



A nomenclatural revision of *Quercus acutifolia*, *Q. conspersa* and *Q. grahamii* (Lobatae, Fagaceae)

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Abstract

A nomenclatural conflict between *Quercus acutifolia* and *Q. conspersa* is solved based on the thorough revision of herbarium specimens, type specimens, original descriptions and field observations. *Q. conspersa* is proposed as a synonym of *Q. acutifolia*, as are the names *Q. acutifolia* ζ *conspersa*, *Q. acutifolia* β *bonplandi*, *Q. acutifolia* γ *angustifolia*, *Q. acutifolia* ϵ *longifolia* and *Q. candolleana*. In addition, *Q. grahamii* is recognized as the correct name for the taxon identified as *Q. acutifolia*. *Q. conspersa* is lectotypified and *Q. conspersa* f. *caudata* is neotypified here. Information on the distribution of *Q. acutifolia* and *Q. grahamii* and the main features used to distinguish them is also provided.

Key words: *Quercus*, Mexico, taxonomy, red oaks, type specimens

Introduction

During the revision of type specimens of the genus *Quercus* Linnaeus (1753: 994) at the Real Jardín Botánico Herbarium in Madrid, Spain, (MA) collected by Née in 1791, upon which were based the descriptions of 16 new species of oaks in America (Née 1801), an important conflict was found between the identity of the type material in the herbarium and the current application of the names *Quercus acutifolia* Née (1801: 267) and *Q. conspersa* Bentham (1842: 91).

Quercus acutifolia is a name traditionally assigned to a red oak species, native to America. However, the type specimen corresponds instead to what has been treated in recent works as *Q. conspersa*, while the type specimen of *Q. grahamii* Bentham (1840: 57) corresponds to what has been treated as *Q. acutifolia* (Muller 1942, Muller and McVaugh 1972, McVaugh 1974, González 1986, Valencia 1995, Valencia *et al.*, 2002, Valencia-A. 2004; Valencia and Flores 2006 and Romero 2006). This creates important nomenclatural problems that make difficult the communication among botanists regarding to the genus. Therefore, we have revised the nomenclature of *Q. acutifolia* and *Q. grahamii* and here provide a solution to the nomenclatural conflicts, as well as highlighting the distinctive features of both taxa.

Material and methods

The type specimens of *Quercus acutifolia* collected by Née in 1791 and deposited in the Real Jardín Botánico Herbarium in Madrid, Spain (MA), were revised, as were the digital images of the types of *Q. conspersa* and *Q. grahamii* at <http://plants.jstor.org>, and photos of the type specimens in the work of Trelease (1924), including their proposed synonyms. In addition, a thorough revision of the original descriptions and associated synonymy of the taxa was carried out.

The type material of *Quercus acutifolia* was collected in the current state of Guerrero (México), from where much material of this taxon has been collected for the taxonomic treatments made for the genus in this state (Valencia 1995, Valencia *et al.*, 2002). There is also abundant material of *Q. grahamii* collected in the states of Guerrero and Oaxaca, thus the morphological variation of these species both in the wild and in herbarium specimens is well known. The material of these species deposited in Mexican herbaria MEXU, FCME and ENCB was also revised.