

## VIEWPOINTS REGARDING PROTECTING AND PRESERVING THE AMPHIBIANS SPECIES FROM PATRIMONY OF MUSEUM OF OLTENIA, THAT ARE SIGNALLED IN THE RED BOOK OF VERTEBRATES FROM ROMANIA

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**Abstract.** *Viewpoints regarding protecting and preserving the amphibians species from patrimony of Museum of Oltenia, that are signaled in The Red Book of Vertebrates from Romania. The paper presents eleven species of amphibians that exist in the patrimony of Museum of Oltenia, species that can be also found in the Red Book of Vertebrates from Romania, threatened to extinction at European level, because of destructive agents that led to severe decline of the habitats of these species at large.*

**Keywords:** *amphibians, preservation statute, patrimony of Oltenia Museum.*

**Rezumat.** *Considerații privind ocrotirea și conservarea speciilor de amfibieni din patrimoniul Muzeului Olteniei, care sunt menționate în Cartea Roșie a vertebratelor din România. Lucrarea prezintă unsprezece specii de amfibieni existente în patrimoniul Muzeului Olteniei, specii care se regăsesc în Cartea Roșie a Vertebratelor din România, amenințate cu dispariția la nivel european, datorită factorilor distructivi care au dus la declinul grav al habitatelor acestor specii în stare liberă.*

**Cuvinte cheie:** *amfibieni, statut de conservare, patrimoniul Muzeului Olteniei.*

### INTRODUCTION

The multitude of negative agents led to severe decline of many populations of amphibians. Because of these situations, a series of programmes have been promoted and a series of laws have been elaborated, demanding rehabilitation and preservation of habitats and species. In the strategy of protecting and preserving at European level, editing of books and red lists was included. Species included in the Red Book were selected applying criteria established by International Union for Nature Preservation (2001), and the proposed measures for protection were enunciated strictly according to national and international effective regulations. The paper presents the systematic framing using also the documentation with preserving-protective character. Amphibians are represented in Romania by 19 species. Among these, 89,47% are protected at national level, 84,21% are included in the Red Book, 73,68% are mentioned in the Addenda of European Directive Habitats 92/43/EEC AA 2003/ACT and 26,31% are enumerated in Nature 2000. Among the protected species, 17,65% are endangered, 52,94% are vulnerable and 24,41% species are almost threatened.

Because of the massive deforestation that led to soil erosion, sawdust pollution of brooks where species of amphibians breed, development of alpine tourism facilities, chemical pollution of brooks with diverse waste, interception of mountain waters for industrial or domestic consumption, can deprive population of amphibians of their breed habitats, having negative impacts on them. Commercial collecting is illegal, draining some ponds and using pesticides and fertilizer has negative impact on species, chemical pollution derived from mining or industrial areas, practicing unauthorized tourism and over pasturage have also led to a severe negative impact. The inclusion of many species in the Red Books, was made by applying the above mentioned criteria. Patrimony of Museum of Oltenia, valuable because of the big number of collections, preserves also the amphibians collection with a total of 824 pieces, among which 11 species are signaled in the european legislation.

### MATERIAL AND WORKING METHODS

For elaborating this paper, the herpetological material preserved in the patrimony of Museum of Oltenia was used. Data regarding the statute of preservation, the causes of number modifications, the already existing and the needed protection measures, were taken from The Red Book of Vertebrates in Romania (BOTNARIUC & TATOLE, 2005) and for the notions regarding the spreading area from Romanian fauna (SIMIONESCU, 1983), regarding the place and the collecting date, the Systematic Catalogue of Vertebrate Collections (BAZILESCU et al., 1980) was consulted, and the systematic framing was made according to Fauna Europaea.

### RESULTS AND DISCUSSIONS

Studying the herpetologic patrimony of natural Sciences Department of Museum of Oltenia, we have identified 11 species of amphibians presented in the european legislation, Red Book of Vertebrates from Romania and Emergency Ordinance no. 57/2007. The presence of protected species in the patrimony of museum has both scientific importance as well as expositional and educative importance, taking into consideration the fact that the museum contributes to informing and educating regarding the preservation of nature. We present in philatelic order, species that have been

identified in our patrimony, together with a documentary mechanism regarding the statute of preservation, the place and the collecting date, the causes of number modifications, existing and needed protection measures.

Ord. **URODELA**  
Fam. **SALAMANDRIDAE**

*Salamandra salamandra* L. 1758 - **Salamandra** (Fire Salamander)

Statute of preservation: vulnerable species.

Place and collecting date: Apuseni Mountains, 20.07.1960

Causes of number modifications: degradation of habitat because of massive deforestation, pollution of brooks with waste, using of pesticides.

Existing protection measures: LG. 13/1993 by which Romania ratifies Berna convention, 462/2001 regarding the condition of protected natural areas.

Needed protection measures: creating protected areas, stopping extended and abusive deforestation, tryings of breeding in captivity.

*Triturus cristatus* (LAURENTI, 1768) - **Triton cu creastă** (Crested Newt)

Statute of preservation: vulnerable species.

Place and collecting date: Baia de Fier Gorj 6.09.1965, Cluj Napoca 16.09.1960 Craiova-Dolj, Ceramica Mofleni Craiova 20.04.1966, Craiova 21.05.1969, 14.05.1968, Lunca Jiului (flood plane of Jiu) 17.06.1968, Filiași Dolj 11.06.1966.

Causes of number modifications: degradation of habitat, drainage of lakes and ponds where the species breed, with a severe impact on population because of dangerous vicinity with agricultural crops.

Existing protection measures: LG. 13/1993 by which Romania ratifies Berna convention, DE 92/43/EEC, Nature2000 , LG 462/2001 regarding the condition of protected natural areas.

Needed protection measures: reduction of pollution, establishing new protected areas, encouraging breeding in captivity.

*Triturus vulgaris* L. 1758 - **Tritonul comun** (Smooth Newt)

Statute of preservation: almost threatened species.

Place and collecting date: Bârza Olt 25.05.1967, Budieni Gorj 20. 06. 1966.

Causes of number modifications: degradation of habitat, drainage of lakes and ponds where the species breed, with a severe impact on population because of dangerous vicinity with agricultural crops.

Existing protection measures: LG. 13/1993 by which Romania ratifies Berna convention.

Needed protection measures: reduction of pollution of interior waters, establishing new protected areas.

Ord. **ANURA**  
Fam. **DISCOGLOSSIDAE**

*Bombina bombina* (L,1758) - **Izvoraș cu burtă roșie** (Fire bellied Toad)

Statute of preservation: almost threatened species.

Place and collecting date: Amărăști Dolj 25.05.1967, Marcu Popii Pond, Craiova Dolj 26.05.1966, Ciuperceni Dolj 9.04.1968, Craiovița Pond Craiova Dolj 25.05.1967, Fărcaș Dolj 26.05.1971, Filiași Dolj 26. 06.1971, Gighera Dolj 23. 05.1976.

Causes of number modifications: using pesticides in agriculture and silviculture directly affects these species because of dangerous vicinity with agricultural crops.

Existing protection measures: LG. 13/1993 by which Romania ratifies Berna convention, DE 92/43/EEC, Nature 2000, LG 462/2001 regarding the condition of Natural protected areas.

Needed protection measures: reduction of pollution of interior waters, establishing new protected areas.

*Bombina variegata* (L, 1756) - **Izvoraș cu burtă galbenă** (Yellow-bellied Toad)

Statute of preservation: almost threatened species.

Place and collecting date: Amărăștii de Jos Dolj 16.07.1969, Baia de Aramă Mehedinți 8.07.1966, Baia de Fier Gorj 31.07.1966, Bistrița-Vâlcea 31.08.1976, Căpreni Gorj 13.07.1967, Runcu Gorj 10.04.1961, 15.06.1976, Tg. Logrești Gorj 7.07.1975, Zegaia-Mehedinți 20.07.1973.

Causes of number modifications: degradation of habitat by massive deforestation, also leading to soil erosion, fast course of water and disappearance of pans where these species live. Chemical pollution caused by waste from mine areas, using pesticides in agriculture is a negative agent.

Existing protection measures: LG. 13/1993 by which Romania ratifies Berna convention DE 92/43/EEC, Nature 2000, LG 462/2001 regarding the condition of natural protected areas.

Needed protection measures: reduction of pollution of interior waters, establishing new protected areas.

Ord. **ANURA**  
Fam. **HYLIDAE**

*Hyla arborea* (L, 1758) - **Brotăcel** (Tree frog)

Statute of preservation: vulnerable species.

Place and collecting date: Amărăștii de Jos Dolj 16.07.1969, Balta Bistreț Dolj, 19.07.1969, Jitianu Monastery Pond, Braniște Dolj 30.08.1965, Cluj Napoca 3.08.1960, Preajba Pond, Craiova Dolj 28.06.1966, Ceramica Mofleni Pond 20.04.1966, Craiova 10.10.1969.

Causes of number modifications: degradation of habitat by massive deforestations, also leading to soil erosion, fast course of water and disappearance of pans where these species live. Chemical pollution caused by waste from mine areas, using pesticides in agriculture is a negative agent.

Existing protection measures: LG. 13/1993 by which Romania ratifies Berna convention DE 92/43/EEC, Nature 2000, LG 462/2001 regarding the condition of natural protected areas.

Needed protection measures: creating supplementary natural areas, stopping deforestation and reducing usage of pesticides.

Ord. **ANURA**  
Fam. **BUFONIDAE**

*Bufo bufo* (L, 1758) - **Broasca râioasă brună** (Common Toad)

Statute of preservation: almost threatened species.

Place and collecting date: Cluj Napoca 17.07.1960, Lainici Gorj 28.09.1971, Rânca Gorj 10.08.1966, Tismana Gorj 26.06.1970.

Causes of number modifications: desforestation destroys forestier habitat of species, drainage or pollution of lakes and ponds had impact on species.

Existing protection measures: LG 13/1993, LG./462/2001, regarding the condition of natural protected areas.

Needed protection measures: stopping deforestation, reducing the use of pesticides and pollution of interior waters.

*Bufo viridis* LAURENTI, 1768 - **Broasca râioasă verde** (Green Toad)

Statute of preservation: almost threatened species.

Place and collecting date: Amărăștii de Jos Dolj 16.07.1969, Bistrița Dolj 17.07.1969, Bârza Olt 25.05.1967, Ciuperceni Dolj 16.09.1972, Craiova Dolj 15.08.1967, 22.06.1969, Parcul Poporului (People's Park) 12.05.1970, 5.07.1974, Radovan Dolj 30.05.1970, 29.05.1970, Valea Stanciului Dolj 30.04.1974.

Causes of number modifications: degradation of habitat, pollution of ponds and lakes where the species breed, using pesticides in agriculture.

Existing protection measures: LG. 13/1993, DE 92/43/EEC, LG 462/2001

Needed protection measures: reduction of interior water pollution, reduction of using pesticides.

Ord **ANURA**  
Fam. **RANIDAE**

*Rana arvalis* NILSSON, 1842 - **Broasca de mlaștină** (Moor Frog)

Statute of preservation: endangered species

Place and collecting date: Duțu Mehedinți 6.09.1967

Causes of number modifications: drainage or pollution of lakes and ponds where the species breed, operations of banking, draining and deforestation of easily flooded area have a severe impact, construction of turistic amenities, unorganized turism, over pasturage have a severe impact. Although it lives in isolated populations on small surfaces, the species is very sensitive to anthropic pressure.

Existing protection measures: LG 13/1993, DE 92/43/EE, LG 462/2001

Needed protection measures: creating of supplementary protected areas, reduction of interior waters pollution, reduction of using pesticides.

*Rana dalmatina* BONAPARTE 1839 - **Broasca roșie de pădure** (Agile frog)

Statute of preservation: vulnerable species

Place and collecting date: Budieni Gorj 14.07.1977.

Causes of number modifications: fast deforestations, drainage or pollution of lakes and ponds where the species breed, using pesticides, collecting on commercial purpose, drainage of ponds used for breeding before the larvas are fully developed.

Existing protection measures: LG. 13/1993 by which Romania ratifies Berna convention DE 92/43/EEC, LG 462/2001 regarding the condition of natural areas.

Needed protection measures: stopping deforestations, reducing pollution, strict controlling of collecting and commercializing frogs, trying to breed in captivity.

*Rana temporaria* L, 1758 - **Broasca roșie de munte** (Common frog)

Statute of preservation: vulnerable species

Place and collecting date: Rânca Gorj 3.07.1976, 10.08.1966, Baia de Fier Gorj 6.09.1965.

Causes of number modifications: degradation of habitat, by desforestation their habitat is destroyed, using pesticide, collecting them on commercial purpose, practicing unorganized turism and over pasturage have a negative impact.

Existing protection measures: Lg 13/1993 Romania ratifies Berna convention, DE 92/43/EEC by Lg 462/2001 regarding the condition of protected areas.

Needed protection measures: creating of suplimentary protected areas, stopping deforestation, reducing of interior waters pollution, reducing usage of pesticides, strict controlling of collecting and commercializing.

### CONCLUSIONS

The amphibians collection from patrimony of Museum of Oltenia preserves 11 species registred in the European legislation.

Identification of these species in patrimony of Museum of Oltenia, Craiova, certifies once again the scientific importance of museal collections, constituted as a result of research made by specialists, for knowing the diversity of fauna and enriching the museal patrimony.

### BIBLIOGRAPHY

BAZILESCU ELENA, SORESCU CONSTANTINA, CRUCE M., POPESCU M. 1980. *Catalogul sistematic al colecțiilor de vertebrate din Muzeul Olteniei*. Oltenia. Stud. și com. Șt. Nat. Craiova: 321-338.

BOTNARIUC N. & TATOLE VICTORIA. 2005. *Cartea Roșie a Vertebratelor din România*. Academia Română. Muzeul Național de Istorie Naturală „Grigore Antipa” București: 173-194.

SIMIONESCU I. 1983. *Fauna României*. Edit. Albatros. București: 197-213.

\*\*\*. *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive)*. <http://europa.eu.int/comm/environment/nature/hab-an5en.htm>.

\*\*\*. *Legea nr. 13 / 1993 pentru aderarea României la Convenția privind conservarea vieții sălbatice și a habitatelor naturale din Europa, adoptată la Berna la 19 septembrie 1979*. Monitorul Oficial al României, An. V, nr. 62/25 martie 1993: 1-20.

\*\*\*. *Legea 69/1994 pentru aderarea României la Convenția privind comerțul internațional cu specii sălbatice de faună și floră pe cale de dispariție*, adoptată la Washington, la 3 martie, 1973. Monitorul Oficial al României.

\*\*\*. *Ordonanța de urgență nr. 57 din 20 iunie 2007 privind regimul ariilor naturale protejate, conservarea habitatelor naturale, a florei și faunei sălbatice*. Publicată în Monitorul Oficial nr. 442/29 iun. 2007.

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