
Quercus tungmaiensis

Y. T. Chang in cultivation

Allen J. Coombes¹ and Zhou Zhekun² write about an evergreen oak that was first collected in Tibet in 1965 and named in 1966.

For several years, an unusual oak has grown in the National Collection of oaks at Chevithorne Barton, home of Mr Michael Heathcoat Amory. Tentatively listed as *Quercus lanata*, but obviously different to that species, it had defied all attempts to identify it further. However, the first author discovered a perfect match for the Chevithorne plant in *Q. tungmaiensis* in the Chinese Virtual Herbarium (<http://www.cvh.org.cn/>). This invaluable resource provides access to images of numerous herbarium specimens, including types, held in Chinese herbaria.

According to the original description of *Q. tungmaiensis* (Chang, 1966) it is a deciduous tree to 27 m tall with densely hairy shoots and thinly leathery, lanceolate to oblong lanceolate leaves to 20 cm long and 4.5 cm wide and fruits that ripen the first year. Observations by Keith Rushforth in the wild and Rushforth and others in cultivation show, however, that this species is evergreen. Chang did not mention the affinities of the species when he described it, except that it was placed in subgenus *Quercus*, but it seems to be in section *Cerris*. The holotype was collected in Tung-mai (Tongmai), Tibet in 1965 (Y. T. Chang & K. Y. Lang 887, PE). Tongmai is a small town at about 2000 m in the Palong Tsangpo gorge about 90 km west of Bomi, Bomi County in SE Tibet. *Quercus tungmaiensis* grows here on the mountain slopes and can also be found in the Yalu Tsangpo gorge 50 km west of Tongmai.

Although the species was recognised by Huang et al. (1998) and Govaerts & Frodin (1998), Huang et al. (1999) regard *Q. tungmaiensis*, as well as *Q. leucotrichophora* A. Camus, as synonyms of *Q. lanata* Sm. Indeed, the holotype specimen of *Q. tungmaiensis* is annotated "*Q. leucotrichophora* A. Camus (*Q. tungmaiensis* Y.T. Chang)". While *Q. leucotrichophora* and *Q. lanata* are closely related, and possibly not distinct, at least at specific level, there is no doubt that *Q. tungmaiensis* is different to these and should be recognised as a distinct species.

The plant of *Q. tungmaiensis* at Chevithorne came as a rooted cutting from Keith Rushforth. It was a cutting rooted by Tom Hudson at Tregrehan in Cornwall from his raising from seed collected by Keith in SE Tibet in October 1997 as KR 5765. The locality for this collection was given as Pome (Bomi) County in the Po tsangpo valley about 10 km upstream from Tongmai towards Showa and was found at 2100 to 2200 m. The parent trees were evergreen, to 25-30 m and growing in mesic forest above the road. Field notes (for 5540 from

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the same population) have “leaves chestnut-like with small teeth, bark scaly, cupule with adpressed hairs, fruit in a spike.” In cultivated plants the leaves are downy above with stellate hairs when young and strongly revolute as they unfold becoming more or less glabrous and glossy green. The lower surface of the leaf is glabrous even when young except for persistent hairs on the veins. A distinct feature of this species is the deeply impressed venation on the

Opposite. The holotype of *Quercus tungmaiensis* collected in Tung-mai (Tongmai), Tibet in 1965, at Beijing.

Right. *Quercus tungmaiensis*, Rushforth 5765, at Chevithorne Barton, Devon, England.

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upper surface of the leaf. The Chevithorne plant was 4.4 m tall in December 2014 and has not yet produced acorns. Several other collections in the area by Rushforth in 1999 may also be referable to this species.

Quercus tungmaiensis seems to be one of a group of species related to *Q. engleriana* Seemen, of which the taxonomy is not completely resolved. Tom Hudson (pers. comm.) reports seeing a similar or identical plant in the Dulong Valley in NW Yunnan. Two plants of this species are cultivated at the Sir Harold Hillier Gardens from seed collected at Pianma, Yunnan near the border with Myanmar, approximately 100 km further south, and have reached 1.85 and 2.1 m tall. *Quercus tungmaiensis* was also introduced from northern India to France by Jean Merret in 2008 and has been distributed to several collections. Keith Rushforth (pers. comm.) reports seeing the species in Arunachal Pradesh, NE India at Menchukka (Mechuka) in West Siang district at around 1950 m, and also in the Hoot area in Anjaw district at around 2600 m. He notes that he has only seen *Q. lanata* in Nepal to West Kameng, Arunachal Pradesh, India where it is found, at comparable altitudes, but in dry inner valleys or on dry rocky slopes. Commenting on Huang et al. (1999) he notes that *Q. lanata* does not occur on mesic sites in these countries.

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