

G1.Ba *Alnus cordata* woodland

Summary

This habitat comprises the peculiar, sub-endemic supramediterranean woodland dominated by *Alnus cordata* and limited to small patches in Southern Italy and in Corsica. This vigorous pioneer tends to colonize free-draining mineral soils on the steep slopes and sides of deep valleys, expanding rapidly with the drastic economic changes following the Second World War, when large agricultural areas were abandoned. As such, few conservation measures are necessary except to restrain inappropriate silviculture and control grazing.

Synthesis

The habitat is characterized by a small number of locations (AOO=67), but there is no indication of negative trends or threats. *Alnus cordata* is a pioneer and fast growing species which can recover after cutting. For southern Italy, without quantitative data, the habitat is considered to be stable, but no information is available for Corsica. Due to limited information, the habitat has been classified as Data Deficient.

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Data Deficient	-	Data Deficient	-

Sub-habitat types that may require further examination

No subtypes have to be considered for this very restricted and narrowly defined habitat.

Habitat Type

Code and name

G1.Ba *Alnus cordata* woodland



Alnus cordata woodland, *Alnus cordata* monospecific stand at the edge of deciduous broadleaf forests, Monte Eremita, Italy (Photo: R. Bagnaia).



Alnus cordata woodland, *Alnus cordata* detail of fruits and leaves, Monti Picentini, Italy (Photo: R. Bagnaia).

Habitat description

Broadleaved deciduous, non-riparian forests dominated by *Alnus cordata*, subendemic to Corsica (North-Eastern sectors of the island) and S-Italy (Campania, Basilicata and Calabria Regions). The dominant species is a relict from the Tertiary period and is also present in other areas, where it is considered not native. Biogeographically distributed on the Central-Mediterranean mountains, from the climatic point of

view these forests develop preferentially between the hilly and the montane belts, occupying a transitional area between the deciduous oaks and the beech forests. From a geo-pedological point of view, they show a preference for siliceous substrata but can also be found on limestone. *Alnus cordata* tends to form forests, either pure or mixed with other deciduous species, such as *Quercus cerris*, *Castanea sativa* or, at higher altitudes, *Fagus sylvatica*. They tend to colonize steep slopes and sides of deep valleys. The Italian alder is a strong pioneer species with great affinity for mineral soils, and could largely expand after the drastic economic changes following the Second World War, when large agricultural areas were abandoned and left to natural evolution, especially at higher altitudes. These formations are characterized by very strong pace of growth in the juvenile stage, and quickly reach maturity (Bezzi et al. 1991). Unlike the other species of the genus *Alnus*, the Italian alder shuns soils where water stagnates for a long time, although it still shows a certain hygrophilous ecology. Regeneration occurs quickly and seedlings can grow fast after cutting or in clearings. Furthermore, *Alnus cordata* can play a prominent role in improving the soil, due to the presence of radical tubercles hosting microorganisms (*Frankia alni*) fixing the atmospheric nitrogen (Pirazzi 1984; Ducci & Tani, 2009).

These forest types often show a high environmental quality and host rare or endangered species.

Indicators of good quality:

- Dominance of *Alnus cordata*
- Presence of the distinctive woody associates and field layer
- Presence of the field layer flora typical of the region
- Uneven-aged canopy with signs of regeneration of woody dominants
- Presence of a well-developed structure of the tree layer
- Woodland permanent, not a successional stage; blocked dynamism due e.g. to the steep slope, where this forests represent the potential natural vegetation

Characteristic species:

Alnus cordata, *Fagus sylvatica*, *Quercus cerris*, *Castanea sativa*, *Acer opalus* subsp. *obtusatum*, *Acer campestre*, *Crataegus monogyna*, *Rubus hirtus*, *Rubus ulmifolius*, *Malus sylvestris*, *Pyrus pyraeaster*, *Prunus spinosa*, *Clematis vitalba*, *Hedera helix*, *Cytisus villosus*, *Asperula taurina*, *Geranium versicolor*, *Geranium nodosum*, *Anemone apennina*, *Melittis albida*, *Festuca exaltata*, *Arisarum proboscideum*, *Pteridium aquilinum*, *Aquilegia vulgaris*, *Lamium flexuosum*, *Polystichum setiferum*, *Carex sylvatica*, *Mycelis muralis*, *Sanicula europea*, *Helleborus lividus* subsp. *corsicus*, *Primula vulgaris*, *Poa sylvicola*, *Fragaria vesca*, *Geum urbanum*, *Symphytum tuberosum*, *Geranium robertianum*, *Chaerophyllum temulum*, *Brachypodium sylvaticum*, *Viola alba* subsp. *dehnhardtii*, *Digitalis lutea* subsp. *australis*, *Potentilla micrantha*, *Crepis leontodontoides*, *Teucrium siculum*, *Stachys sylvatica*, *Circaea lutetiana*, *Salvia glutinosa*, *Rumex sanguineus*.

Classification

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

EUNIS:

G.1B Non-riverine alder woodland (= G1.B1 *Alnus cordata* woods)

EuroVeg Checklist:

Alnion incanae Pawlowski et al. 1928

Geranio striati-Fagion Gentile 1970

Lathyro veneti-Taxion baccatae Carni et Mucina 2013

Annex 1:

-

Emerald:

G1.13 Southern Alnus and Betula galleries

MAES-2:

Woodland and forest

IUCN:

1.4 Temperate Forest

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

No

Justification

The habitat can not be considered as an outstanding example of the Mediterranean region, as it occurs very localized and represents very peculiar ecological conditions.

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>France</i>	Corsica: Present	Unknown Km ²	Unknown	Unknown
<i>Italy</i>	Italy mainland: Present	80 Km ²	Stable	Unknown

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>	109000 Km ²	67	>80 Km ²	no data available for Corse (FR)
<i>EU 28+</i>	109000 Km ²	67	>80 Km ²	no occurrences outside EU28

Distribution map



The map is rather complete. Data sources: Art17, LIT.

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

The habitat is known only from Corsica and southern Italy, so 100% of its distribution is within the EU28.

Trends in quantity

There are no data available on trends; in Southern Italy the habitat is assumed to be stable.

- Average current trend in quantity (extent)

EU 28: Unknown

EU 28+: Unknown

- Does the habitat type have a small natural range following regression?

No

Justification

The habitat is characterized by a small natural range but there are no data that indicate regression in the last 50 years.

- Does the habitat have a small natural range by reason of its intrinsically restricted area?

Yes

Justification

The dominant species *Alnus cordata* is considered to be a relict from the Tertiary period in small stands in Italy and Corse. The occurrences of the habitat are few, and it occurs in relatively small stands.

Trends in quality

There is no data on changes in quality.

- Average current trend in quality

EU 28: Unknown

Pressures and threats

Major threats to this habitat type are forest and plantation management and use, grazing in woodland and - possibly - climate change effects.

List of pressures and threats

Sylviculture, forestry

Forest and Plantation management & use
Grazing in forests/ woodland

Climate change

Changes in abiotic conditions
Changes in biotic conditions

Conservation and management

Currently no conservation and management approaches are reported. Grazing control is considered important in order to avoid a reduction of the regeneration of the characteristic species.

List of conservation and management needs

Measures related to forests and wooded habitats

Restoring/Improving forest habitats
Adapt forest management

Conservation status

There is no correspondence with an Annex 1-type.

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

The dominant species (*Alnus cordata*) is a strong pioneer species and could largely expand after land abandonment if left to natural dynamic, especially at higher altitudes. These formations are characterized by very strong rate of growth especially in the juvenile stage, and quickly reach maturity. Regeneration occurs quickly and seedlings can grow fast after cutting or in clearings.

Effort required

10 years	20 years
Naturally	Naturally

Red List Assessment

Criterion A: Reduction in quantity

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

There is no quantitative or even qualitative information on trends. The habitat is supposed to be stable,

but this is not certain.

Criterion B: Restricted geographic distribution

Criterion B	B1				B2				B3
	E00	a	b	c	A00	a	b	c	
EU 28	109000 Km ²	Unknown	Unknown	No	67	Unknown	Unknown	No	No
EU 28+	109000 Km ²	Unknown	Unknown	No	67	Unknown	Unknown	No	No

The data for E00 and A00 are close to the thresholds for B1 and B2, respectively. However there is no information on threats or trends, so no category 'Near Threatened' can be assigned. The conclusion for B therefore is Data Deficient.

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	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %
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 %
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%

No quantitative data are available to calculate “Extent affected” and the “Relative severity” for this habitat.

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	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD	DD

Overall Category & Criteria			
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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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