

Hierophis viridiflavus

Region: 3

Taxonomic Authority: (Lacépède, 1789)

Synonyms:

Hierophis gyarosensis (Mertens, 1968)

Common Names:

Western Whip Snake	English
Green Whip Snake	English
Gelbgrüne Zornnatter	German
Culebra Verdiamarilla	Spanish
biacco	Italian

Order: Ophidia

Family: Colubridae

Notes on taxonomy: This species was formerly included in the genus Coluber, but is included here in Hierophis following Schätti and Utiger (2001) and Nagy et al. (2004). Nagy et al. (2002) showed that the subspecies H. viridiflavus carbonarius is probably a different evolutionary unit from H.v. viridiflavus. The synonym Hierophis gyarosensis (known only from the island of Gyaros (Greece)) is actually a translocation of H.v. carbonarius (Schätti, in press).

General Information

Biome

Terrestrial Freshwater Marine

Geographic Range of species:

This species ranges from northeastern Spain; western, southern, eastern and northeastern France; and southern Switzerland, through most of Italy, to southwestern Slovenia and northern Croatia. It is present on the Mediterranean islands of Corsica (France), Sardinia, Sicily and most other Italian islands, Krk (Croatia), and Malta. The species may occur in Luxembourg, but this requires verification. The species is absent from Austria. It has also been translocated to the island of Gyaros (Greece) in the Aegean Sea where it was described as a new species but it is now considered to be a synonym. It ranges from sea level up to 2,000m asl.

Habitat and Ecology Information:

It is found in dry, open, well vegetated habitats. It occurs in scrubland, macchia, open woodland (deciduous and mixed), heathland, cultivated areas, dry river beds, rural gardens, roads, stone walls and ruins. The species lays four to 15 eggs.

Conservation Measures:

This species is listed on Annex II of the Bern Convention, and on Annex IV of the European Union Habitat and Species Directive. It is present in a number of protected areas throughout its range. It is protected by national legislation in Switzerland.

Threats:

It is locally threatened by high accidental mortality on roads, especially close to urban or tourist areas, but this is not considered to be a major threat to the species overall. It is also persecuted throughout its range because people mistakenly believe it to be venomous. It is not known to be collected in significant numbers. It is threatened by habitat loss through conversion of land to intensive agricultural use in Switzerland (Andreas Meyer pers. comm.)

Species population information:

It can be a common species.

Country Distribution

	Native - Presence Confirmed	Native - Presence Possible	Extinct	Reintroduced	Introduced	Vagrant
Andorra	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Croatia	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
France	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greece	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Italy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Luxembourg	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Malta	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Slovenia	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spain	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Switzerland	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FAO Marine Habitats

Native - Presence Confirmed	Native - Presence Possible	Extinct	Reintroduced	Introduced
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Major Lakes

Major Rivers

Upper Level Habitat Preferences

1.4 Forest - Temperate	Score	1
3.4 Shrubland - Temperate	Score	1

Lower Level Habitat Preferences

Score

3.8 Shrubland - Mediterranean-type Shrubby Vegetation	1
11.1 Artificial/Terrestrial - Arable Land	1
11.2 Artificial/Terrestrial - Pastureland	1
11.3 Artificial/Terrestrial - Plantations	1
11.4 Artificial/Terrestrial - Rural Gardens	1
11.5 Artificial/Terrestrial - Urban Areas	1

Major threats

Code	Description of threat
13	None

Conservation Measures

Past	Present	Future	Code	Conservation measures	In place	Needed
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	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"/>
			1.2.2	Implementation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			1.2.2.1	International level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			3	Research actions	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			3.5	Threats	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			4	Habitat and site-based actions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			4.1	Maintenance/Conservation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			4.4	Protected areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			4.4.2	Establishment	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			4.4.3	Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Utilisation of Species

Purpose/Type of Use	Subsistence	National	International	Other purpose:	
Primary forms removed from the wild	100%	>75%	51-75%	26-50% <25%	<i>Other forms removed from the wild:</i>
Source of specimens in commercial trade	100%	>75%	51-75%	26-50% <25%	<i>Other source of specimens:</i>

Trend in wild offtake/harvest in relation to total wild population numbers over last five years:

Trend in offtake/harvest produced through domestication/cultivation over last five years:

CITES:

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 degree of habitat modification, 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): Milan Vogrin, Claudia Corti, Valentin Pérez Mellado, Paulo Sá-Sousa, Marc Cheylan, Juan Pleguezuelos, Andreas Meyer, Bened

Notes on Red listing: This species is categorised as Endangered in Switzerland (Monney and Meyer, 2005).

Bibliography

- Arnold, E.N., 2003, , , Reptiles and amphibians of Europe., , 288 pp., Princeton University Press., Princeton and Oxford.
- Pleguezuelos, J.M., Márquez, R. and Lizana, M., 2002, , , Atlas y Libro Rojo de los Anfibios y Reptiles de España., , pp. 584, Dirección General de la Conservación de la naturaleza-Asociación Herpetológica Española., Madrid.
- Bowles, F.D., 2001, A short note on the herpetofauna of the Palinuro Peninsula, Cliento, Southern Campania, Italy., Herpetological Bulletin, , , 77, 30-32., ,
- Forman, F. and Forman, B., 1981, Herpetologische Beobachtungen auf Korsika., Herpetofauna, , , 3(10), 12-16., ,
- Heimes, P., 1993, Coluber viridiflavus - Gelbgrüne Zornnatter., , Handbuch der Reptilien und Amphibien Europas, Band 3/I., Schlangen (Serpentes) I., Böhme, W., , pp. 177-198, Aula-Verlag, Wiesbaden
- Henle, K., 1985, Ökologische, zoogeographische und systematische Bemerkungen zur Herpetofauna Jugoslawiens., Salamandra, , , 21(4):, 229-251., ,
- Philippin, H.D. and Rogner, M., 1986, Zur Biologie und Ökologie der Schlangen Korsikas., Herpetofauna, , , 8(44), 25-29., ,
- Rimpp, K., 1979, Herpetologische Skizzen aus Sardinien., Herpetofauna, , , 1(2), 24-27., ,
- Schätti, B., Stimson, A.F. and Henle, K., 1991, Natrix gemonensis Laurenti, 1768 (currently Coluber gemonensis), Coluber viridiflavus Lacepede, 1789 and Coluber helveticus Lacepede, 1789 (currently Natrix natrix helvetica)., Bulletin of Zoological Nomenclature, , , 48(1), 50., ,
- Gasc, J.-P., Cabela, A., Crnobrnja-Isailovic, J., Dolmen, D., Grossenbacher, K., Haffner, P., Lescure, J., Martens, H., Martínez-Rica, J.P., Maurin, H., Oliveira, M.E., Sofianidou, T.S., Veith, M. and Zuiderwijk, A., 1997, , , Atlas of Amphibians and Reptiles in Europe., , , pp. 494, Societas Europaea Herpetologica and Musée National d'Histoire Naturelle, Paris
- Mertens, R., 1968, Eine schwarze Zornnatter von den Cycladen: Coluber gemonensis gyarosensis n. subsp., Senck. Biol., , , 46(1), 5-9., ,

- Böhme, W., 1993, *Coluber gyarusensis* - Gyarus-Pfeilnatter., , Handbuch der Reptilien und Amphibien Europas, Band 3/1., Schlangen (Serpentes) I., Böhme, W., , pp. 111-114, Aula-Verlag, Wiesbaden
- Nagy, Z.T., Lawson, R., Joger, U., & Wink, M., 2004, Molecular systematics of racers, whipsnakes, and relatives (Reptilia: Colubridae) using mitochondrial and nuclear markers, *Journal of Zoological Systematics and Evolutionary Research*, , , 42, 223-233, ,
- Schätti, B. and Utiger, U., 2001, *Hemerophis*, a new genus for *Zamenis socotrae* Günther, and a contribution to the phylogeny of Old World racers, whip snakes, and related genera (Reptilia: Squamata: Colubrinae)., *Revue suisse de Zoologie*, , , 108, 919-948., ,
- Nagy, Z.T., Joger, U., Guiking, D. and Wink, M., 2002, Phylogeography of the European whip snake *Coluber* (*Hierophis*) *viridiflavus* as inferred from nucleotide sequences of the mitochondrial cytochrome b gene and ISSR genomic fingerprinting., *Biota*, , , 3, 109-118., ,
- Andreu, A., Bea, A., Braña, F., Galán, P., López-Jurado, L.F., Pérez-Mellado, V., Pleguezuelos, J.M. and Salvador, A., 1998, Reptiles., *Fauna Ibérica*, , , 10, 1-705, Museo Nacional de Ciencias Naturales. CSIC., Madrid
- Monney, J.-C. and Meyer, A., 2005, , , Rote Liste der gefährdeten Reptilien der Schweiz., , , BUWAL-Reihe: Vollzug Umwelt, 50 S., (BUWAL, Bern, Switzerland)
- Hofer, U., Monney, J.-C. and Dusej, G., 2001, , , Die Reptilien der Schweiz: Verbreitung, Lebensräume, Schutz., , , Birkhäuser Verlag, Basel, Switzerland.