

G1.7b Mediterranean thermophilous deciduous woodland

Summary

This habitat comprises thermophilous deciduous woodlands of *Quercus ithaburensis* subsp. *macrolepis* in the East Mediterranean, typical of shallow soils on a variety of terrain up to 700m and beyond, though growing better where the local climate is semi-arid with warmer winters. Often the canopy is pure but there can be some other deciduous oaks, and in some cases the overall effect is of a phrygana, at higher altitudes a grassland with trees. A common feature in many stands is the prominence of a variety of therophytes, maybe because of the long history of disturbance of the landscapes. Traditional land use of these forests was for grazing and collection of acorns but regeneration is affected by the intensity of exploitation: abandonment of grazing has led to onward succession of the habitat, and on neglected arable land a spread. Conversion of forests to agricultural land, illegal logging, overgrazing and forest fires less threatening than previously but regulation of grazing and control of illegal wood-cutting are essential for proper conservation.

Synthesis

The habitat is assessed as Least Concern (LC) due to the very small reduction in its quantity in the EU28 countries and the slight decline in biotic and abiotic quality; both the quantity and the quality are currently in the process of improvement and expansion of the valonia oak woodlands after abandonment of agro-pastoral practices within the *Q. macrolepis* forest zones. Compared to the past, the forests of *Q. ithaburensis* subsp. *macrolepis* currently have more ecological than economic importance. No data from outside the EU28+ (Albania) was reported.

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

The sub-habitat types of the assessed habitat as distributed in Greece and Italy need to be examined for their potentially threatened status.

Habitat Type

Code and name

G1.7b Mediterranean thermophilous deciduous woodland



Quercus ithaburensis subsp. *macrolepis* open woodlands at the most extensive



Quercus ithaburensis subsp. *macrolepis* stand at a closer view in the most extensive

Habitat description

Quercus ithaburensis subsp. *macrolepis* (Kotschy) Hedge and Yaltirik (Valonia oak) is a subspecies of the broadly distributed East Mediterranean deciduous oak species *Quercus ithaburensis* Decne (mount Thabor's oak), that is confined to continental Greece and some Greek islands (surviving as relict isolated trees or in scattered localities as the dominant species in open woodland), in Southeastern Italy, in Southern Albania (forming important pure and mixed forests up to 800-900 m a.s.l.) and in Turkey. The relict *Quercus macrolepis* stands in Salento (S Italy), appear to have been derived from planted stock, but are treated here as semi-natural woodlands. Most stands occur on shallow soils, perhaps because of the absence of competition from rival trees but also maybe because of preferential felling of the oak on deeper better soils. It can grow on a variety of terrain types and soils up to 700m and beyond, but growth is better where the local climate is semi-arid with warmer winters. Often the canopy is pure but there can be some other deciduous oaks such as *Q. frainetto*, *Q. coccifera* or *Q. pubescens*, *Pinus pinea*. In some cases the overall effect is of a phrygana, at higher altitudes a grassland with trees, but a common feature in many stands is the prominence of a variety of therophytes, maybe because of the long history of disturbance of the landscapes. Agroforestry and specifically silvopastoralism is a traditional land use system in parts of continental and insular Greece where livestock breeders use the valonia oak forests (*Quercus ithaburensis* subsp. *macrolepis*) for grazing and the collection of acorns. Valonia oak regeneration is affected by livestock grazing and tree canopy cover. Very low regeneration is observed in various distances from the sheep and goat sheds where livestock is intensively grazing in the surrounding area. On the other hand, tree regeneration is strongly related to the tree canopy cover, whereas new seedlings are observed under trees due to the favorable micro-environmental conditions.

Indicators of quality:

- No forest exploitations (if applicable, mainly azonal types with high nature value)
- Natural composition of canopy
- Structural diversity/ complexity with (semi)natural age structure or completeness of layers
- Typical flora and fauna composition of the region
- Presence of old trees and a variety of dead wood (lying or standing) and the associated flora, fauna and fungi
- Presence of natural disturbance such as treefall openings with natural regeneration
- Long historical continuity (ancient woodland) with high species diversity
- Survival of larger stands of forest without anthropogenic fragmentation and isolation (to support fauna which need large undisturbed forests)
- Absence of non-native species in all layers (flora & fauna)
- No man-induced very high population levels of grazing animals (sheep, goats, cows)

Characteristic species:

Tree canopy: *Q. macrolepis*, *Q. frainetto*, *Q. coccifera*, *Q. pubescens*,

Understorey: *Pistacia terebinthus*, *Cistus creticus*, *Olea euopaea*, *Phillyrea latifolia*, *Prunus spinosa*, *Pyrus amygdaliformis* and *Ruscus aculeatus*

Field layer: *Chrysopogon gryllus*, *Dactylis glomerata*, *Asparagus acutifolius*, *Asphodelus aestivus*, *Urginea maritima*, *Cardamine hirsuta*, *Origanum vulgare*, *Phlomis fruticosa*, *Galium aparine*.

Classification

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

EUNIS:

G1.7 Thermophilous deciduous woodland (a group of broad diversity which is here split into two habitats according to regional distribution: Temperate and submediterranean thermophilous woodlands are included in G1.7a and the Mediterranean thermophilous deciduous woodlands are included in G1.7b.

EuroVegChecklist:

Quercion macrolepidis Zohary ex Di Pietro, Mucina et al. 2016

Annex I:

9350 *Quercus macrolepis* forests

Emerald:

-

MAES:

Woodland and forest

IUCN:

1.4 Temperate Forest

EFT:

8.6 Valonia oak forest

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

Yes

Regions

Mediterranean

Justification

Quercus ithaburensis subsp. *macrolepis* is native to Southeast Italy, Greece, Turkey and the Balkan Peninsula (Albania), all belonging to the Mediterranean Biogeographical zone.

Geographic occurrence and trends

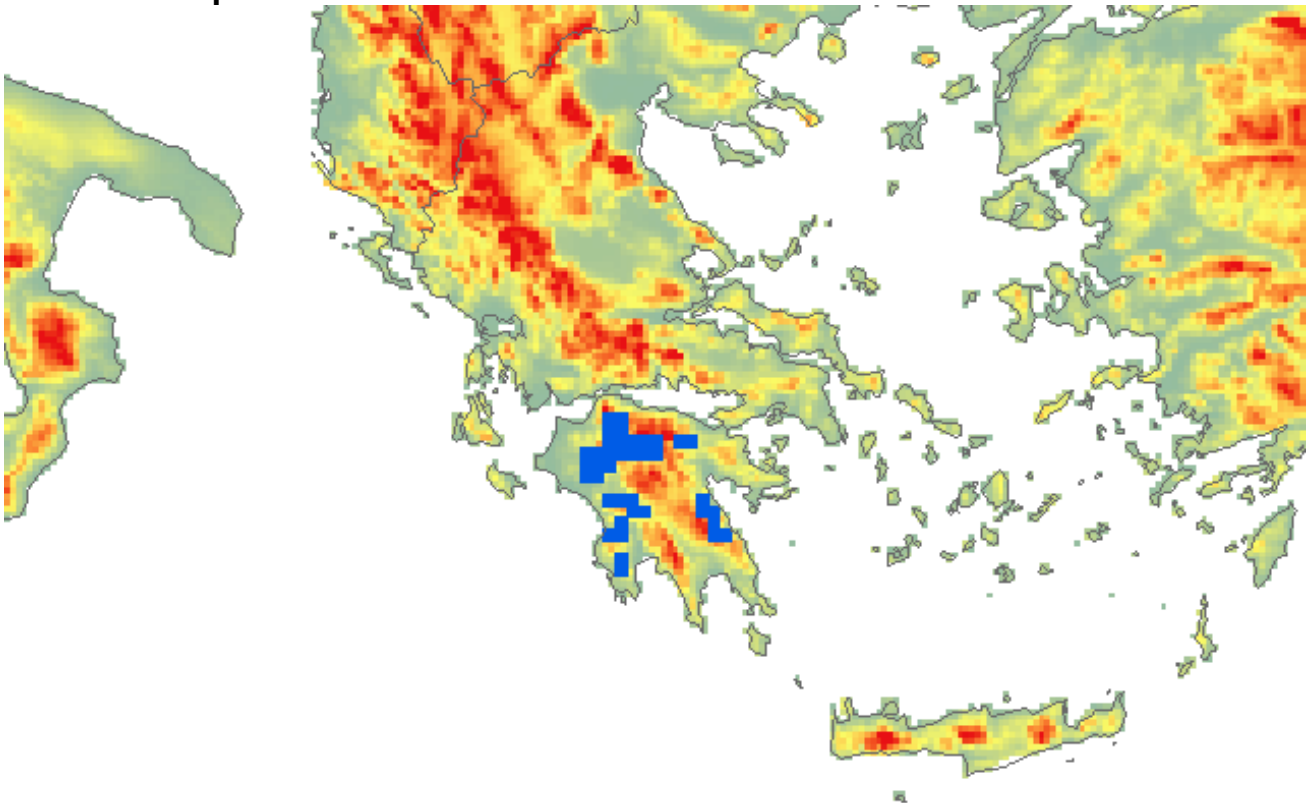
EU 28	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>Greece</i>	Crete: Present East Aegean: Present Greece (mainland and other islands): Present	299 Km ²	Increasing	Increasing
<i>Italy</i>	Italy mainland: Present	1.5 Km ²	Decreasing	Decreasing

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>Albania</i>	Present	unknown Km ²	Unknown	Unknown

Extent of Occurrence, Area of Occupancy and habitat area

	Extent of Occurrence (EOO)	Area of Occupancy (AOO)	Current estimated Total Area	Comment
EU 28	12.950 Km ²	39	300.5 Km ²	The map attached below is wrong. The map for Greece should be corrected and corrected (in this EUNIS habitat unit two Annex I habitats should be included: 9310 + 9350) and include all the occurrences
EU 28+	12.950 Km ²	39	unknown Km ²	

Distribution map



The distribution area of the *Quercus ithaburensis* subsp. *macrolepis* forests in the EU 28 part includes only continental and insular Greece and SE Italy. In the current area of the habitat we have calculated also the Aegean *Quercus brachyphylla* forests.

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

>90%

Trends in quantity

The area covered by the *Quercus itaburensis* subsp. *macrolepis* woodlands has increased the last 40 years (especially to many of the Aegean islands and continental Western Greece) due to the abandonment of the cultivated land either on terraces or on flat productive areas.

- 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

Its small natural range is not related to recorded deterioration and destruction of forested areas with *Quercus ithaburensis* subsp. *macrolepis* woodlands.

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

Yes

Justification

The most extensive Valonia oak forests occur in Greece (continental and insular) mainly in lowlands and forested hills as well as in agricultural and urban areas (0m-1100m a.s.l.). Relict forests only (of rather semi-natural origin) occur in SE Italy.

Trends in quality

The average current trend in quality taking into consideration the surface areas covered by the habitat type is increasing.

- Average current trend in quality

EU 28: Increasing

EU 28+: Stable

Pressures and threats

Intensive grazing as well as cessation of grazing are both pressures affecting the conservation status of the *Quercus ithaburensis* subsp. *macrolepis* woodlands in the Mediterranean. The illegal woodcutting for heating purposes and furniture is still an existing threat.

List of pressures and threats

Agriculture

Cultivation

Intensive grazing

Abandonment of pastoral systems, lack of grazing

Livestock farming and animal breeding (without grazing)

Sylviculture, forestry

Forestry clearance

Removal of dead and dying trees

Forest exploitation without replanting or natural regrowth

Grazing in forests/ woodland

Geological events, natural catastrophes

Fire (natural)

Conservation and management

In most cases the abandonment of grazing in the forests has led to unmanaged, almost not penetrable stands; so regulation of grazing to keep the openings among the woodlands with *Q. ithaburensis* subsp. *macrolepis* should support the open landscape characteristics of these woodlands. The abandonment of cultivated fields contribute substantially to the expansion of the area covered by the Valonia oak woodlands. The control of the illegal woodcutting at sites where the *Q. ithaburensis* subsp. *macrolepis*

woodlands are present would help and would speed up the recovery of these forests.

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

Restoring/Improving forest habitats
Adapt forest management

Measures related to spatial planning

Manage landscape features

Measures related to hunting, taking and fishing and species management

Regulation/Management of hunting and taking
Specific single species or species group management measures

Measures related to special resource use

Regulating/Management exploitation of natural resources on land

Conservation status

Annex I:

9350: MED U2

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

The natural recovery of the *Q. ithaburensis* subsp. *macrolepis* woodlands takes long, depending on the grazing conditions and the factor which led to the deterioration/degradation and/or complete destruction of these forests.

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	-0.1 %	unknown %	unknown %	unknown %
EU 28+	-0.1 %	unknown %	unknown %	unknown %

Quantitative past data for more than 50 years are not available, but a very slight decrease in the extent of the habitat has been recorded by the territorial experts for Italy. The "present past area" has been calculated by applying the average present-past trend to the current surface.

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 habitat is assessed as Least Concern under criterion B because of the too large EOO, AOO and number of locations. Even if these are much smaller than in many other habitats, they do not meet the thresholds for the B criteria.

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	0% %	slight %	unknown% %	unknown %	unknown% %	unknown %
EU 28+	0% %	slight %	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%u %

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%%

Biotic and abiotic quality of the habitat is currently in the process of improvement, so it is not reduced. Extent of degradation is rather locally increased, but in general it ranges between 1% and 5%, depending on the previous and the current land use and the implemented agro-sylvo-pastoral system which differs among the two countries of the EU28 where the habitat is present and in the one country of the EU28+ where it also occurs.

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.

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	LC	LC	LC	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	LC	DD	DD	DD	LC	LC	LC	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)

Assessors

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Date of assessment

23/12/2015

Date of review

30/03/2016

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