

## F3.1d Balkan-Anatolian submontane genistoid scrub

### Summary

This scrub dominated by endemic genistoid shrubs is confined to Bulgaria and Greece in the Balkan Peninsula and, outside the EU28+, Asia Minor. It occurs in lowlands and foothills on unstable screes, steep slopes and outcrops of various rock types, mainly in dry, sunny situations with shallow soils, as a primary habitat or replacing destroyed or degraded forest. It is threatened by mining and quarrying, afforestation, overgrazing and abandonment, with succession to forest. Legal protection and limitation of disturbance are essential for conservation.

### Synthesis

The habitat type is assessed as Vulnerable (VU) in the EU28, due to a small distribution in combination with continuing (small) negative trends in quantity and quality (criterion B2). As far as known, the habitat does not occur outside the EU28 (within the Red List project region), and therefore the same categories apply for EU28+.

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Vulnerable	B1	Vulnerable	B1

### Sub-habitat types that may require further examination

No sub-habitats have been distinguished for further analysis.

### Habitat Type

#### Code and name

F3.1d Balkan-Anatolian submontane genistoid scrub



*Genista rumelica* communities at the southern foothills of Rila Mts near the Eleshnica village, Bulgaria (Photo: Rossen Tzonev).



*Genista rumelica* communities at the Eastern Rodopi Mts close to Kurdzhali town, Bulgaria (Photo: Rossen Tzonev).

#### Habitat description

This habitat type comprises a complex of open shrub, herbaceous and chasmophytic plant communities dominated by the species complex of *Genista rumelica*/*Genista lydia*. It is an endemic type distributed to the southeastern part of the Balkan Peninsula (Southern Bulgaria and Northern Greece) and Asia Minor. The *Genista rumelica* communities are more widely distributed but restricted to the Balkans (endemic),

whereas the communities of *Genista lydia* also occur in the western part of Anatolia. These communities are found mostly in lowland areas and lower parts of mountains on unstable sites (scree, steep slopes, rocky substrates). The genistoid scrubs grow mainly on sunny, dry, stony slopes with shallow soils of various bedrock (chalk, sandstones, volcanic stones). However, *Genista rumelica* prefers calcareous substrata. Because of its open structure the habitat is species rich with many elements from the *Thero-Brachypodietea* grasslands amongst which annual grasses (*Brachypodium distachyon*, *Poa bulbosa*, *Psilurus incurvus*, *Bromus squarrosus*), perennial grasses (*Koeleria splendens*, *Chrysopogon gryllus*) and many Balkan endemics (*Achillea coarctata*, *Dianthus pinifolius*, *Silene frivaldszkyana*). The communities can occupy secondary, degraded areas: scree and eroded places, replacing destroyed or degraded forest, mostly of different oak species, Oriental Hornbeam or Black Pine especially in Eastern Rodopi Mts. The habitat is characterized by open and complex structure consisting of patches with annual grasslands and low (0.5-1) genistoid scrublands where the tree individuals and high shrubs are either absent or in low numbers. The more open mosaics with other habitats exhibit the highest biodiversity (plant and animal species).

Indicators of quality:

- Relatively open scrublands in mosaic with other vegetation types;
- Presence of endemic shrub and herbaceous species;
- Absence or low number of trees and high (2-3 m) shrubs.

Characteristic species:

Flora, Vascular plants

*Achillea coarctata*, *Alyssum murale*, *Brachypodium distachyon*, *Bromus squarrosus*, *Carpinus orientalis*, *Cephalaria laevigata*, *Chrysopogon gryllus*, *Cleistogenes serotina*, *Dianthus pinifolius*, *Dichanthium ischaemum*, *Fraxinus ornus*, *Genista lydia*, *G. rumelica*, *Jasmiium fruticans*, *Juniperus oxycedrus*, *Koeleria* spp., *Melica ciliata*, *Minuartia setacea*, *Orlaya grandiflora*, *Poa bulbosa*, *Psilurus incurvus*, *Scabiosa ochroleuca*, *S. triniifolia*, *Sedum hispanicum*, *Silene frivaldszkyana*, *Stipa capillata*, *Teucrium chamaedrys*, *Thymus* spp.

### **Classification**

This habitat may be equivalent to, or broader than, or narrower than the habitats or ecosystems in the following typologies.

EUNIS:

F3.29 Moesian broom fields

EuroVegChecklist:

Relationship unclear

Annex 1:

No relationship

Emerald:

No relationship

MAES-2:

Heathland and shrub

IUCN:

Temperate scrubland

**Does the habitat type present an outstanding example of typical characteristics of one or more biogeographic regions?**

Yes

Regions

Black Sea

Continental

Mediterranean

Justification

The habitat is distributed only in south-easternmost part of Europe and more specifically in Southern Bulgaria (continental) and Northern Greece (Mediterranean region); this is considered more typical in Asia Minor of the Anatolian region.

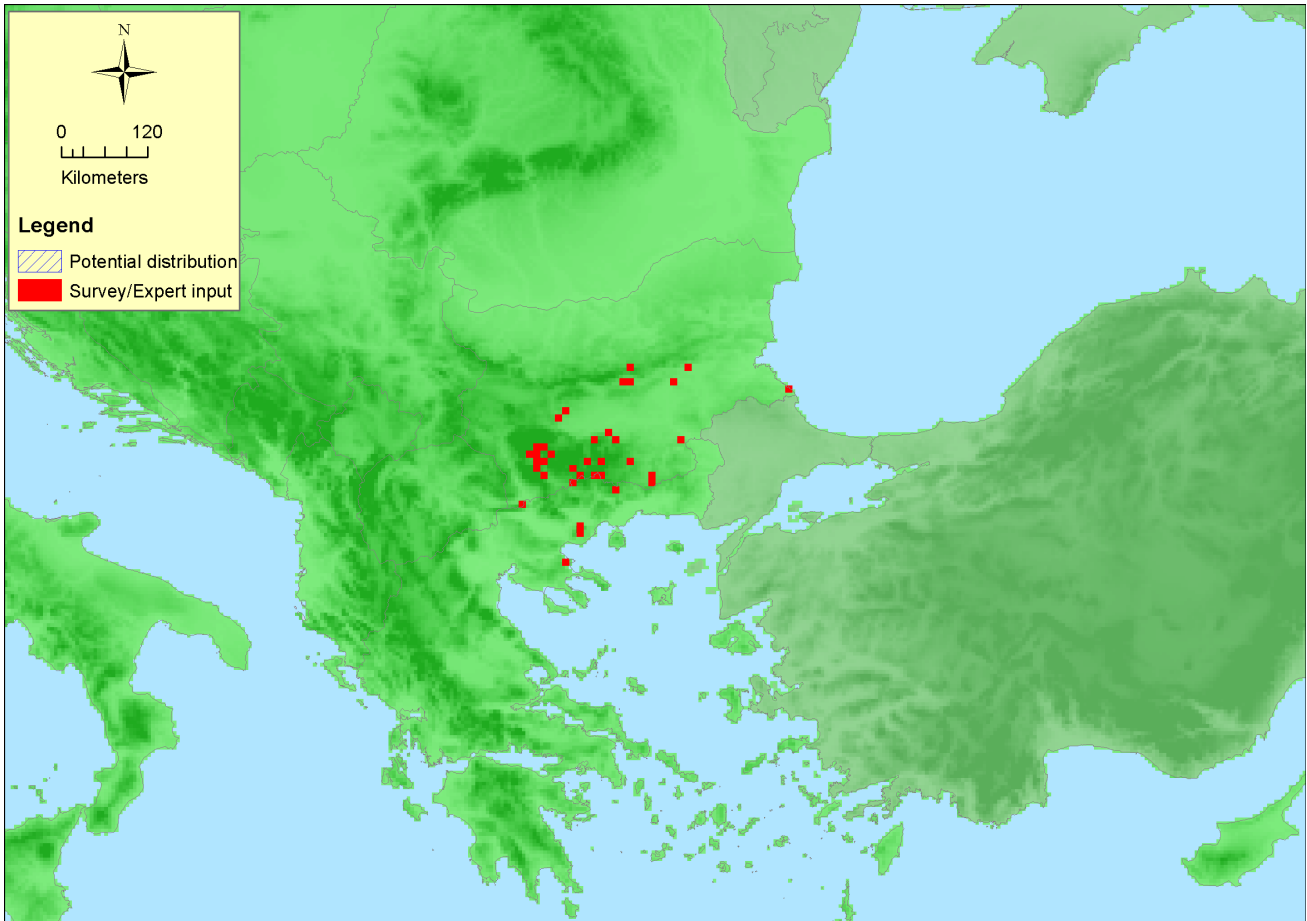
**Geographic occurrence and trends**

EU 28	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>Bulgaria</i>	Present	60 Km <sup>2</sup>	Increasing	Stable
<i>Greece</i>	Greece (mainland and other islands): Present	20 Km <sup>2</sup>	Decreasing	Decreasing

**Extent of Occurrence, Area of Occupancy and habitat area**

	Extent of Occurrence (EOO)	Area of Occupancy (AOO)	Current estimated Total Area	Comment
<i>EU 28</i>	56000 Km <sup>2</sup>	36	80 Km <sup>2</sup>	
<i>EU 28+</i>	56000 Km <sup>2</sup>	36	80 Km <sup>2</sup>	

**Distribution map**



The map gives a good picture of the range but within the range it may provide an underestimation due to lack of data. Data sources: EVA, NAT.

### How much of the current distribution of the habitat type lies within the EU 28?

About 40% of its current distribution lies within the EU 28. The habitat is also distributed in European Turkey and Western Anatolia.

### Trends in quantity

The habitat in Bulgaria has since long decreased its spatial extent (ploughing, quarries, etc); during the last 50 years the habitat has started increasing in extent (<10%) mainly due to the forest degradation caused by fires, overgrazing, etc. The trend in Greece is decline in spatial extent mostly due to the grazig abandonment and forest regeneration.

- Average current trend in quantity (extent)  
 EU 28: Increasing  
 EU 28+: Unknown
- Does the habitat type have a small natural range following regression?  
 No  
*Justification*  
 The habitat is increasing during the last 50 years in Bulgaria. The trend in Greece is decline in extent but the lesser part of habitat's range is in this country.
- Does the habitat have a small natural range by reason of its intrinsically restricted area?  
 No  
*Justification*  
 The habitat is increasing during the last 50 years in Bulgaria. The trends in Greece is decrease but the lesser part of habitat's range is in this country. The habitat has small natural range on the Balkans but

bigger in the Anatolian Peninsula.

## **Trends in quality**

No decline in habitat quality is observed in Bulgaria (stable status). The estimated trend in Greece is a slight decline in quality, mostly due to the abandonment of grazing and the subsequent forest regeneration.

- Average current trend in quality

EU 28: Stable

EU 28+: Unknown

## **Pressures and threats**

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The main pressures/threats for the habitat are the following: mining and quarrying activities, planting of artificial forest plantations, overgrazing and abandonment of grazing followed by the ecological succession and invasion of shrub and forest species on the open places. However, the habitat has also a secondary distribution (especially in Bulgaria) on eroded terrains after forest degradation caused by fires, overgrazing, etc.

### **List of pressures and threats**

#### **Agriculture**

Grazing

Intensive grazing

Abandonment of pastoral systems, lack of grazing

#### **Sylviculture, forestry**

Forest planting on open ground

#### **Mining, extraction of materials and energy production**

Mining and quarrying

Mines

## **Conservation and management**

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The habitat has a narrow distribution and specific ecological features; its vegetation communities are floristically characterized by regional endemic plant species and/or subspecies. However, this EUNIS habitat is not included to the Annex I of the Dir. 92/43/EEC and thus it has not been incorporated to any NATURA 2000 site. Its conservation through the legal identification of the habitat is necessary throughout its distribution range (either by inclusion of the habitat in the Annex I of the Dir. 92/43/EEC which is currently impossible or by the establishment of new Natura 2000 sites). Other conservation measures could focus a) on setting restriction rules for the construction of new quarries and mines, b) on proper management measures for forest planting, grazing activities, fires prevention, etc.

### **List of conservation and management needs**

#### **Measures related to agriculture and open habitats**

Maintaining grasslands and other open habitats

#### **Measures related to forests and wooded habitats**

Adapt forest management

#### **Measures related to spatial planning**

Establish protected areas/sites  
 Legal protection of habitats and species

## Conservation status

The habitat is not included in the Annex 1 of the Directive 92/43/EEC.

## When severely damaged, does the habitat retain the capacity to recover its typical character and functionality?

The habitat has the capacity to recover naturally or through intervention because it is typical to open places resulting from the natural geological and geomorphological processes, as well as from the grazing activities. The habitat can also expand its distribution on certain secondary eroded terrains.

## Effort required

20 years	50+ years
Through intervention	Naturally

## Red List Assessment

### Criterion A: Reduction in quantity

Criterion A	A1	A2a	A2b	A3
EU 28	-3 %	unknown %	unknown %	unknown %
EU 28+	-3 %	unknown %	unknown %	unknown %

The extent of the habitat is increasing in Bulgaria but slightly decreasing in Greece. Totally, there is a slight decrease of 3%. Limited or lack of information for the historical and future trends of the habitat.

### Criterion B: Restricted geographic distribution

Criterion B	B1			B2			B3		
	EOO	a	b	c	AOO	a		b	c
EU 28	>50000 Km <sup>2</sup>	Yes	No	no	36	Yes	No	no	no
EU 28+	>50000 Km <sup>2</sup>	Yes	No	no	36	Yes	No	no	no

The EOO is slightly above the threshold for criterion B, and the AOO (36 km<sup>2</sup>) below the threshold for criterion B. The habitat exists at relatively few locations, but it is estimated to be a more than 10 locations. In combination with small negative trends in quantity and quality, likely to continue, the habitat is assessed as Vulnerable under B2, and Near Threatened under B1.

### Criterion C and D: Reduction in abiotic and/or biotic quality

Criteria C/D	C/D1		C/D2		C/D3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	5 %	40 %	unknown %	unknown %	unknown %	unknown %
EU 28+	5 %	40 %	unknown %	unknown %	unknown %	unknown %

Criterion C	C1		C2		C3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %

Criterion C	C1		C2		C3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28+	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %

Criterion D	D1		D2		D3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	unknown %	unknown%	unknown %	unknown%	unknown %	unknown%
EU 28+	unknown %	unknown%	unknown %	unknown%	unknown %	unknown%

The extent of degradation is about 5%, while the severity of degradation is 40%. The general trend is slight decrease. The involved countries could not provide enough information on long historical or future trends in quality (CD2, CD3, C2, C3, and D2). The changes in quality are both abiotic (quarrying and mining) and biotic (grazing regime), so C/D1 has not been split into C1 and D1.

### Criterion E: Quantitative analysis to evaluate risk of habitat collapse

Criterion E	Probability of collapse
EU 28	Unknown
EU 28+	Unknown

There is no quantitative analysis available that estimates the probability of collapse of this habitat type.

### Overall assessment "Balance sheet" for EU 28 and EU 28+

	A1	A2a	A2b	A3	B1	B2	B3	C/D1	C/D2	C/D3	C1	C2	C3	D1	D2	D3	E
EU28	LC	DD	DD	DD	VU	NT	DD	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	LC	DD	DD	DD	VU	NT	DD	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Vulnerable	B1	Vulnerable	B1

### Confidence in the assessment

Low (mainly based on uncertain or indirect information, inferred and suspected data values, and/or limited expert knowledge)

### Assessors

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### Contributors

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**Reviewers**

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**References**

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Tzonev, R. & C. Gussev 2012. Mediterranean fields of Rumelian green weed (*Genista rumelica*) and Lydian green weed (*Genista lydia*). In: Biserkov, V., C. Gussev, V. Popov, G. Hibaum, V. Roussakova, I. Pandurski, Y. Uzunov, M. Dimitrov, R. Tzonev & Tsoneva, S. (eds.) Red Data Book of the Republic of Bulgaria. Vol. 3. Natural habitats. BAS-MOEW, Sofia: 250-251.