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AN UPDATED CHECKLIST OF THE SERBIAN BATRACHO- AND HERPETOFAUNA

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In this paper, the updated checklist of Serbian amphibians and reptiles is presented. The updated checklist of Serbian amphibians and reptiles was compiled from the literature on distribution, taxonomy and phylogeny. The checklist contains 48 autochthonous and two introduced species. Five species underwent taxonomic revisions (*Triturus ivanbureschi, T. macedonicus, Pelobates balcanicus, Bufotes viridis* and *Mediodactylus kotschyi*). Two species were added after recent taxonomic splits of species' complexes (*Hyla orientalis* and *Anguis colchica*). Presence of new (*Lacerta trilineata*) and introduced species (*Hemidactylus turcicus*) was confirmed during recent fieldwork. There are at least eight more species that can potentially be present in Serbia. The national protection legislative should be updated according to the current checklist.

Key words: amphibians, Balkan Peninsula, biodiversity, conservation, reptiles

INTRODUCTION

Species checklists are comprehensive catalogues of taxa known to inhabit certain geographic areas. They provide a crucial source of information for research and conservation (Reyserhove *et al.* 2020). Some of the most important checklists are the ones related to the conservation statuses and legislative – IUCN Red Lists, CITES checklists, Bern Convention and Habitats Directive checklists, national Red lists of protected flora and fauna, etc.

Serbia is situated in the centre of the Balkan Peninsula, which is regarded as one of the Europe's biodiversity hotspots (Engelmann *et al.* 1986). Balkan Peninsula was one of the important glacial refugia for European biodiversity and one of the sources for the recolonization of the continent after Pleistocene glaciations (Guillaume *et al.* 1997, Džukić & Kalezić 2004, Böhme *et al.* 2007). Accordingly, Serbian batracho- and herpetofauna is characterized by: (1) relatively high taxonomical, morphological and genetic diversity (Crnobrnja-Isailović 2007, Ursenbacher *et al.* 2008, Gvoždík *et al.* 2010, Vukov *et al.* 2013, Wielstra *et al.* 2013b, Tomović *et al.* 2014, Čubrić *et al.* 2019, Stratakis *et al.* 2022), (2) ancestral phylogeographic clades, relict populations and microrefugia (Džukić & Pasuljević 1979, Džukić & Purger 1988, Sotiropoulos *et al.* 2007, Arntzen *et al.* 2007, Hofman *et al.* 2007, Ljubisavljević *et al.* 2010), (3) peripheral populations and marginal species' ranges (Džukić & Kalezić 2004, Vukov *et al.* 2013, Tomović *et al.* 2014, Ćorović *et al.* 2018) and (4) hybridization and hybrid zones (Gvoždík *et al.* 2010, Stöck *et al.* 2012, Arntzen *et al.* 2014, Dufresnes *et al.* 2015, Jablonski *et al.* 2016, Urošević *et al.* 2020, Vučić *et al.* 2020).

Historically, most faunistic and taxonomic surveys of Serbia, including some of the first complete checklists and catalogues, were included into the studies conducted within the territory of the former Yugoslavia or the Balkan Peninsula in general (Karaman 1921, 1939, Cyrén 1933, 1941, Radovanović 1941, 1951, 1964, Pozzi 1966, Brelih & Džukić 1974, Džukić 1995, Džukić *et al.* 2001). The 2000s are characterized by renewed interest for the studies of faunistics and biodiversity (Crnobrnja-Isailović & Aleksić 1999, Ajtić & Tomović 2001, Tomović *et al.* 2001, 2004, Džukić *et al.* 2005, Ljubisavljević *et al.* 2006, Ristić *et al.* 2006, Vukov *et al.* 2006), especially in the second decade (Ralev *et al.* 2012, Jelić *et al.* 2013, Ljubisavljević *et al*. 2014a, 2015, Vukov *et al.* 2013, Tomović *et al.* 2014, 2015a, 2018, 2019a,b, Krizmanić *et al.* 2015, Đorđević & Anđelković 2015, Urošević 2018, Urošević *et al.* 2015, 2016, 2018, 2020, 2021, 2022, Golubović *et al.* 2017, 2019, Vučić *et al.* 2020, Anđelković *et al.* 2022).

Also, some important taxonomic revisions of the European batracho- and herpetofauna were made recently (Freitas *et al.* 2020, Speybroeck *et al*. 2020) and many included the changes in nomenclature of the certain taxa that inhabit Serbia (Frost *et al.* 2006, Arntzen *et al.* 2007, Dubois & Bour 2010, Wielstra *et al.* 2013a, Dufresnes *et al.* 2019a,b) while the splits of the cryptic species' complexes led to the increased species' count at the national level (Gvoždík *et al.* 2010, Stöck *et al.* 2012, Dufresnes *et al.* 2015, Jablonski *et al.* 2016). Finally, the increased fieldwork regarding conservation projects (Ecological networks of Serbia and EU Natura 2000 in Serbia, see Acknowledgements) has led to the updates on the distribution of most of the known species of the Serbian fauna, and even confirmation of some species previously regarded as potentially present (Anđelković *et al.* 2022).

The last comprehensive checklists were published in the papers that systematized distributions of Serbian amphibian (Vukov *et al.* 2013) and reptile fauna (Tomović *et al.* 2014) as well as in the Red Lists in the Red Books of Serbian amphibians (Kalezić *et al.* 2015) and reptiles (Tomović *et al.* 2015b). Currently, there is no stand-alone checklist of the amphibian and reptile species of Serbia, and the important taxonomic revisions had occurred since the last systematizations of the Serbian amphibian and reptile faunas. Hence, the aim of this paper is to provide a systematic list of the officially confirmed amphibian and reptile species of Serbia. This checklist should also be regarded as a starting point for the future analyses of the distribution, biodiversity and conservation of the batracho- and herpetofauna in the Republic of Serbia.

MATERIALS AND METHODS

The Checklist of the Serbian batracho- and herpetofauna was compiled using the faunistic lists from the latest distribution and conservation publications (Vukov *et al.* 2013, Tomović *et al.* 2014, 2015b, Kalezić *et al.* 2015). The introduced species were included into the list if there were data on confirmed reproduction published (Đorđević & Anđelković 2015, Urošević *et al.* 2016, 2019, 2021, 2023). The changes in the taxonomic status or splits of the species' complexes were inferred from the literature (Gvoždík *et al.* 2010, Stöck *et al.* 2012, Dufresnes *et al.* 2015, 2019a, 2019b, Jablonski *et al.* 2016). Finally, the species whose presence was confirmed after the latest faunistic list was published were added (Anđelković *et al.* 2022). Systematics and taxonomy of all species of Serbian batracho- and herpetofauna were updated according to the latest European species list (Speybroeck *et al.* 2020).

RESULTS AND DISCUSSION

List of amphibian and reptile species of Serbia

Class **Amphibia** Linnaeus, 1758

Order **Caudata** Scopoli, 1777 or **Urodela** Duméril, 1805

Family **Salamandridae** Goldfuss, 1820

Genus *Ichthyosaura* Sonnini and Latreille, 1801

1. *Ichthyosaura alpestris* (Laurenti, 1768) – Alpine Newt; planinski mrmoljak

Genus *Lissotriton* Bell, 1839

2. *Lissotriton vulgaris* (Linnaeus, 1758) – Smooth Newt; mali mrmoljak

Genus *Salamandra* Garsault, 1764

3. *Salamandra atra* (Laurenti, 1768) – Alpine Salamander; crni daždevnjak
4. *Salamandra salamandra* (Linnaeus, 1758) – Fire Salamander; šareni daždevnjak

Genus *Triturus* Rafinesque, 1815

5. *Triturus cristatus* (Laurenti, 1768) – Great Crested Newt; obični veliki mrmoljak
6. *Triturus dobrogicus* (Kiritzescu, 1903) – Danube Crested Newt; podunavski veliki mrmoljak
7. ***Triturus ivanbureschi*** Arntzen & Wielstra, 2013 – Buresch's Crested Newt, Balkan crested newt; Burešov dugonogi veliki mrmoljak, balkanski veliki mrmoljak
8. ***Triturus macedonicus*** (Karaman, 1922) – Macedonian Crested Newt; istočni glavati veliki mrmoljak, makedonski veliki mrmoljak

Order **Anura** Duméril, 1805

Family Bombinatoridae Gray, 1825

Genus *Bombina* Oken, 1816

9. *Bombina bombina* (Linnaeus, 1761) – Fire-bellied Toad; crvenotrbi mukač
10. *Bombina variegata* (Linnaeus, 1758) – Yellow-bellied Toad; žutotrbi mukač

Family Pelobatidae Bonaparte, 1850

Genus *Pelobates* Wagler, 1830

11. ***Pelobates balcanicus*** Karaman, 1928 – Balkan Spadefoot Toad; balkanska češnjarka

12. *Pelobates fuscus* (Laurenti, 1768) – Common Spadefoot Toad; obična češnjarka

Family Bufonidae Gray, 1825

Genus *Bufo* Garsault, 1764

13. *Bufo bufo* (Linnaeus, 1758) – Common Toad; obična krastača

Genus *Bufotes* Rafinesque, 1815

14. ***Bufotes viridis*** (Laurenti, 1768) – Green Toad; zelena krastača

Family Hylidae Rafinesque, 1815

Genus *Hyla* Laurenti, 1768

15. *Hyla arborea* (Linnaeus, 1758) – Common Tree Frog; gatalinka
16. ***Hyla orientalis*** Bedriaga, 1890 – Eastern Tree Frog; istočna gatalinka

Family Ranidae Batsch, 1796

Genus *Pelophylax* Fitzinger, 1843

17. *Pelophylax* kl. *esculentus* (Linnaeus, 1758) – Edible Frog; zelena žaba
18. *Pelophylax lessonae* (Camerano, 1882) – Pool Frog; mala zelena žaba
19. *Pelophylax ridibundus* (Pallas, 1771) – Marsh Frog; velika zelena žaba

Genus *Rana* Linnaeus, 1758

20. *Rana dalmatina* Fitzinger in Bonaparte, 1838 – Agile Frog; šumska žaba
21. *Rana graeca* Boulenger, 1891 – Greek Stream Frog; grčka žaba
22. *Rana temporaria* Linnaeus, 1758 – Common Frog; žaba travnjača

Class **Reptilia** Laurenti, 1768

Order **Testudines** Linnaeus, 1758

Family Testudinidae Batsch, 1788

Genus *Testudo* Linnaeus, 1758

23. *Testudo graeca* Linnaeus, 1758 – Spur-thighed Tortoise; grčka kornjača
24. *Testudo hermanni* Gmelin, 1789 – Hermann's Tortoise; šumska kornjača

Family Emydidae Rafinesque, 1815

Genus *Emys* Duméril, 1805

25. *Emys orbicularis* (Linnaeus, 1758) – European Pond Terrapin; barska kornjača

Genus *Trachemys* Agassiz, 1857

* *Trachemys scripta* (Thunberg in Schoepff, 1792) (ssp. *elegans*/*scripta*/*troostii*) – Pond Slider (Red-eared Slider for ssp. *elegans*); crvenouha/žutouha/kamberlendska kornjača

Order **Squamata** Oppel, 1811

Family Gekkonidae Oppel, 1811

Genus *Mediodactylus* Szczerbak & Golubev, 1977

26. ***Mediodactylus kotschyi*** (Steindachner, 1870) – Kotschy's Bent-toed Gecko; Kočijev gekon

* ***Hemidactylus turcicus*** (Linnaeus, 1758) – Mediterranean House Gecko, Turkish Gecko; kućni gekon

Family Lacertidae Batsch, 1788

Genus *Algyroides* Bibron & Bory de Saint-Vincent, 1833

27. *Algyroides nigropunctatus* (Duméril & Bibron, 1839) – Dalmatian Algyroides; ljuskavi gušter

Genus *Darevskia* Arribas, 1997

28. *Darevskia praticola* (Eversmann, 1834) – Meadow Lizard; šumski gušter

Genus *Lacerta* Linnaeus, 1758

29. *Lacerta agilis* Linnaeus, 1758 – Sand Lizard; livadski gušter
30. ***Lacerta trilineata*** Bedriaga, 1886 – Balkan Green Lizard; balkanski zelembać
31. *Lacerta viridis* (Laurenti, 1768) – Eastern Green Lizard; zelembać

Genus *Podarcis* Wagler, 1830

32. *Podarcis erhardii* (Bedriaga, 1876) – Erhard's Wall Lizard; južni zidni gušter
33. *Podarcis muralis* (Laurenti, 1768) – Common Wall Lizard; zidni gušter
34. *Podarcis tauricus* (Pallas, 1814) – Balkan Wall Lizard; stepski gušter

Genus *Zootoca* Wagler, 1830

35. *Zootoca vivipara* (Jacquin, 1787) – Viviparous Lizard; živorodni gušter, planinski gušter

Family Scincidae Oppel, 1811

Genus *Ablepharus* Fitzinger in Eversmann, 1823

36. *Ablepharus kitaibelii* Bibron & Bory de Saint-Vincent, 1833 – Snake-eyed Skink; kratkonogi gušter

Family Anguidae Gray, 1825

Genus *Anguis* Linnaeus, 1758

37. ***Anguis colchica*** (Nordmann, 1840) – Eastern Slow Worm; istočni slepić
38. *Anguis fragilis* Linnaeus, 1758 – Slow Worm; slepić

Family Natricidae Bonaparte, 1840

Genus *Natrix* Laurenti, 1768

39. *Natrix natrix* (Linnaeus, 1758) – Grass Snake; belouška
40. *Natrix tessellata* (Laurenti, 1768) – Dice Snake; ribarica

Family Colubridae Oppel, 1811

Genus *Coronella* Laurenti, 1768

41. *Coronella austriaca* Laurenti, 1768 – Smooth Snake; smukulja

Genus *Dolichophis* Gistel, 1868

42. *Dolichophis caspius* (Gmelin, 1789) – Caspian Whip Snake; stepski smuk

Genus *Elaphe* Fitzinger, 1833

43. *Elaphe quatuorlineata* (Bonnaterre, 1790) – Four-lined Snake; četvoroprugi smuk

Genus *Platyceps* Blyth, 1860

44. *Platyceps najadum* (Eichwald, 1831) – Dahl's Whip Snake; šilac

Genus Zamenis Wagler, 1830

45. *Zamenis longissimus* (Laurenti, 1768) – Aesculapian Snake; eskulapov smuk

Family Viperidae Oppel, 1811

Genus *Vipera* Garsault, 1764

46. *Vipera ammodytes* (Linnaeus, 1758) – Nose-horned Viper; poskok
47. *Vipera berus* (Linnaeus, 1758) – Adder; šarka
48. *Vipera ursinii* (Bonaparte, 1835) – Meadow Viper; šargan

Species written out in boldface indicate a recent taxonomic revision and/or inclusion in the Serbian fauna; * indicates allochthonous species with confirmed reproduction.

According to the latest update, Serbian batracho- and herpetofauna consist of 48 autochthonous species. There are 22 amphibian species, belonging to six families and two orders, and 26 reptile species belonging to nine families and two orders. Two reptile species are allochthonous – *Trachemys scripta* ssp. (invasive) and *Hemidactylus turcicus* (potentially invasive) (Đorđević & Anđelković 2015, Urošević *et al.* 2016, 2019, 2023).

The complex of great crested newts (*Triturus cristatus* superspecies) is one of the most diverse amphibian groups in Serbia, and one of the most intensively studied with several taxonomic revisions in past two decades. These revisions include change in taxonomical level of *T. macedonicus* (formerly subspecies *T. carnifex macedonicus*, Arntzen *et al.* 2007) as well as description of new species *T. ivanbureschi* (Arntzen & Wielstra 2013), which was formerly considered as *T. karelini* or *T. karelini* species complex (Wielstra *et al.* 2013a). There are four species of great crested newts that inhabit our country, with established hybrid zones and very complex interaction (Wielstra *et al.* 2013a,b, Arntzen *et al.* 2014, Vučić *et al.* 2020). This species complex is also among the top targets for the future research, and also a great conservation priority since the habitats of great crested newts are greatly jeopardized by the anthropogenic alterations (Crnobrnja-Isailović *et al.* 2005, Crnobrnja-Isailović & Paunović 2015, Kalezić *et al.* 2015, Vučić *et al.* 2020).

Spadefoot toads also recently went through a taxonomic revision. What was formerly regarded as a subspecies of the Eastern spadefoot, *Pelobates syriacus balcanicus*, is now elevated to the species level, and regarded as the Balkan endemic species (Dufresnes *et al.* 2019a).

Green toads (*Bufotes* spp.) went through changes in nomenclature and taxonomy (Frost *et al.* 2006, Dubois & Bour 2010, Dufresnes *et al.* 2019b) with *Bufotes* now being accepted as a valid genus name.

The species complex of tree frogs, *Hyla* ssp. also had a significant taxonomic split (Stöck *et al.* 2012, Dufresnes *et al.* 2015) and the Eastern treefrog (*Hyla orientalis*) is now officially added to the checklist of Serbian fauna. It inhabits the parts of North-Eastern, Eastern and South-Eastern Serbia, with the contact zone with *H. arborea* being estimated to be a 30 km wide cline where the hybridization occurs (Stöck *et al.* 2012, Dufresnes *et al.* 2015).

The Kotschyi's gecko (*Mediodactylus kotschyi*) recently colonized urban habitats in Serbia far northerly than its native range in Metohija, Serbia (Ajtić 2009, Urošević *et al.* 2021). The taxonomy at the genus level has been through some fluctuations, with the name *Mediodactylus* now being generally accepted (Bauer *et al*. 2013, Kotsakiozi *et al.* 2018, Speybroeck *et al.* 2020). The species' complex has also recently undergone the taxonomic revision (Kotsakiozi *et al.* 2018). The morphological data strongly suggests that the introduced populations in Serbia belong to the *kotschyi* group (Ajtić 2009, Urošević *et al.* 2021), but the additional molecular analyses are needed to elucidate the origin and possible introduction pathways.

The Balkan green lizard (*Lacerta trilineata*) was previously regarded as potentially present in Serbia (Sterijovski *et al.* 2014, Tomović *et al.* 2014, Urošević *et al.* 2015) but the first solid, georeferenced and peer-reviewed data were presented by Anđelković *et al*. (2022). It is also one of the species newly included in the Serbian fauna.

The slow worm complex went through the taxonomic revision, and the Eastern slow worm (*Anguis colchica*) is also a new addition to the Serbian fauna (Gvoždík *et al.* 2010, Jablonski *et al.* 2016, Urošević *et al.* 2020). The distribution of the two species of slow worms is still insufficiently known, with huge sampling gaps and a wide "*incertae sedis*" zone (Jablonski *et al.* 2016, 2021, Urošević *et al.* 2020).

There is a potential presence of some additional species of batracho- and herpetofauna in Serbia. The Greek smooth newt (*Lissotriton graecus*) can be regarded as likely present in the southernmost parts of Kosovo and Metohija province, since it occurs very close to the border in the adjacent parts of Albania and North Macedonia (Wielstra *et al.* 2018), but some additional sampling in that region would be mandatory to confirm its presence. The Moor frog (*Rana arvalis*) is present in the neighbouring countries – Croatia, Hungary and Romania, and adequate habitats for this species exist in the extreme north of Serbia. Still, there is only one old literature data for this species – village Svetozar Miletić, near the Hungarian border (Dely 1953, 1964, Böhme 2014), without later reconfirmation (Urošević *et al.* 2018).

The Prokletije rock lizard (*Dinarolacerta montenegrina*) can be expected in the Prokletije massif in the western part of Kosovo and Metohija province (Tomović *et al.* 2014, 2018) since it is distributed near the border in both Montenegro (Ljubisavljević *et al.* 2007, 2014b, 2016) and Albania (Petrov 2006, Podnar *et al.* 2014, Mizsei *et al.* 2017). The Greek slow worm (*Anguis graeca*) occurs in North Macedonia (Jablonski *et al.* 2016, 2021), relatively close to the border with Serbia, and its presence can be expected in the extreme southern and south-eastern parts of Serbia (Urošević *et al.* 2020). The Eastern Montpellier snake (*Malpolon insignitus*), European cat snake (*Telescopus fallax*) and Leopard snake (*Zamenis situla*) are distributed in North Macedonia, with their distribution limits very close to the Serbian border (Sterijovski *et al.* 2014) and their presence could also be expected in the southern and south-eastern parts of Serbia, in the areas under sub-Mediterranean climate (Tomović *et al*. 2014). The Balkan whip snake (*Hierophis gemonensis*) is present in Albania, close to the border with Serbia (Haxhiu 1998) and it could be potentially found in the Drim River valley (southern part of Kosovo and Metohija province), together with other Mediterranean species (Tomović *et al.* 2014).

Of 48 species of amphibians and reptiles registered in Serbia, seven are considered vulnerable/near threatened at the international level, i.e. are on the global and regional IUCN Red Lists, 39 are listed on the Annexes II, IV or V of the Habitats Directive, all are on the Appendices II or III of the Bern Convention and three are on the Appendices I or II of CITES (Tab. 1).

At the national level, 12 species are considered critically endangered, endangered or vulnerable, according to the IUCN criteria and 20 according to the DELH (Distribution, Ecology and Life History) criteria (Kalezić *et al.* 2015, Tomović *et al.* 2015b); additionally, five are protected and 36 strictly protected by the law (Official Gazette of the Republic of Serbia, No. 5/2010) (Tab. 1). The species *H. orientalis, A. colchica* and *L. trilineata* are yet to be assessed according to the IUCN and DELH criteria at the national level, and given an official protection status in Serbia. The new conservation status assessment and protection legislative have been suggested and are currently being evaluated.

CONCLUSIONS

With 48 autochthonous species of the batracho- and herpetofauna, Serbia can be considered as regionally rich in species diversity, and even a hotspot for certain taxa – particularly *Triturus* newts and other species complexes (*Hyla*, *Pelophylax, Anguis*). The further research should be focused on the contact/hybrid zones and the border regions of Serbia, where potential new species for the national fauna could be discovered. The existing conservation status and national legislative should be updated to accommodate with the newly found species or changed taxonomy and nomenclature.

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Table 1. – The list of autochthonous amphibian and reptile species of Serbia, with international and national conservation status and protection legislative. DELH – distribution, ecology and life history. National protection status is given according to the Official Gazette of the Republic of Serbia, No. 5/2010.

Species	Global IUCN category	National IUCN category	National DELH category	Habitats Directive	Bern Convention	CITES	National protection status
Ichthyosaura alpestris	LC	LC	LC	-	Appendix III	-	Strictly protected
Lissotriton vulgaris	LC	LC	LC	-	Appendix III	-	Strictly protected
Salamandra atra	LC	EN	CR	Annex II, IV	Appendix III	-	Strictly protected
Salamandra salamandra	LC	LC	LC	-	Appendix III	-	Strictly protected
Triturus cristatus	LC	EN	VU	Annex II, IV	Appendix II	-	Strictly protected
Triturus dobrogicus	NT	NT	VU	Annex II	Appendix II	-	Strictly protected
Triturus ivanbureschi	NE	VU	VU	Annex II, IV	Appendix II	-	Strictly protected
Triturus macedonicus	NE	LC	LC	Annex II, IV	Appendix II	-	Strictly protected
Bombina bombina	LC	LC	LC	Annex II, IV	Appendix II	-	Strictly protected
Bombina variegata	LC	LC	LC	Annex II, IV	Appendix II	-	Strictly protected
Pelobates balcanicus	NE	VU	CR	Annex IV	Appendix II	-	Strictly protected
Pelobates fuscus	LC	DD	CR	Annex IV	Appendix II	-	Strictly protected
Bufo bufo	LC	LC	LC	-	Appendix III	-	Strictly protected
Bufotes viridis	LC	LC	LC	Annex IV	Appendix II	-	Strictly protected
Hyla arborea	LC	LC	LC	Annex IV	Appendix II	-	Strictly protected
Hyla orientalis	NE	-	-	Annex IV	Appendix II	-	-
Pelophylax kl. *esculentus*	LC	LC	LC	Annex V	Appendix III	-	Protected
Pelophylax lessonae	LC	DD	VU	Annex IV	Appendix III	-	Protected
Pelophylax ridibundus	LC	LC	LC	Annex V	Appendix III	-	Protected
Rana dalmatina	LC	LC	LC	Annex IV	Appendix II	-	Strictly protected
Rana graeca	LC	LC	EN	Annex IV	Appendix III	-	Strictly protected
Rana temporaria	LC	NT	LC	Annex V	Appendix III	-	Strictly protected

Species	Global IUCN category	National IUCN category	National DELH category	Habitats Directive	Bern Convention	CITES	National protection status
Testudo graeca	VU	CR	CR	Annex II, IV	Appendix II	Appendix II	Strictly protected
Testudo hermanni	NT	NT	VU	Annex II, IV	Appendix II	Appendix II	Protected
Emys orbicularis	NT	DD	LC	Annex II, IV	Appendix II	-	Strictly protected
Mediodactylus kotschyi	LC	CR	EN	Annex IV	Appendix II	-	Strictly protected
Algyroides nigropunctatus	LC	EN	CR	Annex IV	Appendix II	-	Strictly protected
Darevskia praticola	NT	NT	EN	-	Appendix III	-	Strictly protected
Lacerta agilis	LC	LC	LC	Annex IV	Appendix II	-	-
Lacerta trilineata	LC	-	-	Annex IV	Appendix II	-	-
Lacerta viridis	LC	LC	LC	Annex IV	Appendix II	-	-
Podarcis erhardii	LC	EN	NT	Annex IV	Appendix II	-	Strictly protected
Podarcis muralis	LC	LC	LC	Annex IV	Appendix II	-	-
Podarcis tauricus	LC	LC	NT	Annex IV	Appendix II	-	Strictly protected
Zootoca vivipara	LC	NT	EN	Annex IV	Appendix III	-	Strictly protected
Ablepharus kitaibelii	LC	LC	EN	Annex IV	Appendix II	-	Strictly protected
Anguis colchica	NE	-	-	-	Appendix III	-	-
Anguis fragilis	LC	LC	LC	-	Appendix III	-	-
Natrix natrix	LC	LC	LC	-	Appendix III	-	Strictly protected
Natrix tessellata	LC	LC	LC	Annex IV	Appendix II	-	Strictly protected
Coronella austriaca	LC	LC	LC	Annex IV	Appendix II	-	Strictly protected
Dolichophis caspius	LC	DD	VU	Annex IV	Appendix III	-	Strictly protected
Elaphe quatuorlineata	NT	CR	VU	Annex II, IV	Appendix II	-	Strictly protected
Platyceps najadum	LC	CR	EN	Annex IV	Appendix II	-	Strictly protected
Zamenis longissimus	LC	LC	LC	Annex IV	Appendix II	-	Strictly protected
Vipera ammodytes	LC	LC	LC	Annex IV	Appendix II	-	Protected
Vipera berus	LC	VU	VU	-	Appendix III	-	Strictly protected
Vipera ursinii	VU	EN	CR	Annex II, IV	Appendix II	Appendix I	Strictly protected

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АЖУРИРАНА ЛИСТА БАТРАХО- И ХЕРПЕТОФАУНЕ РЕПУБЛИКЕ СРБИЈЕ

АЛЕКСАНДАР УРОШЕВИЋ, ЈЕЛКА ЦРНОБРЊА-ИСАИЛОВИЋ, КАТАРИНА ЉУБИСАВЉЕВИЋ, ТАЊА ВУКОВ, МАРКО АНЂЕЛКОВИЋ, АНА ИВАНОВИЋ, АНА ГОЛУБОВИЋ, ТИЈАНА ВУЧИЋ, ЉИЉАНА ТОМОВИЋ

РЕЗИМЕ

У овом раду приказујемо ажурирану листу фауне водоземаца и гмизаваца у Србији. Листа је састављена на основу литературе о дистрибуцији, таксономији и филогенији водоземаца и гмизаваца који припадају нашој фауни. Садржи 48 врста аутохтоних за Републику Србију као и две интродуковане врсте за које је потврђено да се на територији Србије размножавају и успостављају популације. Пет врста на овој листи су недавно прошле кроз таксономску ревизију (*Triturus ivanbureschi, T. macedonicus, Pelobates balcanicus, Bufotes viridis* и *Mediodactylus kotschyi*), а две врсте су придодате након скорашњег таксономског раздвајања комплекса врста (*Hyla orientalis* и *Anguis colchica*). Најновија теренска истраживања су потврдила присуство једне нове (*Lacerta trilineata*) и једне интродуковане врсте (*Hemidactylus turcicus*). Потенцијално је на територији Репубике Србије присутно још најмање осам врста водоземаца и гмизаваца, пре свега у пограничним областима. Од 48 врста аутохтоних за Републику Србију, седам су рањиве/готово угрожене на међународном нивоу, према критеријумима IUCN, три су у прилозима CITES-а, 39 се налазе на анексима Директиве о стаништима (Habitat Directive), а све су на прилозима Бернске конвенције. У току је процена конзервационог статуса свих врста на националном нивоу, на основу чега ће бити предложена нова легислатива.

Са 48 врста, Србија се може сматрати за богату биолошком разноврсношћу водоземаца и гмизаваца па чак и центром диверзитета појединих таксона – пре свега великих мрмољака и других комплекса врста (*Hyla*, *Pelophylax, Anguis*). Даља истраживања батрахо- и херпетофауне требало би концентрисати на контактне/хибридне зоне комплекса врста и пограничне области наше земље.