

Bufo viridis

Taxonomic Authority: Laurenti, 1768

Region: 10

Synonyms:

Bufo shaartusiensis	Pisanetz, Mezhzherin and Szczerb
Bufo variabilis	(Pallas, 1769)
Rana picta	Pallas, [1814]
Bufo sitibundus	(Pallas, 1771)
Bufo kavirensis	Andrén and Nilson, 1979

Common Names:

Aljoun Akhdar	Arabic
Crapaud Vert	French
Green Toad	English
Ropucha Zielona	Polish
Sapo Verde	Spanish
Zelenaya Zhaba	Russian
rospo smeraldino	Italian

Order: Anura

Family: Bufonidae

Notes on taxonomy:

Bufo viridis is the central member of the "*Bufo viridis* subgroup" (Stöck et al. 2001) which includes both diploid and polyploid toad species. Numerous species of green toads have been described on the basis of only morphological data. However, recent studies have revealed that in many cases morphological characters are unusable in the systematics of this "subgroup" because interspecific differences overlap widely with interpopulational differences. In Central Asia the "*Bufo viridis* subgroup", represents a large radiation of taxa. This includes the following nominal taxa, preliminarily placed by Stöck et al. (2001) in the following species and subspecies: diploid *B. viridis* (with *B.v. kermanensis*, *B.v. turanensis* and *B.v. ssp. [formerly "arabicus"]*); diploid *B. latastii* *latastii*; the tetraploid species *B. oblongus* (with *B. o. oblongus* and *B. o. danatensis*); and bisexual triploid taxa represented by *B. pseudoraddei* (with *B. p. pseudoraddei* and *B. p. baturae*). Because of contradictory data or unknown ploidy the status of the taxa *asiomontanus* and *zugmayeri* remains unclear; these taxa are currently not included in the species account or map. Further revision of taxonomy of the *Bufo viridis* complex with the use of genetic and biochemical data is needed.

General Information

Biome

Terrestrial

Freshwater

Marine

Geographic Range of species:

This species is distributed in much of Europe (including the southern tip of Sweden, but excluding the rest of Fenno-Scandia, the British Isles, the Iberian Peninsula and almost all of Europe west of the Rhine River) eastwards to Kazakhstan, Kyrgystan, Uzbekistan, Tajikistan (and probably adjacent Afghanistan). It is found in the Altai mountains in Russia and possibly in northwestern Mongolia (requires confirmation). It has been introduced to the Balearic Islands, and occurs naturally on Corsica, Sardinia, Sicily, Malta, Crete (and a few smaller Greek islands), and Cyprus. The species is present in very fragmented populations over much of northern Africa from Western Sahara to Egypt (it is genetically very homogeneous over this part of its range); confirmation of the presence of the species in Chad, Mali, Niger and Mauritania is needed. It also occurs widely in southwestern Asia, often in isolated populations, in Turkey, Iran, Iraq, Syria, Lebanon, Jordan and Israel. Populations in Israel may be expanding their range with increasing irrigation of arid areas. There is an isolated, relict population in the southern Hadramaut in southwestern Saudi Arabia. Previously reported populations from western China (Xinjiang) are now assigned to *Bufo pewzowi*. Populations assigned to "*zugmayeri*" in Pakistan have an uncertain taxonomic status (see comments by Stöck et al. 2001); these might not actually be *Bufo viridis* and are not included in this account. The distribution map for Central Asia largely follows that presented in Stöck et al. (2001). The species is found from 400 below sea level (Dead Sea shores) to over 4,500m asl.

Conservation Measures:

The species is listed on Appendix II of the Berne Convention and is listed on Annex IV of the EU Natural Habitats Directive. It is protected by national legislation in many countries; it is recorded on many national and sub-national Red Data books and lists and is present in many protected areas. Reintroduction of this species and restoration of its habitat are taking place in parts of its range (e.g., the Balearic Islands, Spain). In parts of this species range, mitigation measures to reduce road kill have been established.

Species population information:

This species is still considered a relatively abundant to common species over large parts of its range, although rare or declining on the fringes of its range in Europe (e.g., Denmark and Sweden). It is extinct in Switzerland despite reintroduction efforts.

Habitat and Ecology Information:

Bufo viridis is one of the most adaptable amphibians of the Palearctic, living in forests, forest steppe, steppe, dry grasslands, alpine areas, semi-deserts and deserts. It inhabits both wet swampy areas as well as different dry desert types (usually close to oases). In the forest zone, it tends to live in open areas and bushlands, often far away from waterbodies, whereas in the southern dry parts of the range it primarily inhabits moist sites such as oases and the shores of irrigation ditches and lakes. In drier areas irrigation ditches and channels are used as corridors for dispersal. In mountains, it lives primarily below the upper margin of forest vegetation avoiding rocky taluses and alpine meadows. Spawning and larval development occurs in a diverse range of temporary and permanent waterbodies including swamps, ponds, lakes, pools in streams and rivers, reservoirs, ditches and puddles. May be present in modified areas including urban centres (e.g., Turin, Milan, Tan Tan), city parks and gardens.

Threats:

The main threat over much of the range (most especially in the north) appears to be the loss of breeding habitats through wetland drainage, desiccation and aquatic pollution (industrial and agricultural). Populations may be locally declining through deforestation, environmental pollution, urbanisation, recreation, mortality on roads and general persecution. Israeli, Jordanian and Iranian populations may be threatened by loss of wetlands and other suitable habitat to agricultural intensification and drought. In the 1980s and 1990s, some populations close to the northern limit of the species range (e.g., in Moskovskaya province of Russia) declined, possibly through climatic changes. It is collected in small numbers for the pet trade.



Native - Presence Confirmed Native - Presence Possible Extinct Reintroduced Introduced

FAO Marine Habitats**Major Lakes****Major Rivers**

Upper Level Habitat Preferences		Score	Lower Level Habitat Preferences		Score
1.4	Forest - Temperate	1	Broadleaf Forest		2
3.4	Shrubland - Temperate	1	Cold Grassland		9
3.8	Shrubland - Mediterranean-type Shrubby Vegetation	1	Conifer Forest		3
4.4	Grassland - Temperate	1	Cool Broadleaf Forest		2
4.5	Grassland - Subtropical/Tropical Dry	1	Cool Crops and Towns		2
5.1	Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)	1	Cool Fields and Woods		2
5.4	Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands	1	Cool Irrigated Cropland		9
5.7	Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha)	1	Deciduous Broadleaf Wood		2
5.8	Wetlands (inland) - Seasonal/Intermittent Freshwater Marshes/Pools (under 8ha)	1	Fields and Woody Savanna		1
5.9	Wetlands (inland) - Freshwater Springs and Oases	1	Grass Crops		2
8.1	Desert - Hot	1	Hot Irrigated Cropland		2
8.2	Desert - Temperate	1	Low Sparse Grassland		1
8.4	Desert - Semi-Desert (no trees present)	1	Mixed Forest		2
10.2	Coastline - Sand, Shingle or Pebble Shores (incl. sand bars, spits, sandy islets, dune systems)	2	Rice Paddy and Field		1
11.1	Artificial/Terrestrial - Arable Land	1	Sand Desert		1
11.2	Artificial/Terrestrial - Pastureland	1	Semi Desert Shrubs		1
11.4	Artificial/Terrestrial - Rural Gardens	1	Shrub Deciduous		2
11.5	Artificial/Terrestrial - Urban Areas	1	Urban		1
12.2	Artificial/Aquatic - Ponds (below 8ha)	1	Woody Savanna		1
12.5	Artificial/Aquatic - Excavations (open)	1			
12.7	Artificial/Aquatic - Irrigated Land (includes irrigation channels)	1			
12.9	Artificial/Aquatic - Canals and Drainage Channels, Ditches	1			
13	Introduced vegetation	2			

Major threats

Code	Description of threat	Past	Present	Future
1	Habitat Loss/Degradation (human induced)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1	Agriculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.1	Crops	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.1.3	Agro-industry farming	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.4	Livestock	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.4.3	Agro-industry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Accidental mortality	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.2	Collision	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.2.2	Vehicle collision	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	Pollution (affecting habitat and/or species)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.3	Water pollution	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.3.1	Agriculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.3.3	Commercial/Industrial	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Conservation Measures

Code	Conservation measures	In place	Needed
1	Policy-based actions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2	Legislation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.1	Development	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.1.1	International level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.1.2	National level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.1.3	Sub-national level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.2	Implementation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.2.1	International level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.2.2	National level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2.2.3	Sub-national level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Research actions	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.1	Taxonomy	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2	Population numbers and range	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.3	Biology and Ecology	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.4	Habitat status	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.5	Threats	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.8	Conservation measures	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.9	Trends/Monitoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Habitat and site-based actions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

4.1	Maintenance/Conservation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.2	Restoration	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.4	Protected areas	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.4.2	Establishment	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.4.3	Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	Species-based actions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.1	Re-introductions	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Utilisation of Species

Purpose/Type of Use	Subsistence	National	International	Other purpose:		
13. Pets/display animals, horticulture	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Primary forms removed from the wild	100%	>75%	51-75%	26-50%	<25%	Other forms removed from the wild:
1. Whole animal/plant	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Source of specimens in commercial trade	100%	>75%	51-75%	26-50%	<25%	Other source of specimens:
Wild	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Trend in wild offtake/harvest in relation to total wild population numbers over last five years:						Unknown
Trend in offtake/harvest produced through domestication/cultivation over last five years:						Unknown
CITES:	Not listed					

Red Listing

Red List Assessment: Least Concern (LC)

Possibly Extinct

Red List Criteria:

Rationale for the Red List Assessment: Listed as Least Concern in view of its wide distribution, tolerance of a broad range of habitats, presumed large population, and because it is unlikely to be declining fast enough to qualify for listing in a more threatened category.

Current Population Trend: Stable

Date of Assessment: 12/17/2004

Assessor(s): Matthias Stöck, Muhammad Sharif Khan, Sergius Kuzmin, David Tarkhishvili, Vladimir Ishchenko, Boris Tuniyev, Theodore Pap

Notes on Red listing:

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