Quercus acutissima

[Synonyms : *Quercus acutissima* subsp. *acutissima*, *Quercus acutissima* var. *depressinucata*, *Quercus acutissima* var. *lioui*, *Quercus acutissima* var. *macrocarpa*, *Quercus acutissima* var. *septentrionalis*, *Quercus bombyx*, *Quercus lunglingensis*, *Quercus septentrionalis*, *Quercus serrata*, *Quercus serrata* var. *attenuata*, *Quercus serrata* var. *nana*, *Quercus serrata* var. *obtusata*, *Quercus serrata* var. *tanbakuri*, *Quercus uchiyamana*]

SAWTOOTH OAK is a deciduous tree. Native to eastern Himalayas, China, Korea and Japan, it has chestnut-like green leaves, which turn dull yellow to golden brown in Autumn, and many dark brown acorns.

It is also known as Bristle-tipped oak, *Carvalho-japonês* (Portuguese), *Chêne à dents de scie* (French), *Chêne du Japon* (French), *Chêne du Japon à feuilles de châtaignier* (French), *Dub špičatolistý* (Czech), *Gesägte Eiche* (German), *Gezaagdbladige-eik* (Dutch), *Hegyeslevelû tölgy* (Hungarian), Japanese chestnut oak, *Japanische Kastanieneiche* (German), *Kunugi* (Japanese), Kunugi oak, *Ma li* (Chinese), *Sägezahn-Eiche* (German), Sawthorn oak, *Seidenraupen-Eiche* (German), and *Teravalehine tamm* (Estonian).

The flowers are pollinated by the wind. Acorns take about 18 months to mature and the invariably heavy crop can make sawtooth oak invasive in some areas, not least in eastern North America where it can strive to dominate native habitat. The tree attracts insects which produce galls.

Acutissima is derived from Latin *acuti-* (pointed, acute, sharp) meaning 'very or most sharply pointed' in reference to the leaves, which in this species are lance-shaped and chestnut-like *Castanea* instead of a typical 'oak' shape.

The Chinese have fed the leaves to some types of silkworm.

In times of famine the young leaves, cooked, have offered a source of food and the acorns have also been eaten after necessary processing. In the past this processing involved burial in wet ground during Winter or careful and repeated washing in running water. For the latter the leaves were/are placed in a bag suspended in a flowing stream for several weeks to reduce the amount of tannin in them. After this the leaves were/are dried and ground. This powder had been added to stews and other dishes as a thickening agent or added to other bread flours to eke them out. The whole, processed and roasted seed has also offered a coffee substitute.

The galls have not only been used for tanning but have also provided a source of a black material dye.

According to some authorities the moderately strong wood has been used locally for boat building and general construction – although for other experts its tendency to crack and split has precluded its use for anything but fencing.

At the beginning of the 21st Century it is understood that sawtooth oak is still cultivated and coppiced by the Chinese as a source of charcoal and fuel today. In Japan the trees are cultivated by some farmers for making logs which are then used to produce mushrooms.

A Kew gardener, Richard Oldham (1837-1864), who was sent out to the Far East to collect plants on behalf of the English botanic garden, is believed by many to have introduced this osk to Britain in 1862. It should be mentioned however that there are some experts

who suggest that this introduction may not have been live specimens - but it is noted that the world has the advantage of his herbarium.

Sawtooth oak was introduced to North America in 1862.

Apart from the foregoing, the tree is also cultivated for windbreaks and shade, as well as for its ornamental qualities and as a street tree.

This oak offers a roosting site for many birds and the acorns, despite their bitter taste, are eaten by a wide variety of birds and animals. In North America these include deer, opossums, raccoons, squirrels, wild turkeys, crows and bluejays – especially many authorities state squirrels and turkeys.

Medicinally, cupless acorns have provided an ingredient in remedies of diarrhoea, some period problems and stomach upsets, while the galls have been used in the treatment of diarrhoea, dysentery and haemorrhaging.