

Corylus avellana 'Contorta', Contorted Hazel



Contorted Hazel catkins (male inflorescences)
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Contorted Hazel, C19 Garden, GBG.
May 2018. Photo: HR.

Corylus avellana 'Contorta' is typically a shrub reaching 3 to 8 metres tall, but can reach 15 metres. It is a deciduous, rounded, multi trunked shrub which features, as the cultivar name suggests, twisted and spiralling branches, twigs and leaves. It has broadly ovate leaves and pendent yellow male catkins in late winter and early spring. Most plants sold in commerce are grafted. It is particularly noted for its winter beauty, with contorted branches best observed in winter when the foliage is absent. Although the winter outline is beautiful, the summer foliage is rather less inspiring. The foliage is roundish, coarse, tooth leaves that are not particularly attractive.

Corylus avellana is native to Europe, western Asia and northern Africa: from the British Isles to Iberia, Greece, Turkey, and Cyprus, north to central Scandinavia, east to the central Ural Mountains and north-western Iran. It is typically found growing in thickets, woodland borders, wooded slopes hedgerows, clearings and along streams. It is an important component of hedgerows that were the traditional field boundaries in lowland England. The wood was traditionally grown as coppice, the poles cut being used for wattle and daub building and agricultural fencing.

Monoecious flowers bloom on bare branches in late winter to early spring before the leaves emerge. Somewhat showy, pale yellow grey male flowers appear in sessile drooping catkins. Inconspicuous female flowers with red stigmas bloom just above the male catkin. Double serrate, elliptic to ovate to orbicular, medium green leaves are rounded to cordate at the base and generally hairy. Fruit is a hard, edible brown nut enclosed in a leafy, hairy, light green husk. In Europe and America cultivars of this shrub are commonly grown for nut production.

The genus name comes from the Greek word korylos, or from koryos, meaning a helmet, in regard to the husk of the nut. The species *avellana* comes from Avella in Southern Italy, and was selected by Linnaeus from Leonhart Fuchs's *De historia stirpium commentarii insignes* (1542) where the species was described as *Avellana nux sylvestris* (Wild nut of Avella). The name was taken in turn from Pliny the Elder's first century A.D. encyclopaedia *Naturalis Historia*.

'Contorta' is a contorted version of the species plant. It was discovered growing as a sport in an English hedgerow in Gloucestershire in the early 1860's by eminent Victorian gardener Canon Ellacombe of Bitton. He propagated the plant to amuse his friend Edward Augustus Bowles. Bowles loved plant curiosities and aberrations enough to dedicate part of his large garden near Enfield, Middlesex to his oddities. His original plant, the first contorted hazel in cultivation, still grows in the 'Lunatic Asylum' (as Bowles named it) at Myddelton House today. Once established in Bowles's garden, other famous gardeners admired its sculptural bonsai-like charms. This plant was subsequently given the common name Harry Lauder's Walking Stick in the early 1900's in honour



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Map on page 3

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Contorted Hazel
C19 Garden, GBG.

left: Shrub, Feb 2018.
Photo HR.

Below left: Female
flowers with red styles,
pale green male flowers.
Below right: Bush
covered in catkins. Sep
2014. Photos DJ.

of Scottish entertainer Harry Lauder (1870 - 1950), who was known for using a crooked walking stick.

In some parts of Europe, the Contorted Hazel is used in Easter celebrations: branches are brought into the house and decorated, much like a Christmas tree. The Contorted Hazel is an ideal specimen to be trained as a bonsai. It is widely used in floristry.

Crosses of normal growth habit cultivars and Contorta produced all normal growth seedlings. Matings of these normal seedlings of Contorta produced offspring in the ratio of three normal to one Contorta, while back crosses to Contorta segregated one normal to one contorted. These segregation ratios indicate control of contorted growth by a single recessive gene.

The internal structure of the woody stem of Contorta - the pericycle is noteworthy because of its poor development which is in striking contrast to the normal Hazel. Because the primary shoot is twisted from the very beginning, the cambial cylinder is also twisted. In the loops, unequal amounts of secondary xylem are formed, with a larger quantity at the inner bends than the outer bends. The changes in the cambial area - decrease at the inner and increase at the outer bends - are almost completely parallel to the changes observed in the dimensions of wood vessel elements - decrease in length from pith toward the inner bends of twisted parts of branches and increase in length toward outer bends. In the majority of cases tension wood was present at the outer bends.

Contorted Hazel grows well in partial to full sun in fertile, well drained soil.



References

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Inheritance of contorted growth in hazelnut, by D. C. Smith and S. A. Mehlenbacher, in *Euphytica*, Vol 89, Issue 2, pp 211 - 213.

On the Anatomy of the Woody Stem of the Twisted Hazel, *Corylus avellana* Contorta, by F. B. Klynstra, J. C. Lycklama, A. M. Siebers, P. D. Burggraaf. <https://doi.org/10.1111/j.1438-8677.1964.tb00152x>

Summary

Family: Betulaceae (containing *Betula* Birch, *Alnus* Alder, *Carpinus* Hornbeam)

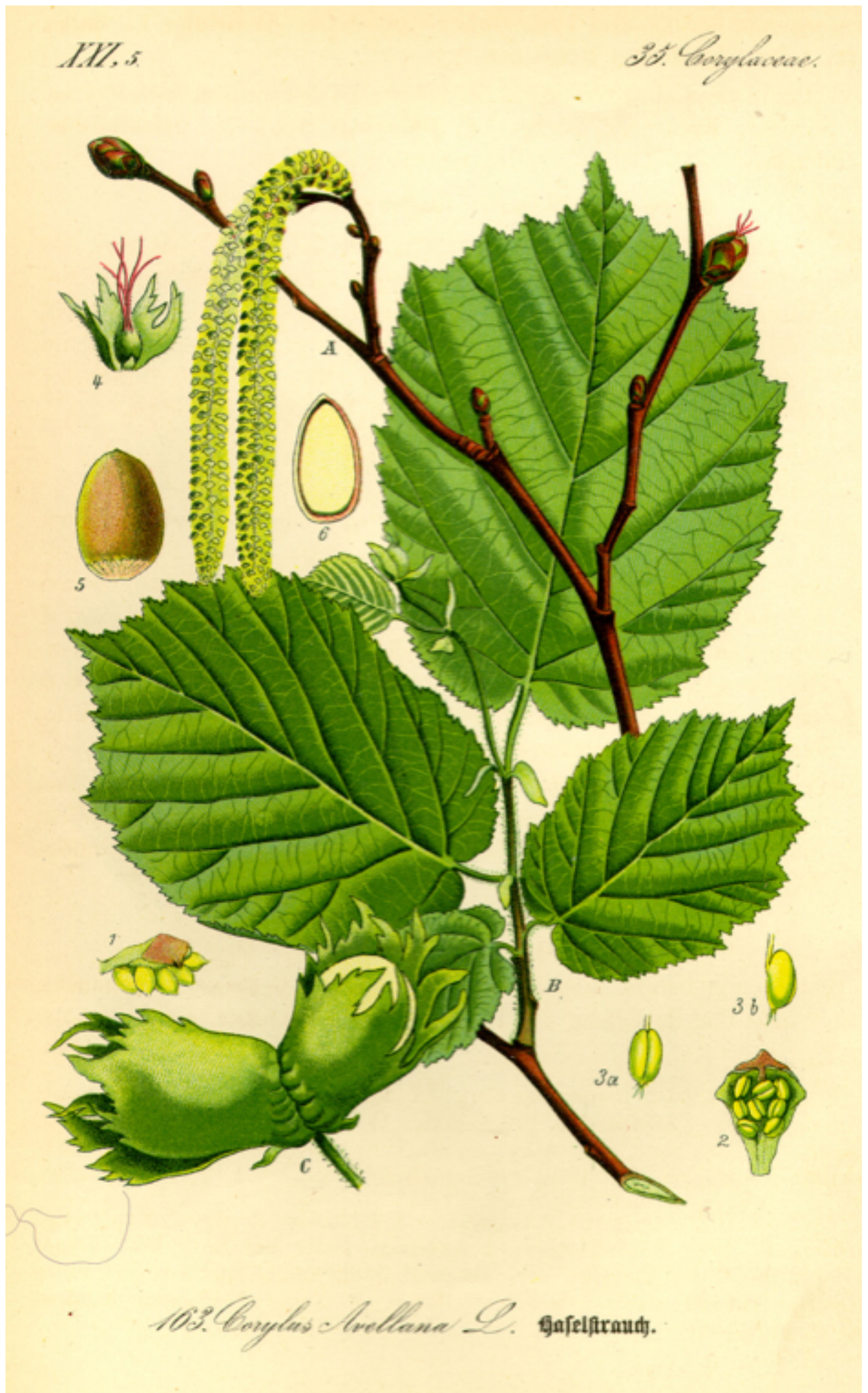
Species: *Corylus avellana* Cultivar: 'Contorta' Common name: Contorted Hazel

Models of *Corylus avellana* Hazel flowers.

Top: Female flower, Botanical Museum in Greifswald, Germany, Wikipedia CC BY-SA 3.0.

Bottom: Male floret, Research Group Biology Didactics, Friedrich Schiller University, Jena, Germany, www.universitaetssammlungen.de CC BY-SA 3.0





Corylus avellana Hazel. A. Flowering stem, B. Leafy stem, C. Developing fruit 1. Fruit early in development? 2. Male floret, 3a & b. Anther, 4. Female flower, 5 & 6. Seed (Hazelnut).
 Prof. Dr. Otto Wilhelm Thomé Flora von Deutschland, Österreich und der Schweiz 1885, Gera, Germany.
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