E5.2b Thermophile woodland fringe of acidic soils

Summary

This habitat is especially characteristic of semi-shaded forest margins and similar situations on acidic, nutrient-poor soils in the cooler Atlantic and Subatlantic regions of Europe, becoming rare and more species-poor further east. It is generally dominated by bulky grasses and tall herbs and being a semi-natural habitat, it is ultimately dependent on human activity, more particularly extensive grazing or occasional mowing to prevent encroachment by shrubs and trees that threaten denser shade. It is thus sensitive to changes in land use, most particularly abandonment of such interventions as well as agricultural intensification with attendant fertiliser drift and infrastructure development, by urbanisation and construction of roads. Although the quality of the habitat has declined in recent historic time, the extent is stable or even increasing.

Synthesis

On the basis of available quantitative data and general expert opinion, this habitat is not endangered in either EU28 and EU28+.

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Least Concern	-	Least Concern	-

Sub-habitat types that may require further examination

No sub-types in need of further examination.

Habitat Type

Code and name

E5.2b Thermophile woodland fringe of acidic soils

Acidophilous fringe community with *Hieracium umbellatum* under a line of *Quercus robur* trees in the eastern part of the Netherlands (Photo: Joop Schaminée).

Acidophilous fringe community of the alliance *Melampyrion pratense* in the Netherlands along a forest margin with flowering *Melampyrum pratense* (Photo: Rense Haveman).

Habitat description

These woodland fringes are especially characteristic of semi-shaded habitats along forest margins, overhung road verges and similar places with acidic and nutrient-poor soils. Dominated by bulky grasses and tall herbs, they are not so diverse as the more thermophilous E5.2a woodland fringe occurring on base-rich soils. They reach their optimum development in the cooler Atlantic and Subatlantic parts of

Europe and, further east, their species richness gradually diminishes. The typical associated trees in the woodlands are deciduous *Quercus spp.*, *Betula* spp. and *Fagus sylvatica*. Fringe communities are semi-natural habitats, strongly influenced by human activities and where newly established, for example in forest clearings, around plantations and along hedgebanks, some years are needed to develop their characteristic features, above all depending on neighbouring habitats. This kind of fringe can be found in association with mat-grass swards on nutrient-poor soils and heathlands on acidic and humus-rich soils. Towards the Mediterranean region, fringes on acidic and neutral and bedrock can be similar to fringes on basic soils (e.g. in the *Lathyro laxiflori-Trifolion velenovskyi*).

To prevent colonisation by shrubs and trees, the vegetation needs to be occasionally mown (for example, every second year) or extensively grazed.

The following characteristics may be considered as indicators of good quality:

- Absence of complete shade of shrubs and trees
- Relative richness in apomictic species of *Hieracium*
- Irregularly grazed and/or mown
- Absence of invasive species
- Low input of nutrients

Characteristic species:

Vascular plants: *Agrostis capillaris, Avenella flexuosa, Betonica officinalis, Campanula rapunculus, Centaurea nigra, Clinopodium vulgare, Conopodium majus, Digitalis purpurea, Hieracium lachenalii, Hieracium murorum, Hieracium sabaudum, Hieracium umbellatum, Holcus mollis, Hypericum perforatum, Hypericum pulchrum, Jasione montana, Lathyrus linifolius, Linaria repens, Lonicera periclimenum, Melampyrum pratense, Origanum virescens, Poa nemoralis, Potetilla erecta, Potentilla sterilis, Pulmonaria longifolia, Rumex acetosella, Serratula tinctoria, Solidago virgaurea, Stellaria holostea, Teucrium scorodonia, Veronica chamaedrys, Veronica officinalis, Viola riviniana.*

Classification

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

EUNIS:

E5.2: Thermophile woodland fringes

EuroVegChecklist :

Melampyrion pratensis Passarge 1979

Violo rivinianae-Stellarion holosteae Passarge 1994

Poion nemoralis Dengler et al. 2006

Teucrion scorodoniae de Foucault et al. 1983

Linarion triornithophorae Rivas-Mart. et al. 1984

Origanion virentis Rivas-Mart. et O. de Bolòs in Rivas-Mart. et al. 1984

Annex 1:

Emerald:

-

MAES-2:

Grassland

IUCN:

4.4 Temperate Grassland

Does the habitat type present an outstanding example of typical characteristics of one or more biogeographic regions?
No

Justification
Although reaching its optimal development in the Atlantic and subatlantic parts of Europe, the habitat is widely distributed, being recorded from 26 countries.

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)
Austria	Present	2 Km^2	Decreasing	Decreasing
Belgium	Present	unknown Km^2	Unknown	Unknown
Bulgaria	Present	unknown Km^2	Increasing	Stable
Czech Republic	Present	7 Km^2	Decreasing	Decreasing
France	France mainland: Present	unknown Km^2	Increasing	Unknown
Germany	Present	unknown Km^2	Increasing	Decreasing
Hungary	Present	3 Km^2	Unknown	Decreasing
Ireland	Present	unknown Km^2	Unknown	Unknown
Italy	Italy mainland: Present	29 Km^2	Increasing	Decreasing
Latvia	Present	3 Km^2	Unknown	Decreasing
Lithuania	Present	4 Km^2	Stable	Unknown
Luxembourg	Present	unknown Km^2	Unknown	Unknown
Netherlands	Present	1 Km^2	Decreasing	Decreasing
Poland	Present	8 Km^2	Unknown	Unknown
Portugal	Portugal mainland: Present	74 Km^2	Increasing	Unknown
Romania	Present	10 Km^2	Increasing	Unknown
Slovakia	Present	0.2 Km^2	Unknown	Decreasing
Spain	Spain mainland: Present	unknown Km^2	Stable	Unknown
Sweden	Present	unknown Km^2	Unknown	Unknown
UK	United Kingdom: Present	unknown Km^2	Unknown	Unknown

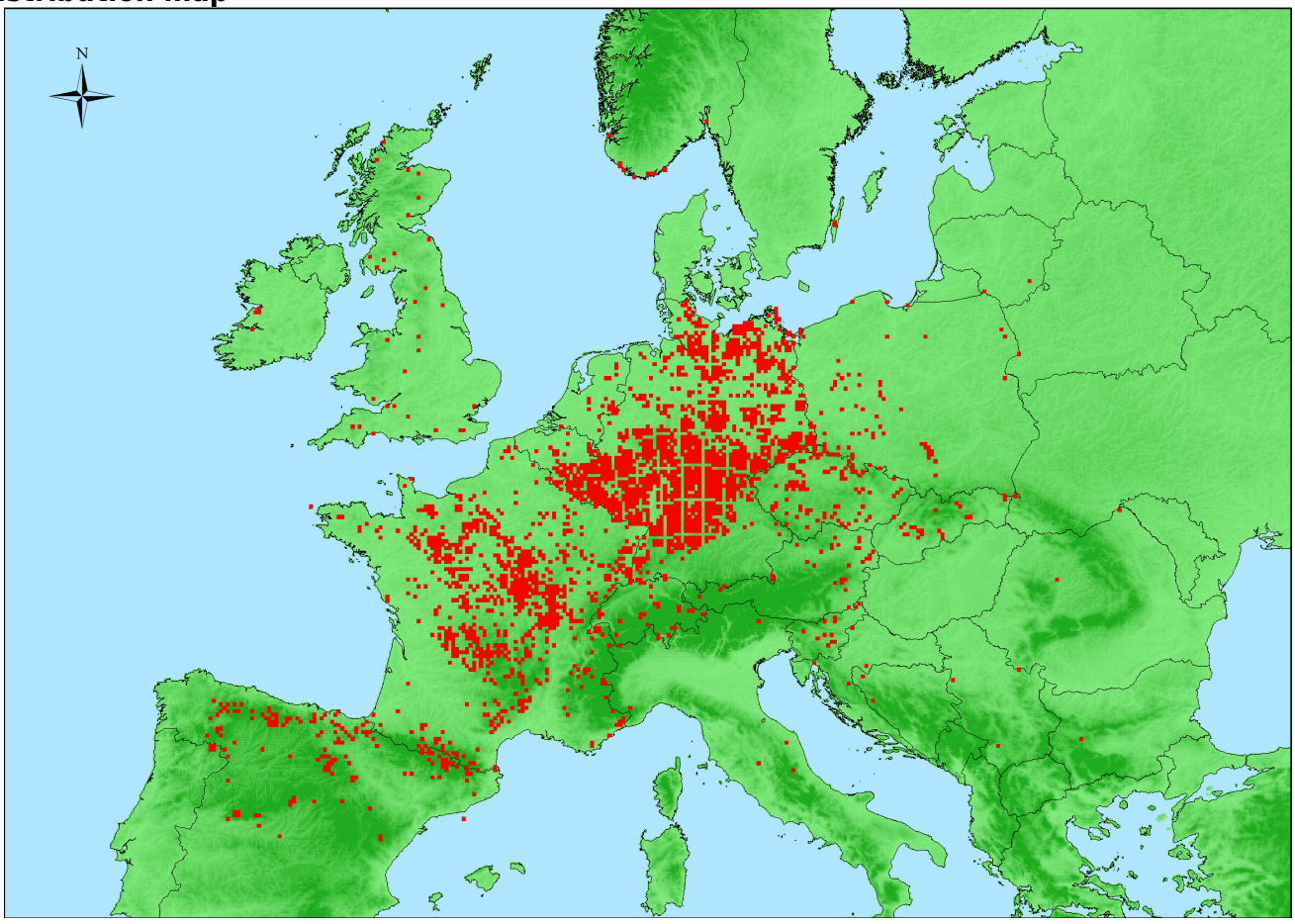
EU 28 +	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
Albania	Present	unknown Km^2	Unknown	Unknown

EU 28 +	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
Bosnia and Herzegovina	Present	20 Km^2	Decreasing	Decreasing
Kaliningrad	Present	unknown Km^2	Unknown	Unknown
Montenegro	Present	unknown Km^2	Unknown	Unknown
Norway	Norway Mainland: Present	unknown Km^2	Unknown	Unknown
Switzerland	Present	3 Km^2	Decreasing	Decreasing

Extent of Occurrence, Area of Occupancy and habitat area

	Extent of Occurrence (EOO)	Area of Occupancy (AOO)	Current estimated Total Area	Comment
EU 28	>50000 Km^2	>50	Km^2	So few quantitative data are suppplied that it is misleading to provide a figure
EU 28+	>50000 Km^2	>50	Km^2	So few quantitative data are supplied that it is misleading to provide a figure

Distribution map



The map is incomplete depending on data avialability. It underestimates occurreces, particularly in Great Britain, Ireland and southern parts of Scadinavia.Data sources: EVA, GBIF.

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

90%

Trends in quantity

Only 5 out of 16 EU-countries that have sent in territorial data sheets (plus 2 additional EU+ countries) provided quatitative data, so the data reliablility is low. Nevertheless, the general conclusion may be drawn that the trend in quantity of the habitat type is stable or increasing. The data provided by the two EU28+ countries (30-50 % decrease) are difficult to value and may allow misinterpretation. The extent in Portugal seems unusually large.

- Average current trend in quantity (extent)
  EU 28: Increasing
  EU 28+: Stable
- Does the habitat type have a small natural range following regression?
  No
  Justification
  The EOO is larger than 50,000 km^2.
- Does the habitat have a small natural range by reason of its intrinsically restricted area?
  No
  Justification
  The habitat type has a wide distribution thorughout Europe, with the centre of distribution in the atlantic and subatlantic regions; occurrences have been recorded from 26 countries. The surface of the sites are generally small.

Trends in quality

According to the calculations, about 24% of the extent in the EU28 countries is degraded with a weighted severity of 20%. Within the EU28+ countries these figures are 31% and 37% respectively. The small amount of data, however, from only 6 out of 16 reporting EU28 countries (plus 3 EU28+ countries), indicates that the results must be treated with care. Neverteless the overall Red List Status for both EU28 and EU28+ could be defined as Least Concern, although the data reliablility is low.

- Average current trend in quality
  EU 28: Decreasing
  EU 28+: Decreasing

Pressures and threats

Fringe communities are dependent on temporal gradients in the landscape, and therefore by definition vulnerable and the extent and quality of this habitat type are strongly affected by changes in land use, with agricultural intensification as the major threat. To a lesser extent, urbanisation and related changes in infrastructure also have a negative impact. Abandonment of management of neighbouring habitats may also allow encroachment of shrubs and trees.

List of pressures and threats

Agriculture

Agricultural intensification
Intensive grazing
Fertilisation
Removal of hedges and copses or scrub
Removal of stone walls and embankments

Urbanisation, residential and commercial development

Continuous urbanisation

Conservation and management

Compared to the woodland fringes on basiphilous soils, these acidophilous fringes house a lower number of endangered and rare species, with the clear exception of the (many) apomicts of the genus *Hieracium*. However, they can provide a valuable transitional habitat for invertebrates, small passerine birds and small mammals, also interconnecting suitable areas for colonisation.

List of conservation and management needs

Measures related to agriculture and open habitats

Maintaining grasslands and other open habitats

Measures related to spatial planning

Manage landscape features

Conservation status

There is no Annex I type assigned to this habitat type.

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

Extensive grazing and - to a lower extent - mowing are prerequisites for safeguarding this habitat type and both intensification and abandonment may disturb the rather subtle balance. When management ceases, succession will lead to the development of shrubland and woodland, with the ultimate loss of these fringe communities.When overgrown with shrubs and trees, cutting of the woody plants and subsequent grazing offers a good chance of recovery of the target communities, within a reasonable time-span.

Effort required

20 years
Through intervention

Red List Assessment

Criterion A: Reduction in quantity

Criterion A	A1	A2a	A2b	A3
EU 28	increase %	unknown %	unknown %	unknown %
EU 28+	stable %	unknown %	unknown %	unknown %

Although the data reliability is low, the overall conclusion that the extent of the habitat type is (at least) stable seems to be justified.

Criterion B: Restricted geographic distribution

Criterion B	B1				B2				B3
	EOO	a	b	c	AOO	a	b	c	
EU 28	>50000 Km^2	No	No	No	>50	No	No	No	No
EU 28+	>50000 Km^2	No	No	No	>50	No	No	No	No

The EOO and AOO are above thresholds for evaluating criterion B.

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	24 %	20 %	unknown %	unknownu %	unknown %	unknown %
EU 28+	31 %	37 %	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 %
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 values for C/D1 are calculated from the territorial data sheets, which were obtained from 18 countries (out of 26 countries where the habitat is presumed to occur), although only a limited number of respondees provided quantititave data. No data are available for C/D2 and C/D3. The degradation in quality refers to both biotic features and abiotic cicumstances.

Criterion E: Quantitative analysis to evaluate risk of habitat collapse

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

There is no quanititative 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	-	-	-	LC	LC	DD	LC	DD	DD	LC	DD	DD	DD	DD	DD	DD
EU28+	LC	-	-	-	LC	LC	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
Least Concern	-	Least Concern	-

Confidence in the assessment

Medium (evenly split between quantitative data/literature and uncertain data sources and assured expert knowledge)

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