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New locality of *Quercus trojana* subsp. *euboica* (Fagaceae)

Abstract

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We report on a new locality of *Quercus trojana* subsp. *euboica*, endemic oak of the Island of Evvia (Euboea), Greece. *Q. trojana* subsp. *euboica* was found on serpentine (peridotite) near the town of Prokopi, northern Evvia in undergrowth of open *Pinus halepensis* wood. Phytosociological status of *Q. trojana* subsp. *euboica* and syntaxonomy of these Evvian *Pinus halepensis* woods on peridotite is briefly discussed.

Introduction

It is not very common for a taxon within Fagaceae to have extremely localised distribution and to be considered endemic to a small area such as an island. *Quercus trojana* subsp. *euboica* (Papaioannou) K. I. Chr., known exclusively from the island of Evvia (Euboea) is one of those cases (Papaioannou 1949, Boratynski & al. 1988, Christensen 1997). In this short communication we would like to report on a new locality of this rare oak which was found during the field mapping of habitat and vegetation types of the proposed Natura 2000 site GR2420003 "Oros Kantili-Koilada Prokopiou-Delta Kirea". We shall also make some notes on the phytosociology of vegetation containing this taxon.

Distribution of *Q. trojana* subsp. *euboica*

Q. trojana subsp. *euboica*, is confined to a polygon delimited by the villages of Vasilikos, Pappades, Strapsi, Kerasia and Tsapournia. from the in northern Evvia, a small region spanning only approximately 50 km² where Papaioannou (1949) identified 18 localities.

Our new locality lies S of Prokopi, some 20 km S of the nearest known locality of *Q. trojana* subsp. *euboica* (Fig. 1). The exact location of the new locality is the following: Relevé LM6697: Greece, Nom. Evvias, Island of Evvia (Euboea), S of town of Prokopi in N Evvia, locality Peukiás; geographic position: 38°42'14.7" N and 23°28'51.7" E (measured by a GPS device), altitude 350 m, orientation 327°, slope 15-20°, sampled area 75 m²; June 20, 1999, sampled by L. Mucina.

As far as vegetation is concerned the estimation of cover/abundance was done using

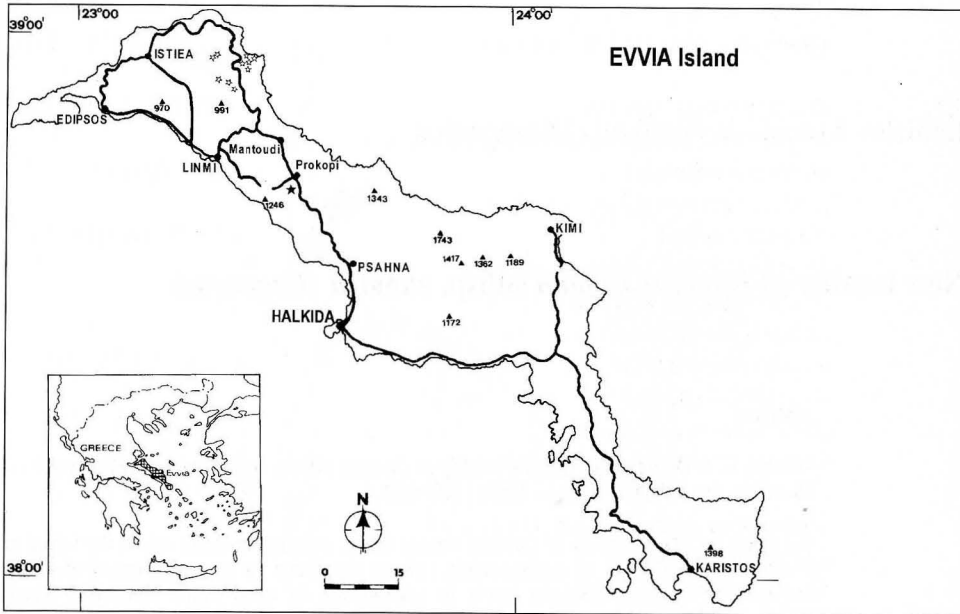


Fig. 1. Schematic map of Evvia showing the position of known (empty asterisks) and new (full asterisk) localities of *Quercus trojana* subsp. *euboica*.

modified scale of Braun-Blanquet (cfr. Barkman & al. 1964). The symbol \circ after a cover/abundance value indicates juvenile status. For the definitions of upper and lower tree and shrub layers, respectively, see Mucina & al. (in press).

Some specimens (as indicated in the relev  below) are lodged in the following herbaria;

- ATHU Herbarium of the Department of Biology, University of Athens, Greece;
 LI Herbarium of the Ober sterreichisches Landesmuseum, Biozentrum, Linz, Austria
 WU Herbarium of the Institut of Botany, University of Vienna, Austria.

Vegetation layer	Cover %	Notes
Tree layer (E3)	30	6 m (lower), 10 m (upper)
Shrub layer (E2)	70	0.5-2 m (lower), 2-3.5 m (upper)
Herb layer (E1)	30	50 cm (average), 5-70 cm (span)
Moss layer (E0)	25	up to 1 cm
Litter	25	composed mainly of decaying needles of <i>P. halepensis</i>
E3 upper: <i>Pinus halepensis</i> subsp. <i>halepensis</i>		2b
E3 (lower): <i>Pinus halepensis</i> subsp. <i>halepensis</i>		1
E2 (upper): <i>Arbutus unedo</i>		2a
E2 (lower): <i>Erica manipuliflora</i>		3
<i>Cistus creticus</i> subsp. <i>eriocephalus</i>		2b
<i>Phillyrea latifolia</i>		2a

	<i>Hypericum empetrifolium</i>	2a	
	<i>Quercus trojana</i> subsp. <i>euboica</i>	2a	LM6697/a ATHU, WU
E1:	<i>Brachypodium rupestre</i>	2a	LM6697/205 ATHU
	<i>Brachypodium sylvaticum</i> subsp. <i>sylvaticum</i>	2a	
	<i>Galium heldreichii</i>	2m	LM6697/200 LI
	<i>Alkanna graeca</i> subsp. <i>baeotica</i>	1	
	<i>Festuca callieri</i>	1	LM6697/206 ATHU
	<i>Quercus trojana</i> subsp. <i>euboica</i> juv.	1°	
	<i>Scorzonera serpentinica</i>	1	
	<i>Selaginella denticulata</i>	1	
	<i>Teucrium capitatum</i>	1	LM6697/203 ATHU
	<i>Aira elegantissima</i>	+	
	<i>Asparagus acutifolius</i>	+°	
	<i>Carlina corymbosa</i> subsp. <i>graeca</i>	+	
	<i>Centaurea mantouidi</i>	+	LM6697/208 ATHU
	<i>Dorycnium pentaphyllum</i> subsp. <i>herbaceum</i>	+	
	<i>Eryngium campestre</i>	+	
	<i>Convolvulus cantabrica</i>	+	LM6697/211
	<i>Jurinea mollis</i> subsp. <i>anatolica</i>	+	
	<i>Leontodon graecus</i>	+	LM6697/201 ATHU
	<i>Piptatherum coerulegens</i>	+	
	<i>Silene oligantha</i> subsp. <i>pseudoradicosa</i>	+	LM6697/209 & 667/212 ATHU
	<i>Trifolium arvense</i>	+	LM6697/207 ATHU
	<i>Allium</i> sp.	r	LM6697/204 LI
	unknown <i>Apiaceae</i> (only leaf rosette)	r	LM6697/210 ATHU
E0:	<i>Homalothecium</i> sp.	2b	LM697/M1 WU

Syntaxonomical and ecological notes

As shown by our phytosociological relevé (see above), the new locality of *Q. trojana* subsp. *euboica* is located in a *Pinus halepensis* subsp. *halepensis* woodland on peridotite, a hard ultramafic rock of Mesozoic age. This woodland is one of the most significant features of the vegetation of Evvia; it is of major conservational, landscape-forming and silvicultural importance for the entire Greece. The most extensive serpentine pine forests occur in the NW of Evvia. *Quercus trojana* subsp. *euboica* participates in the shrubby undergrowth of these low woodlands only locally. From a syntaxonomic point of view, these pine woodlands belong undoubtedly to the class *Quercetea ilicis* (Mucina 1997, Mucina & Dimopoulos 2000) and the order *Quercetalia ilicis*. Their syntaxonomic position on the level of alliance is unclear – synecologically most similar unit appears to be *Quercion ilicis*, however we consider a possibility of describing a new alliance comprising East-Mediterranean *Pinus halepensis* dominated woodlands.

Krause & al. (1963) have described dry pine woodlands of Evvia as the “*Erica verticil-*

lata-Pinus halepensis-Ges." with reference to the *Oleo-Ceratonion* – a unit occurring in the Western and Central Mediterranean. Papaioannou (1949), featured briefly the phytosociology of *Q. trojana* subsp. *euboica* within a table showing "associations du *Quercus euboica*". Most of the relevés collected in this table correspond to the *Erica verticillata-Pinus halepensis* community of Krause & al. (1963) later Brullo & al. (1997) suggested the name *Erico manipuliflorae-Pinetum halepensis* for the Evvian serpentine pine woodlands and also designated this association as the holotype of ecologically, physiognomically and floristically very heterogeneous *Alyssion euboei*. Mucina & Dimopoulos (2000) have suggested to reject the latter name as a *nomen dubium*.

On the basis of the floristic composition of the examined pine woodlands, it can be assumed that *Quercus trojana* subsp. *euboica* occurs on the drier habitats, especially on the exposed ridges facing the Stenon Atalanti, which support the *Erico-Pinetum halepensis*. The deeper gullies on the SW flank, habitats with deeper ultramafic rendzina over magnesite on the ridge, as well as on NW facing slopes would support a mesic pine woodland preliminary called the *Myrto-Pinetum halepensis*.

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