European Forest Types: tree species matrix

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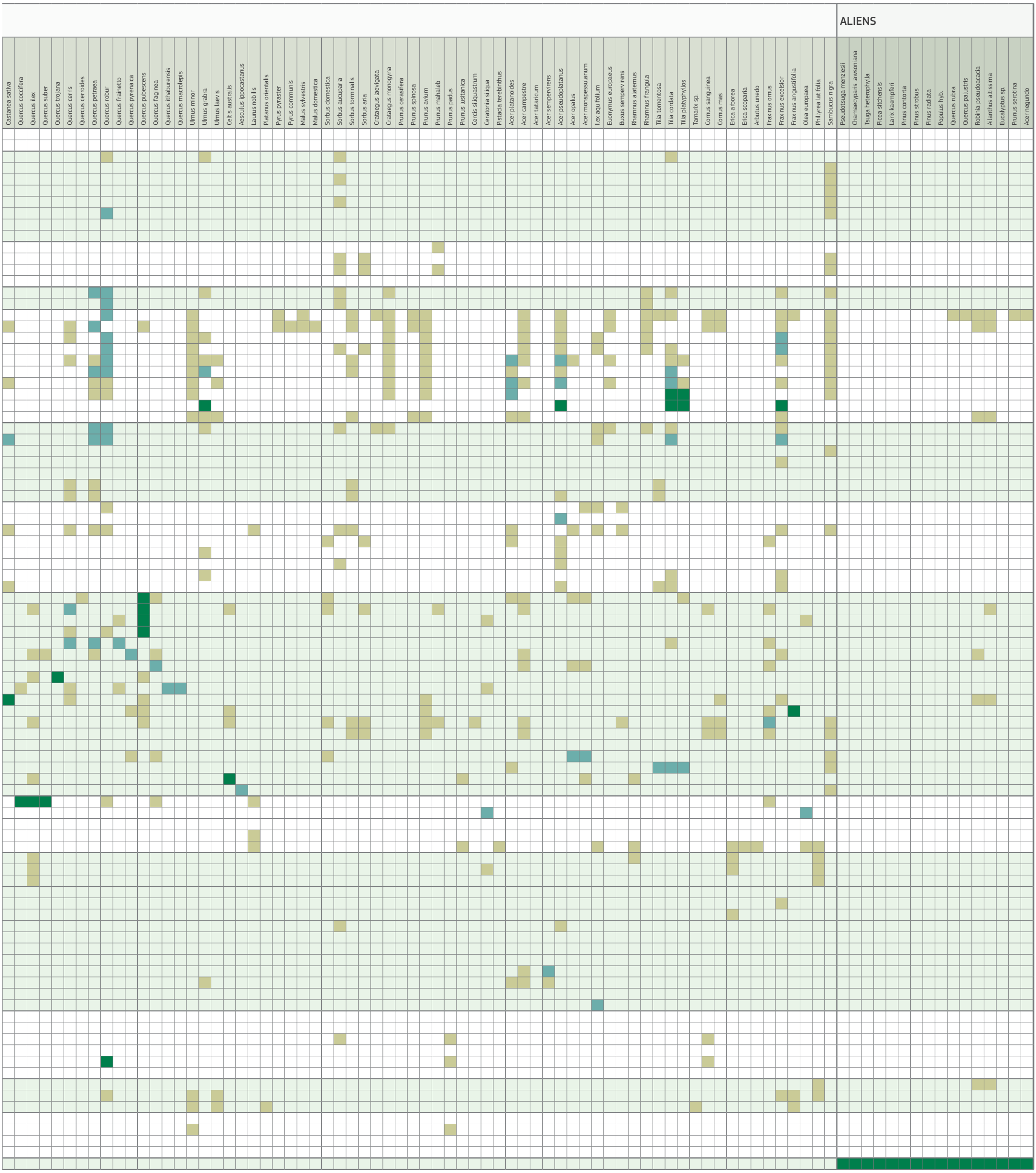
CATEGORY	FOREST TYPE
1. Boreal forest	1.1 Spruce and spruce-birch boreal forest
	1.2 Pine and pine-birch boreal forest
2. Hemiboreal forest and nemoral coniferous and mixed broadleaved-coniferous forest	2.1 Hemiboreal forest
	2.2 Nemoral Scots pine forest
	2.3 Nemoral spruce forest
	2.4 Nemoral Black pine forest
	2.5 Mixed Scots pine-birch forest
	2.6 Mixed Scots pine-pedunculate oak forest
	2.7 Atlantic maritime pine forest
	2.8 Nemoral silver fir
3. Alpine coniferous forest	3.1 Subalpine larch-arolla pine and dwarf pine forest
	3.2 Subalpine and mountainous spruce and mountainous mixed spruce-silver fir forest
	3.3 Alpine Scots pine and Black pine forest
	3.4 Mountainous birch forest
4. Acidophilous oak and oak-birch forest	4.1 Acidophilous oakwood
	4.2 Oak-birch forest
5. Mesophytic deciduous forest	5.1 Pedunculate oak–hornbeam forest
	5.2 Sessile oak–hornbeam forest
	5.3.1 Ashwood and oak-ash forest lowlands
	5.3.2 Ashwood and oak-ash forest uplands
	5.4 Maple-oak forest
	5.5 Lime-oak forest
	5.6 Maple-lime forest
	5.7 Lime forest
	5.8 Ravine and slope forest
	5.9 Other mesophytic deciduous forests
6. Beech forest	6.1 Lowland beech forest of southern Scandinavia and north central Europe
	6.2 Atlantic and subatlantic lowland beech forest
	6.3 Subatlantic submountainous beech forest
	6.4 Central European submountainous beech forest
	6.5 Carpathian submountainous beech forest
	6.6 Illyrian submountainous beech forest
	6.7 Moesian submountainous beech forest
7. Mountainous beech forest	7.1 South western European mountainous beech forest
	7.2 Central European mountainous beech forest
	7.3 Apennine-Corsican mountainous beech forest
	7.4 Illyrian mountainous beech forest
	7.5 Carpathian mountainous beech forest
	7.6 Moesian mountainous beech forest
	7.7 Crimean mountainous beech forest
	7.8 Oriental beech and hornbeam-oriental beech forest
8. Thermophilous deciduous forest	8.1.1 Downy oak forest - western
	8.1.2 Downy oak forest - Italian
	8.1.3 Downy oak forest - Greek, Anatolian
	8.1.4 Downy oak forest - steppe
	8.2 Turkey oak, Hungarian oak and Sessile oak forest
	8.3 Pyrenean oak forest
	8.4 Portuguese oak and Mirbeck's oak Iberian forest
	8.5 Macedonian oak forest
	8.6 Valonia oak forest
	8.7 Chestnut forest
	8.8.1 Thermophilous ash forest
	8.8.2 Fraxinus ornus and Ostrya carpinifolia forest
	8.8.3 Hop-hornbeam (Ostrya carpinifolia) forest
	8.8.4 Oriental hornbeam (Carpinus orientalis) forest
	8.8.5 Thermophilous maple (Acer spp.) forest
	8.8.6 Mediterranean lime (Tilia spp.) forest
	8.8.7 Celtis australis forest
	8.8.8 Horse chestnut and walnut mixed woods
9. Broadleaved evergreen forest	9.1 Mediterranean evergreen oak forest
	9.2 Olive-carob forest
	9.3 Palm groves
	9.4 Macaronesian laurisilva
	9.5 Other sclerophlyllous forests
10. Coniferous forests of the Mediterranean, Anatolian and Macaronesian regions	10.1.1 Mediterranean pine forest - Pinus pinaster
	10.1.2 Mediterranean pine forest - Pinus halepensis
	10.1.3 Mediterranean pine forest - Pinus pinea
	10.2.1 Mediterranean Black pine forest
	10.2.2 Anatolian Black pine forest
	10.3 Canarian pine forest
	10.4 Mediterranean and Anatolian Scots pine forest
	10.5 Alti-Mediterranean pine forest
	10.6 Mediterranean and Anatolian fir forest
	10.7 Juniper forest
	10.8 Cypress forest
	10.9 Cedar forest
	10.10 Tetraclinis articulata stands
	10.11 Mediterranean yew stands
11. Mire and swamp forest	11.1 Spruce mire forest
	11.2 Pine mire forest
	11.3 Alder swamp forest
	11.4 Birch swamp forest
	11.5 Pedunculate oak swamp forest
	11.6 Aspen swamp forest
12. Floodplain forest	12.1 Riparian forest
	12.2 Fluvial forest
	12.3 Mediterranean and Macaronesian riparian forest
13. Non riverine alder, birch, or aspen forest	13.1 Alder forest
	13.2 Italian alder forest
	13.3 Birch forest
	13.4 Aspen forest
14. Introduced tree species forest	

CONIFERS	BROADLEAVES
Abies nordmanniana	Salix fragilis
Abies alba	Salix alba
Abies borisii-regi	Salix cinerea
Abies others	Salix atrocinerea
Picea abies	Salix caprea
Picea omorika	Salix eleagnos
Larix decidua	Populus alba
Pinus pinaster	Populus canescens
Pinus nigra	Populus tremula
Pinus sylvestris	Populus nigra
Pinus mugo	Myrica faya
Pinus halepensis	Juglans regia
Pinus pinea	Betula pubescens
Pinus cembra	Betula pendula
Pinus canariensis	Alnus viridis
Pinus heldreichii	Alnus glutinosa
Pinus peuce	Alnus incana
Cupressus sempervirens	Alnus cordata
Cedrus libani	Alnus orientalis
Cedrus brevifolia	Carpinus betulus
Juniperus communis	Carpinus orientalis
Juniperus oxycedrus	Ostrya carpinifolia
Juniperus phoenicea	Corylus avellana
Juniperus thurifera	Fagus sylvatica
Juniperus sp.	Fagus moesiaca
Tetraclinis articulata	Fagus orientalis
Taxus baccata	

In this table the European Forest Types (EFTs) scheme is presented as proposed and revised by Barbati and colleagues[1-3], counting 14 broad categories which include 78 forest types, some of which are divided into sub-types. For every EFT the presence of the main tree and shrub species of forest interest in Europe has been evaluated, separated into three main groups: conifers, broadleaved and alien trees. The species presence in the EFTs is categorized in three classes: the species is abundant and dominant in the EFT; the species presence in the EFT is either secondary or predominant but in peculiar and not characteristic ecological conditions of the EFT; the presence in the EFT is both dominant and secondary in some cases. It has to be taken into account that

- Species is dominant in that forest type
- Species is present but not dominant
- Species is present in either category



in many cases the EFTs are wide forest communities having inner variability in their species composition and structure according to more local ecological conditions. For this reason the presence of some species can be both, dominant or secondary in some cases.

References

[1] A. Barbati, P. Corona, M. Marchetti, *Plant Biosystems - An International Journal Dealing with all Aspects of Plant Biology* **141**, 93 (2007).

[2] A. Barbati, P. Corona, M. Marchetti, *European forest types: Categories and types for sustainable forest management reporting and policy* (European Environment Agency, Copenhagen, 2007), second edn.

[3] A. Barbati, M. Marchetti, G. Chirici, P. Corona, *Forest Ecology and Management* **321**, 145 (2014).

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Pividori, M., Giannetti, F., Barbati, A., Chirici, G., 2016. **European Forest Types: tree species matrix**. In: San-Miguel-Ayanz, J., de Rigo, D., Caudullo, G., Houston Durrant, T., Mauri, A. (Eds.), *European Atlas of Forest Tree Species*. Publ. Off. EU, Luxembourg, pp. e01f162+