

THE TAXONOMY OF THE GRIFFITH CYPRESS (*Cupressus tortulosa* Griffith).

by John Silba\*

## Abstract

*Cupressus* was first described from cultivated material collected near Roongdong, Bhutan by Griffith at 1920 m. elevation. Griffith (1848) described the plant as *Cupressus pendula* Griffith based on Griffith n°529. However, this herbarium collection was apparently lost or destroyed and cannot be located at present. Furthermore, the name *Cupressus pendula* was earlier published as *Cupressus pendula* Thunb. (1783), and is therefore invalid. Indeed, the older homonym *Cupressus pendula* Thunb. belongs to a quite different species altogether or *Platycladus orientalis* (L.) Franco.

Realizing that his species name was invalid, Griffith renamed the *Cupressus* as *Cupressus tortulosis* Griffith (Griffith 1854-a). In the type description Griffith lists two herbarium collections, one from Roongdong and the other from Dewangiri (n°27). Since Griffith n°529 was earlier quoted as the type (holotype) for *C. pendula* Griffith, then Griffith n°27 from Dewangiri (K) must be proposed as the lectotype for *Cupressus tortulosis* Griffith. Farjon (2005) incorrectly lists Griffith n°27 (K) as the holotype of *C. pendula* Griff. In his monograph on the Cupressaceae Farjon attempts to cleverly and cavalierly dismiss the name *Cupressus tortulosis* Griff. as a mere synonym of *Cupressus cashmeriana* Carr. However, Farjon (2005) is clearly not clever, he is wrong and the name *Cupressus tortulosis* Griffith is rightfully the earliest valid name published for the cypress (*Cupressus*) of Bhutan. According to the ICBN therefore the name *Cupressus tortulosis* Griff. has precedence over the later name *Cupressus cashmeriana* Royle ex Carriere.

Key words: Bhutan, Griffith, priority, nomenclature, lectotype, *Cupressus cashmeriana*, *Cupressus tortulosa*.

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The name *Cupressus cashmeriana* Royle Ex Carrière has had a long history as having a dubious origin in the wild. Carrière (1867) first described the plant based on a young cultivated tree in Europe, and states that the origin of the plant is uncertain. However, Carrière (1867) also states that the plant may be from Tibet (China). It may be probable that Carrière based his plant on a cultivated tree grown in southern France, such as at Antibes or Hortus Huberis Hyeres. It is highly unlikely that Carrière based his plant on a cultivated tree in England, as suggested by Farjon (1994). An old tree, probably over 100 years old is still cultivated in northern Italy, at Isola Madre, near Milan. There exists at Kew herbarium a collection made by Henry (Henry s.n.) of the cultivated tree at Isola Madre. Another old cultivated tree exists at Jardin Les Cèdres in Saint-Jean-Cap-Ferrat in Alpes Maritimes, southern France. The cultivated tree in southern France may also be from an original introduction from the Orient as is the cultivated tree in northern Italy.

Gausson (1968) may have been the first botanist to suggest that *Cupressus cashmeriana* may have originated from Bhutan. Gausson (1968) early speculated that *C. cashmeriana* may be from Bhutan, and this is probably based on his knowledge of the early collections of *Cupressus* made by Cooper from cultivated trees (at the Edinburgh herbarium). However, the early collections made by Cooper were originally labeled as *Cupressus funebris*. Indeed *Cupressus funebris* of Auct. (non Endl.) had been recorded as a cultivated tree in Bhutan and eastern India by Hooker file (1888). Franco (1968) later studied the cultivated *Cupressus* material from Bhutan as belonging to *Cupressus cashmeriana*, yet Franco (1968) wrongly assigned the name *Cupressus corneyana* Auct. (non Carrière) to the Bhutan plants. The cultivated trees of *Cupressus* in Bhutan reach 45 meters tall and to 15 m. in circumference, as one cultivated tree at Chalimarpe Timpu in Bhutan was measured by Cooper and by Ludlow, Sherriff and Hicks (E,BM).

Interestingly, in 1983 Grierson and Long in the Flora of Bhutan (1983) described *Cupressus* discovered wild for the first time in Bhutan. Grierson and Long made the first wild collection of *Cupressus* in Bhutan as Grierson & Long 1079 (E) from near Norbding, below Pele Le (pass) from north-west Bhutan. Further wild collections were recently made by S. Miehe (S. Miehe 00-46201 (K)) from Pho Chu Valley, north-east of Kewa Nang. However, the wild collections from Bhutan (which occur as high as 3000 meters) differ markedly from the old cultivated trees in Bhutan (which occur as low as 1500 m.) in that

the foliage of the wild plants is obtuse and dark green in color. In contrast, the old cultivated trees in Bhutan have sharply acute leaves which are free at the apex, and the foliage is distinctly silvery-glaucous. The native trees of *Cupressus* near Norbding were unknown to the local people in Bhutan previous to the discovery by Grierson and Long. Yet, the old cultivated trees in central and southern Bhutan (and also in Sikkim) were rumored by the local priests in Bhutan to be sacred trees that imported to the temples in Bhutan from an unconfirmed location in Tibet.

Silba (1987) named the wild plant from Bhutan as *Cupressus himalaica* Silba based on Grierson et Long 1079 (holotype-E). The name *Cupressus himalaica* Silba was not intended by Silba (1987) as a replacement for the name *Cupressus cashmeriana* Royle ex Carrière. However, *Cupressus himalaica* represents a distinct taxon which differs significantly in botanical features from the cultivated trees of *Cupressus cashmeriana* cultivated in central Bhutan, Sikkim and in Europe. *Cupressus himalaica* is a much taller tree than *Cupressus cashmeriana*, and reaches over 95 m. in the wild (Farjon, 2005). *Cupressus himalaica* has less pendulous branchlets, obtuse leaves, greenish foliage and smaller cones with fewer scales than the cultivated trees of *Cupressus cashmeriana*. In addition the wild populations of *Cupressus himalaica* near Pele Le occur as high as 3000 meters, in stark contrast to the cultivated trees of *Cupressus cashmeriana* as low as 1500 meters in Sikkim. Furthermore, the *Cupressus himalaica* has proven much more cold hardy in cultivation in Europe and the United States than *Cupressus cashmeriana* (and of which Carrière originally stated is "sensitive to frost").

Clearly, the early name *Cupressus tortulosa* Griffith has been largely overlooked by modern day botanists. It is clear though that Griffith was the first botanist to validly publish the *Cupressus* which is cultivated in Bhutan. Griffith (1854-a) gave a valid description, listed type specimens and also described a valid illustration of his *Cupressus tortulosis*. The Latin name "tortulosis" means "twisted", whereas the Latin name *Cupressus torulosa* D. Don in his "torulosa" means "bunched". Both *C. tortulosis* and *C. torulosa* clearly have two different meanings, and indeed represent two different species. It is clear that Griffith knew use of the Latin language quite well, and Griffith did not carelessly duplicate a previously published name while correcting his accidental use of a

previously published name (*C. pendula* Thunb.). Griffith gives a full Latin description for his *Cupressus pendula* Griffith along with a type specimen cited in his publication in 1848. Farjon mistakenly goes on in his recent monograph (2005) to give the illustration by Griffith (1854-b) as the type for "torulosis" and then Farjon rejects Griffith's plant as a homonym. To further add to the confusion, Farjon wrongly designates a herbarium collection of *Cupressus* from England as the neotype for *Cupressus cashmeriana*. It is clearly evident that Farjon (2005) adds more confusion to the name.

There is conclusive evidence that Griffith validly published the name *Cupressus tortulosis*, and also listed type specimens in his original description. Yet, in the genus *Cupressus* the feminine form of Latin has been generally accepted, and thus *Cupressus tortulosis* must be corrected as *Cupressus tortulosa* Griffith.

*Cupressus tortulosa* Griffith, Not. Pl. Asiat. 4: 26 (1854a.)  
Lectotype propositus- Griffith 27, from Dewangiri, Bhutan  
lectotype-K).

A markedly pendulous tree cultivated in Bhutan, and possibly extinct in the wild. A collection by Ludlow & Sherriff 1254 (BM, E) from south Tibet (or border of Arunachal Pradesh), Pangchen, near Nyam Jang Chu, 2000 meters may be from an isolated specimen or cultivated. Nevertheless, the Ludlow & Sherriff 1254 (BM, E) may represent the last relic population of this species, as it was suggested that it originally came from Tibet. Further exploration of northern Arunachal Pradesh may find the tree as native, yet for now it is regarded as extinct in the wild.

The cultivated *Cupressus tortulosa* in Bhutan are small to medium sized trees, with markedly pendulous branchlets, glaucous foliage and acute leaves with a free apex, and in stark contrast to the wild populations near Pele Le, Bhutan.

The reports of *Cupressus cashmeriana* by Farjon (2005) from Assam are all in error. The specimens Smythees s.n. (K) and Kingdon-Ward 12449 (BM) clearly belong to *Cupressus assamica* Silba, a species of which does not have long pendulous branchlets as *C. tortulosa*. Infact, *Cupressus assamica* (Silba, 2005) occurs much further south in Arunachal Pradesh or Assam, at lower elevations and has been

recorded as far south as the Shillong Plateau in the Meghalaya (Silba, 2005). The suggestion by Farjon (2005) that *Cupressus cashmeriana* occurs near Pome in south-east Tibet (based on a Ludlow, Sherriff & Elliot collection) is completely wrong. It is tendentious of Farjon to quote this specimen under *C. cashmeriana*, and since the specimen rightly belongs to *C. duclouxiana* Camus (Franco, 1968). *Cupressus duclouxiana* has a deep sunken pit in the leaf, and how Farjon (2005) can confuse this with *C. tortulosa* seems most unreasonable.

*Cupressus tortulosa* Griffith subsp. *himalaica* (Silba) Silba,  
Combination Nova.

Basionym: *Cupressus himalaica* Silba, *Phytologia* 64 (1): 80 (1987),  
Type: northern Bhutan, near Norbding, Grierson & Long 1079  
(holotype-E).

*Cupressus tortulosa* subsp. *himalaica* resembles *Cupressus tortulosa* subsp. *tortulosa* in that it also has long pendulous and flattened branches. However, the wild plants near Norbding differ markedly in being a tree to 95 meters tall, less pendulous branches, foliage dark green, leaves obtuse and smaller more globose cones with fewer scales (generally 8 scales, whereas as many as 14 scales in the type). Clearly there are marked botanical differences between the old cultivated trees in Bhutan versus the wild populations of *Cupressus tortulosa* subsp. *himalaica*. *Cupressus tortulosa* subsp. *himalaica* apparently is not cultivated in Bhutan, and has only been recently introduced into cultivation in Great Britain. *Cupressus tortulosa* subsp. *himalaica* occurs up to 3000 m. in elevation in northern Bhutan and should be regarded as an endangered plant along with the type subspecies. Typical *Cupressus tortulosa* is represented by old cultivated trees near Bhuddist temples in central and southern Bhutan, and is most likely extinct in the wild.

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