The Genus *Quercus* in Romania

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Seven species of oaks, belonging to the subgenus *Quercus* (syn. *Lepidobalanus* Endl. & Oerst.) in sections *Cerris* and *Quercus* are found growing spontaneously in Romania. In addition, many authorities segregate the sessile oak *Quercus petraea* (Mattuschka) Liebl. into three species (including *Q. dalechampii* Ten. and *Q. polycarpa* Schur. plus the typical *Q. petraea*), all of which are found in Romania. The oaks cover roughly 19 percent of our forested land. Another 20 exotic oaks have been introduced, and are cultivated in forests and parks.

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Quercus petraea *foliage in Kizit Woods, Hunedoara Forest, Romania.*

Due to their silvicultural importance, the Romanian native oaks have been studied thoroughly during the past 50 years from different points of view: botanical, ecological, genetic, typological, edaphic, and mensurational. Diseases and pest control also have been studied, as have the properties and uses of the wood. The great diversity of sites and compositions of stands formed by these species is well reflected in existing classifications. Romanian oak forests were studied and have

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been described as comprising 141 forest types (Purcelean & Pascovschi, 1968) and 104 site types (Chirita & Stanescu, 1990).

Abundant Romanian literature is available on these topics. For a short and general note, addressed to the International Oak Society members, we have tried to compile some basic data. The nomenclature, occurrence, soil requirements and uses of Romanian oaks are summarized in the accompanying table (see revised table on page 34).

Producing high quality wood, the oak forests exert productive climatic, hydrological, and erosion control functions. But during the centuries, the natural oak forests endured a strong anthropic pressure. Deforestation, application of coppice systems, abusive forest pasturing, and the effects of air pollution and acid rains, coupled with natural pressures from prolonged and frequent droughts and defoliation by insects, combined to weaken some oak ecosystems. The so-called *dépérissement* (dieback) of oaks, frequently recorded in Europe during recent decades, is noted also in Romania, particularly in European (*Q. robur*) and sessile (*Q. petraea*) oaks and sometimes in other species.

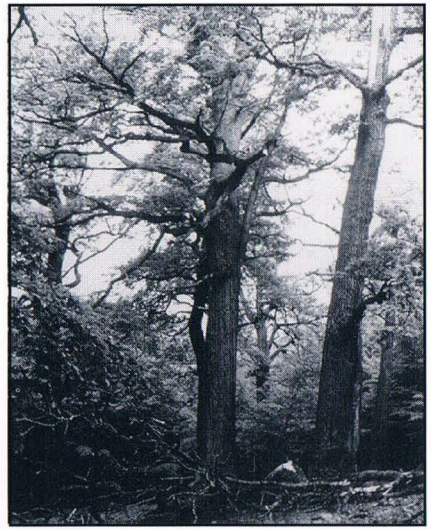

Photo by Dr. ing. Stelian Radu

Mature specimens of Quercus petraea *in Romania.*

Photo by Thierry Lamant

Twig and bud of Quercus cerris.

Oak forests are subjected to sophisticated sylvicultural systems, relying on natural regeneration. But seed crops, unfortunately, are rare, particularly in the last few decades. For the purpose of scientific cooperation and exchange of biological materials, our research station occasionally is able to locate seed crops for these species. We organize the collection and dispatching through the post (with necessary documents of provenance and phytosanitary certificates) of some small quantities of acorns, in exchange for North American or Asiatic forest and amenity tree seeds. A catalog of seeds and plants for exchange is published annually by our research station. Special requests must he directed in advance to: Forest Research Station & Arboretum, str. Biscaria 1, R-2625 Simeria, Jud. Hunedoara, Romania.

Editor's note: *Dr. Radu, one of our founding members, was a featured speaker at our first conference at The Morton Arboretum in Illinois during October of 1994 and also prepared a presentation for the following conference in 1997 in California. He has retired as the Director of Arboretum and Research Station Simeria since this article was published in our inaugural issue. He remains an active (life) member of the International Oak Society, corresponding from his historic family home at the base of the ancient Deva Citadel Hill in the picturesque Western Transylvania region of Romania.*

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Quercus petraea *in Kizit Woods, Hunedoara Forest, Romania.*

TABLE 1. SUMMARY OF ROMANIAN OAKS

Species	Varieties, Subspecies	Range (general)	Habitat in Romania	Mature Hgt. (feet)	Soil, Moisture Requirements	Timber Value	Remarks
Q. petraea (Matl..) Liebl. Sessile oak (*Q. sessiliflora* Salisl.) (*Q. sessilis* Ehrh.)	ssp. *petraea* ssp. *polycarpa* Schur. ssp. *dalechampii* Ten. (often given separate species status)	Europe Carp, Balk, Cauc Carp, Balk, Alps	Hills and piedmonts in pure and mixed stands	100 (130)	Moderately acidic, rich or poor, dry-mesic, coarse, well drained	Good, often remarkable	Variable, with many forms and cultivars
Q. robur L. English oak (*Q. pedunculata* Ehrh.)	var. *tardiflora* Czern var *praecox* Czern (many other ecotypes and variations)	Europe	Plains and hills in pure and mixed stands	130 (165)	Neutral to acidic, rich or poor, dry to moist, deep, sandy to loamy	Good, often remarkable	Variable, with more than 100 cultivars
Q. cerris L. Turkish oak	(significant clinal variation in foliage)	Mediterranean	Forest steppe, hills in pure and mixed stands	100 (130)	Acidic, rich or poor, dry to xeric, sandy to compact clay	Good to medium (trees with white heartwood better than those with red)	Several cultivars, but seldom cultivated in Romania - does not cross with other Romanian oaks
Q. frainetto Ten. Hungarian oak (*Q. conferta* Kit.)		Balkan	Forest steppe, hills generally in mixed stands	130	Acidic, rich or poor, dry to xeric, sandy to compact clay	Good	Very decorative
Q. pedunculiflora C. Koch Grey oak	var. *pedunculiflora* Schuz. var. *virescens* C. Koch	Pontic (around Black Sea)	Forest steppe in pure and mixed stands	130	Neutral rich, dry, medium coarse, loose	Good	Subthermic species. seldom cultivated
Q. pubescens Willd. Pubescent oak (*Q. lanuginosa* Thuill.)	A variable species throughout much of its range	Mediterranean	Forest steppe, hills in open stands, sometimes shrubby	15-50 (65)	Neutral to alkaline calcic, medium-rich, xeric, sandy to clay	Not used significantly in Romania	Subthermic species
Q. virgiliana Ten.		Mediterranean	Forest steppe, hills in open stands, sometimes shrubby	65	Neutral to alkaline, medium-rich, medium-dry, sandy to clay loam	Not used significantly in Romania	Subthermic to thermic species