

Helictochloa lusitanica

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Taxonomy

Kingdom	Phylum	Class	Order	Family
Plantae	Tracheophyta	Liliopsida	Poales	Poaceae

Taxon Name: *Helictochloa lusitanica* (Romero Zarco) Romero Zarco

Synonym(s):

- *Avenula lusitanica* (Romero Zarco) Holub
- *Avenula pratensis* (L.) Dumort. subsp. *lusitanica* Romero Zarco
- *Avenula pratensis* (L.) Dumort. subsp. *lusitanica* Romero Zarco
- *Helictotrichon lusitanicum* (Romero Zarco) Röser

Taxonomic Source(s):

Valdés, B. and Scholz, H.; with contributions from Raab-Straube, E. von and Parolly, G. 2009. Poaceae (pro parte majore). Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity. Available at: <http://ww2.bgbm.org/EuroPlusMed/>. (Accessed: 11 March 2010).

Taxonomic Notes:

The taxon was formerly described as a subspecies of *Helictochloa pratensis* (former name *Avenula pratensis*) using a single exsiccatum collected by P. Silva *et al.* in 1966 (Romero-Zarco 1984). The taxon was subsequently studied by Röser (1998), who proved that it is a good isolated species, the westernmost taxon of the *Helictochloa pratensis* s.l. complex.

It is high polyploid ($2n = 126 = 18x$), but a misapplied diploid record ($2n=14$) was published due to confusion with *Helictochloa marginata* (Castroviejo *et al.* 2003). In the Sierra de Nogueira both species grow together and can be easily confused (Romero-Zarco 2014).

Assessment Information

Red List Category & Criteria: Vulnerable D2 [ver 3.1](#)

Year Published: 2018

Date Assessed: July 29, 2015

Justification:

This species is endemic to northwestern Portugal. It is assessed as Vulnerable based on the very small area of occurrence, approximately 20 km², although this is likely to be an underestimate, since point records may not be available for all subpopulations. This species presents specific habitat requirements (ultrabasic rocky soils) and is not able to colonize other kinds of habitat. It is also subject to ongoing threats like shrub encroachment and threats which may repeat in the future (industrial and road development). This plant requires some level of human management like sustainable grazing and further research to confirm current distribution and population trends.

Geographic Range

Range Description:

The plant is endemic to the Massive de Morais and Vinhais, Sierra de Nogueira, Bragança, northwestern Portugal (Aguiar 2001, 2015), where it has been found at altitudes from 850 to 1,050 m asl.

Herbarium specimens

- Bragança, Espinhosela, Sardoal das Cavadas, forest of *Quercus rotundifolia*, ultrabasic rocks, c.850 m, 29TPG7737, BRESA 2650.
- Bragança, Nogueira, between Cruzes and Mosqueiro, ultrabasic rocks, 1,050 m, 29TPG7826, BRESA 1473, 1536.
- Vinhais, Vilar de Ossos, Zido, ultrabasic rocks, 900 m, 29TPG6236, BRESA 4854.

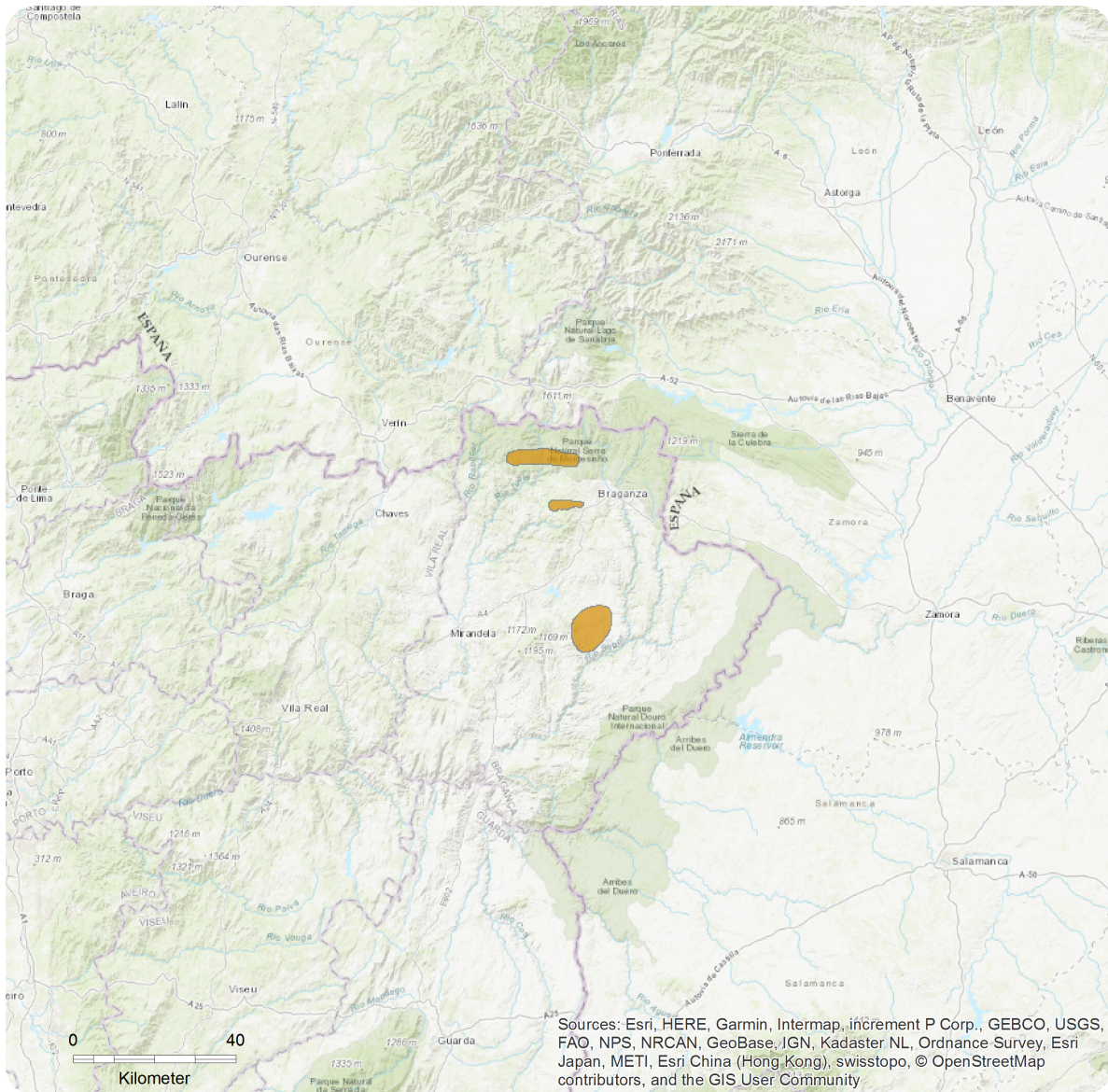
In addition, Aguiar (2015) records the plant from the area of Morais (two records; quadrat PF89, south of Bragança) and from the area of Carrazedo (one record; quadrat PG72, southwest of Bragança). Based on currently available records, the extent of occurrence is approximately 320 km² and the area of occupancy c.20 km² (however the latter is likely to be an underestimate since point records are not available for all locations).

Country Occurrence:


Native: Portugal (Portugal (mainland))

Distribution Map

Helictochloa lusitanica

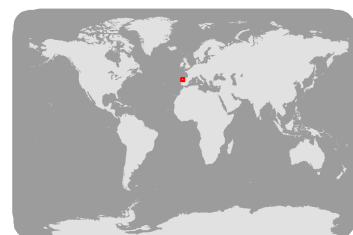


Range

 Extant (resident)

Compiled by:

IUCN Mediterranean Red List



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.



Population

Due to strict habitat requirements, it occurs in very few places. Some populations are very dense (e.g. Samil), other are very restricted and with a small number of individuals (e.g. Limãos, Monte de Morais, Macedo de Cavaleiros, Bragança and Alimonde) (Aguiar 2015). Little information available on population trends, but is known to have undergone significant reduction of area of occupancy in last decade, and at least one large population was destroyed (Aguiar 2015).

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

The species occurs as pioneer in open grasslands over rocky grounds, rock crevices and thin soil, on ultrabasic substrate (serpentinite).

Systems: Terrestrial

Use and Trade

No use known.

Threats (see Appendix for additional information)

One large population near Bragança was destroyed by industrial development and another is known to have been heavily affected by a road (Aguiar 2015). As a pioneer species, it is likely to be very sensitive to natural processes of vegetation evolution, namely shrub encroachment (Aguiar 2015).

Conservation Actions (see Appendix for additional information)

It is not known if any conservation actions are in place, although some sub population occur within the *Morais* and *Montesinho-Nogueira* Natura 2000 sites and *Parque Natural de Montesinho*, northwest of Bragança (Flora-On 2015). This plant requires some level human management like sustainable grazing (Aguiar 2015). Further research is required to confirm the plants current distribution and population trends, and information is needed on potential threats to the plant and its habitat.

Credits

Assessor(s): Romero Zarco, C.

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Contributor(s): Carapeto, A.

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Romero-Zarco, C. 2014. Notas taxonómicas sobre el género *Helictochloa* Romero Zarco (Poaceae). *Acta Botanica Malacitana* 39: 308-310.

Röser, M. 1998. Character evolution of the genus *Helictotrichon* (Poaceae: Aveneae) reconsidered in view of recent results in Ibero-Mauritanian and Eurasian species. *Flora* 193: 425-447.

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External Resources

For [Images and External Links to Additional Information](#), please see the [Red List website](#).

Appendix

Habitats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Habitat	Season	Suitability	Major Importance?
4. Grassland -> 4.4. Grassland - Temperate	Resident	Suitable	Yes

Threats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Threat	Timing	Scope	Severity	Impact Score
1. Residential & commercial development -> 1.2. Commercial & industrial areas	Past, likely to return	Minority (50%)	Very rapid declines	Past impact
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 2. Species Stresses -> 2.1. Species mortality		
4. Transportation & service corridors -> 4.1. Roads & railroads	Past, likely to return	Minority (50%)	Very rapid declines	Past impact
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality		
7. Natural system modifications -> 7.3. Other ecosystem modifications	Ongoing	Whole (>90%)	Unknown	Unknown
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation 2. Species Stresses -> 2.1. Species mortality		

Conservation Actions in Place

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Actions in Place
In-Place Land/Water Protection and Management
Occur in at least one PA: Yes

Research Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.5. Threats
3. Monitoring -> 3.1. Population trends

Research Needed
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km ²): 20
Continuing decline in area of occupancy (AOO): Yes
Estimated extent of occurrence (EOO) (km ²): 320
Continuing decline in extent of occurrence (EOO): Unknown
Lower elevation limit (m): 850
Upper elevation limit (m): 1050
Population
Continuing decline of mature individuals: Yes
Extreme fluctuations: Unknown
Population severely fragmented: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes

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