogeographic transition zone between the European and Caucasian regions.

Among the species recorded, *D. rudis* was the most frequently encountered, distributed widely from coastal habitats to higher montane zones. Its dominance across a range of elevations (0–1700 m) and habitat types—including forest edges, rocky outcrops, and humid slopes—aligns with its known ecological tolerance (Kurnaz & Yousefkhani, 2020). Other commonly observed species such as *L. viridis*, *N. tessellata*, and *A. colchica* were also broadly distributed, indicating the prevalence of mesic and semi-open habitats throughout the region. Notably, range-restricted species such as *V. berus* and *D. clarkorum* were also confirmed in Ordu, highlighting the province's potential conservation significance.

Two testudinian species—*T. graeca* and *E. orbicularis*—were recorded from limited localities. The former, classified as Vulnerable (VU) by the IUCN, is highly susceptible to habitat degradation and illegal collection (Shearer & Türkozan, 2024), and its observation in Ordu represents an important conservation concern. Likewise, *E. orbicularis*, listed as Near Threatened (NT), was recorded from marshy and slow-flowing aquatic habitats which are increasingly under threat from agricultural and urban expansion. Conservation efforts targeting freshwater ecosystems in Ordu should consider these species as priority taxa (IUCN, 2025).

The chorotype assessment indicated that Turano-Mediterranean, Armeno-Anatolian endemic, and European elements dominate the reptile fauna of Ordu, consistent with findings from other provinces in northern and northeastern Anatolia (Çakmak et al., 2017; Kumlutaş et al., 2017; Şahin & Afsar, 2018; Akman et al., 2020; Yıldız et al., 2021). The presence of Euro-Siberian (S) European species such as *A. colchica*, *Z. longissimus* and *V. meridionalis* is also expected, given the province's proximity to the temperate forest belts of the Pontic Mountains. This chorotypic mosaic supports the notion that Ordu acts as an ecological corridor, with faunal elements originating from both temperate Europe and arid continental Asia.

Compared to some provinces from Anatolia, the observed 15 species in Ordu represent a modest herpetofaunal richness. For example, Sarıkaya et al. (2017) reported 48 herptile species from Adana, while Yıldız et al. (2024) listed 53 from Şanlıurfa, and Akman et al., 2018 reported 36 species from Bitlis. However, unlike these regions, Ordu's high topographic complexity, dense forest cover, and humid climate may limit the presence of xeric-adapted or open-habitat reptile species that contribute to higher species counts elsewhere. Nonetheless, the detection of widespread generalists (*N. natrix*, *C. austriaca*) reinforces the province's ecological importance.

In light of ongoing land-use change, hydrological alteration, and infrastructure development in the region—including road construction and forest fragmentation—the long-term persistence of several sensitive species in Ordu remains uncertain (Turoğlu & Dölek, 2011). Outreach and education programs aimed at raising public awareness about local biodiversity, particularly among communities living near sensitive habitats, are recommended. Emphasis should be placed on wetland conservation, and reduction of pesticide use, particularly in highland pastures where *Vipera* spp. and other microendemic taxa occur. Given increasing anthropogenic pressures—particularly habitat loss and landscape fragmentation—these findings provide an essential baseline for future biodiversity monitoring, species conservation prioritization, and habitat protection efforts in the region. Sustained field studies and public engagement will be critical for safeguarding the unique herpetofaunal assemblage of this ecologically significant province.

Article Information

Conflict of Interest Disclosure: No potential conflict of interest was declared by the author.

Ethical Approval and Participant Consent: It is declared that during the preparation process of this study, scientific and ethical principles were followed and all the studies benefited from are stated in the bibliography. The results of field surveys were carried out with the permission of Republic of Türkiye Ministry of Agriculture and Forestry (Permission Number: 72784983—279.99-19020783).

Availability of data and materials: Not applicable.

Acknowledgements: This work was undertaken by the Directorate of Nature Conservation and National Parks of the Ministry of Agriculture and Forestry, and the Provincial Directorate of Ordu Nature Conservation and National Parks.

Author's contributions: The author solely conceived and designed the study, conducted all fieldwork, compiled and analyzed the data, performed chorotypic and biogeographical assessments, prepared all figures and tables, and wrote and revised the manuscript.

Supporting/Supporting Organizations: The author would like to express his thanks to Nartus Energy and Environmental Investments Co. for their support during their project.

Plagiarism Statement: This article was scanned by the plagiarism program. No plagiarism detected.

5. References

- Afsar, M., & Tok, C. V. (2011). The herpetofauna of the Sultan Mountains (Afyon-Konya-Isparta), Turkey. *Turkish Journal of Zoology*, 35(4), 491–501.
- Akman, B., Çakmak, M., & Yıldız, M. Z. (2020). On the Herpetofauna of the Central Anatolian Province of Kırıkkale (Turkey). *Acta Biologica Turcica*, 33(2), 70–79.
- Akman, B., Yıldız, M. Z., Özcan, A. F., Bozkurt, M. A., Igci, N., & Gocmen, B. (2018). On the herpetofauna of the East Anatolian Province of Bitlis (Turkey)(Amphibia; Reptilia). *Herpetozoa*, 31(1–2), 69–82.
- Ambarlı, D., & Bilgin, C. C. (2014). Effects of landscape, land use and vegetation on bird community composition and diversity in Inner Anatolian steppes. *Agriculture, Ecosystems & Environment*, 182, 37–46.
- Ambarlı, D., Zeydanlı, U. S., Balkız, Ö., Aslan, S., Karaçetin, E., Sözen, M., Ilgaz, Ç., Ergen, A. G., Lise, Y., & Çağlayan, S. D. (2016). An overview of biodiversity and conservation status of steppes of the Anatolian Biogeographical Region. *Biodiversity and Conservation*, 25(12), 2491–2519.
- Arribas, O., Candan, K., Kornilios, P., Ayaz, D., Kumlutaş, Y., Gül, S., Yılmaz, C., Yıldırım Caynak, E., & Ilgaz, Ç. (2022). Revising the taxonomy of *Darevskia valentini* (Boettger, 1892) and *Darevskia rudis* (Bedriaga, 1886)(Squamata, Lacertidae): A Morpho-Phylogenetic integrated study in a complex Anatolian scenario. *Zootaxa*, 5224(1), 1–68.
- Arslan, D., Oliver, A., Yaşar, Ç., İsmail, İ. B., Döndüren, Ö., Ernoul, L., Beck, N., & Çiçek, K. (2018). Distribution and current status of herpetofauna in the Gediz Delta (Western Anatolia, Turkey). *Herpetology Notes*, 11, 1–15.
- Baran, İ., Avcı, A., Kumlutaş, Y., Olgun, K., & Ilgaz, Ç. (2021). *Türkiye Amfibi ve Sürüngenleri*. Palme Yayıncılık.
- Baran, İ., Kumlutaş, Y., Tok, C. V., Ilgaz, Ç., Avcı, A., Özdemir, A., Tosunoğlu, M., & İret, F. (2006). *Güneydoğu Anadolu bölgesinin herpetofaunasının araştırılması*.
- Baran, İ., Yılmaz, İ., Kete, R., Kumlutaş, Y., & Durmuş, H. (1992). Batı ve Orta Karadeniz bölgesinin herpetofaunası. *Turkish Journal of Zoology*, 16(1), 275–288.
- Bodenheimer, F. S. (1944). *Introduction into the knowledge of the Amphibia and Reptilia of Turkey*. Marmara Basemevi.
- Bozkurt, E., Ürker, O., & Elverici, M. (2022). An assessment of the herpetofauna of the Oriental Sweetgum forests in southwestern Anatolia, Turkey. *Phyllomedusa: Journal of Herpetology*, 21(2), 125–139.
- Budak, A., & Göçmen, B. (2014). *Herpetoloji*. Ege Üniversitesi.
- Çakmak, M., Akman, B., & Yıldız, M. Z. (2017). Herpetofauna of Bartın Province (Northwest Blacksea Region, Turkey). *South Western Journal of Horticulture Biology and Environment*, 8(2), 89–102.
- Candan, K., Caynak, E. Y., Kumlutaş, Y., Özender, Ö., & Ilgaz, Ç. (2020). Meke Maarı (Konya) civarının herpetofaunası. *Balıkesir Üniversitesi Fen Bilimleri Enstitüsü Dergisi*, 22(2), 55–66.
- Çevik, İ. E., & Kumlutaş, Y. (1999). Taxsonomical States of *Lacerta viridis* (Lacertidae) Populations from Turkey. *Turkish Journal of Zoology*, 23(5), 37–46.
- Erişmiş, U. C. (2017). Herpetofauna of the Province of Kütahya, Turkey. *Journal of Applied Biological Sciences*, 1, 33–38.
- Eser, Ö., & Erişmiş, U. C. (2014). Research on the Herpetofauna of Başkomutan Historical National Park, Afyonkarahisar, Turkey. *Biharean Biologist*, 8(2), 98–101.

- Güçlü, Ö., Candan, K., Kankiliç, T., Kumlutaş, Y., Durmuş, S. H., Poulakakis, N., & Ilgaz, Ç. (2014). Phylogeny of *Trachylepis* sp.(Reptilia) from Turkey inferred from mtDNA sequences. *Mitochondrial DNA*, 25(6), 456–463.
- Gül, S., Özdemir, N., Avci, A., Kumlutaş, Y., & Ilgaz, Ç. (2015). Altitudinal effects on the life history of the Anatolian lizard (*Apathya cappadocica*, Werner 1902) from southeastern Anatolia, Turkey. *Turkish Journal of Zoology*, 39(3), 507–512.
- IUCN, (2025). IUCN red list of threatened species. *Version*, 2025, 1.
- Kafimola, S., Azimi, M., Saberi-Pirooz, R., Ilgaz, Ç., Kashani, G. M., Kapli, P., & Ahmadzadeh, F. (2023). Diversification in the mountains: Evolutionary history and molecular phylogeny of Anatolian rock lizards. *Molecular Phylogenetics and Evolution*, 180, 107675.
- Kumlutaş, Y., Durmuş, S. H., & Ilgaz, Ç. (2011). Kaş-Kekova Özel Çevre Koruma Bölgesi'nin Herpetofaunası. *Anadolu Doğa Bilimleri Dergisi*, 2(1), 28–33.
- Kumlutaş, Y., Ilgaz, Ç., & Candan, K. (2015). Fethiye-Göcek (Muğla) Özel Çevre Koruma Bölgesi'nin Herpetofaunik çeşitliliği. *Journal of Anatolian Natural Sciences*, 6 (Özel Sayı 2), 155–162.
- Kumlutaş, Y., Ilgaz, C., & Yakar, O. (2017). Herpetofauna of Karabük province. *Acta Biologica Turcica*, 30(4), 102–107.
- Kumlutaş, Y., Tok, C. V., & Türkozan, O. (1998). The herpetofauna of the Ordu-Giresun Region. *Turkish Journal of Zoology*, 22(3), 199–202.
- Kurnaz, M. (2020). Species list of Amphibians and Reptiles from Turkey. *Journal of Animal Diversity*, 2(4), 10–32.
- Kurnaz, M., Kutrup, B., Hosseinian Yousefkhani, S. S., Koç, H., Bülbül, U., & Eroğlu, A. İ. (2019). Phylogeography of the red-bellied lizard, *Darevskia parvula* in Turkey. *Mitochondrial DNA Part A*, 30(3), 556–566.
- Kurnaz, M., & Yousefkhani, S. S. H. (2020). Ecological niche divergence between *Darevskia rudis* and *D. bithynica* (Lacertidae) in Turkey. *Biologia*, 75(9), 1307–1312.
- Ministry of Culture and Tourism. (2025). *Ordu'nun coğrafyası*. <https://ordu.ktb.gov.tr/TR-106499/cografya.html>
- Mittermeier, R. A., Turner, W. R., Larsen, F. W., Brooks, T. M., & Gascon, C. (2011). Global biodiversity conservation: The critical role of hotspots. In *Biodiversity hotspots* (pp. 3–22). Springer.
- Mulder, J. (1995). Herpetological observations in Turkey (1987-1995). *Deinsea*, 2(1), 51–66.
- Özdemir, N., Üzümlü, N., Avci, A., & Olgun, K. (2009). Phylogeny of *Neurergus crocatus* and *Neurergus strauchii* in Turkey based on morphological and molecular data. *Herpetologica*, 65(3), 280–291.
- Ravkin, Y. S., Bogomolova, I. N., & Yudkin, V. A. (2010). Herpetofaunistic Zonation of Northern Eurasia. *Contemporary Problems of Ecology*, 3, 63–75.
- Reading, C. J., & Jofré, G. M. (2015). Habitat use by smooth snakes on lowland heath managed using 'conservation grazing'. *The Herpetological Journal*, 25(4), 225–231.
- Şahin, M. K., & Afsar, M. (2018). Evaluation of the reptilian fauna in Amasya province, Turkey with new locality records. *Gazi University Journal of Science*, 31(4), 1007–1020.
- Sarıkaya, B., Yıldız, M. Z., & Sezen, G. (2017). Adana ilinin herpetofaunası. *Kommagene Biyoloji Dergisi*, 1(1), 1–11.

- Sevgili, H., Karataş, A., & Candan, O. (2016). Biodiversity in Urban environments of Ordu City and Nearby Areas: Mammals, Birds, Reptiles and Amphibians. *Hacettepe Journal of Biology and Chemistry*, 44(1), 47–63.
- Sindaco, R., Venchi, A., Carpaneto, G. M., & Bologna, M. A. (2000). The reptiles of Anatolia: A checklist and zoogeographical analysis. *Biogeographia–The Journal of Integrative Biogeography*, 21(1).
- Speybroeck, J., Beukema, W., Dufresnes, C., Fritz, U., Jablonski, D., Lymberakis, P., Martínez-Solano, I., Razzetti, E., Vamberger, M., & Vences, M. (2020). Species list of the European herpetofauna–2020 update by the Taxonomic Committee of the Societas Europaea Herpetologica. *Amphibia-Reptilia*, 1(aop), 1–51.
- Tok, C. V., & Kumlutaş, Y. (1996). On *Vipera ammodytes transcaucasiana* (Viperidae) from Perşembe, Black Sea region of Turkey. *Zoology in the Middle East*, 13(1), 47–50.
- Turoğlu, H., & Dölek, İ. (2011). Floods and their likely impacts on ecological environment in Bolaman River basin (Ordu, Turkey). *Research Journal of Agricultural Science*, 43(4), 167–173.
- Vigna Taglianti, A., Audisio, P. A., Biondi, M., Bologna, M. A., Carpaneto, G. M., De Biase, A., Fattorini, S., Piattella, E., Sindaco, R., & Venchi, A. (1999). A proposal for a chorotype classification of the Near East fauna, in the framework of the Western Palearctic region. *Biogeographia–The Journal of Integrative Biogeography*, 20(1).
- Yaşar, Ç., Cicek, K., Mulder, J., & Tok, C. V. (2021). The distribution and biogeography of amphibians and reptiles in Turkey. *North-Western Journal of Zoology*, 17(2), 232–275.
- Yılduz, M. Z., İğci, N., & Akman, B. (2021). Herpetofaunal inventory of Van Province, eastern Anatolia, Turkey. *Journal of Threatened Taxa*, 13(2), 17670–17683.
- Yıldız, M. Z., İğci, N., Üçeş, F., Bozkurt, M. A., Sami, E., Karadağ, Ş., Aydoğdu, M., Akman, B., Sömer, M., & Polat, E. (2024). Herpetofaunal diversity of Şanlıurfa province (Southeastern Turkey) with comments on the taxonomic status of *Platyceps karelini* in Turkey. *Russian Journal of Herpetology*, 31(2), 65–78

Affiliation

MEHMET KÜRŞAT ŞAHİN

ADRESS: Department of Biology, Faculty of Science, Hacettepe University, 06800 Ankara, Türkiye

E-MAIL: yasambilimci.kursat@gmail.com

ORCID: 0000-0003-0834-5081