

defoliated by Japanese beetles (*Popillia japonica*) in Tennessee. The cecropia moth caterpillar (*Hyalophora cecropia*) is credited with partially defoliating young buffaloberry plantings as well. Two psyllids, *Paratrioza arborensis* and *Psylla magnicauda*, have been noted. Root feeders include larvae of the june beetle (*Phyllophaga* sp.) and click beetle (family Elateridae). Premature fruit drop is caused by the buffaloberry maggot (*Rhagoletis* sp.). Another insect, known as the buffaloberry fruit worm (*Carposina niponensis ottawana*), has also been noted.

HANDLING AND POSTHARVEST STORAGE Harvesting represents one of the major drawbacks to the widespread use of buffaloberry fruit. The thorns are sharp and numerous. The fruit ripen unevenly, are small and often adhere quite strongly to the branches. Many older trees are too tall for convenient picking, and the dense irregular growth of the plant can make it difficult to reach all of the fruit. The traditional method is to lay a cloth on the ground under the bush and then to beat the bush with a stick, once air temperatures have decreased to about -10°C , as frozen fruit fall off very easily. Otherwise the method demands more effort than hand picking and is more harmful to the bush.

MAIN CULTIVARS AND BREEDING Two cultivars of buffaloberry currently exist: 'Gold-eye' (yellow fruited), developed in Morden, Manitoba, and 'Sakakawea', developed by the Soil Conservation Service of the USDA for revegetation of disturbed areas. Richard St-Pierre

Literature cited and further reading

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ELAEOCARPACEAE

Aristotelia chilensis maqui

Maqui or macqui, *Aristotelia chilensis* [Mol.] Stuntz (*Elaeocarpaceae*), is a shrub or small tree native to Chile and Argentina in South America. The plant typically grows as an evergreen shrub that is 3-4 m tall. The leaves are ovate to lanceolate, 3-15 cm long, 1-5 cm wide, with a serrated leaf margin and are a glossy dark green colour. The midvein and petiole are often reddish especially in young leaves.

The plant is most commonly found in Andean foothills in fertile, slightly acidic, well-drained soils with good soil moisture. Maqui is an early colonizer after forest timber is harvested.

Maqui is dioecious and therefore plants produce either staminate or pistillate flowers. The yellowish-green flowers are borne in terminal clusters and open in late spring or early summer. The flowers are insect pollinated.

The small (5-6 mm) black fruit ripen in late summer to early autumn. The fruit are pleasant to eat fresh or dried. Large quantities of fruit are wild harvested for fresh market sales. Juice concentrate and wine are also commonly made from the fruit. Maqui fruit have very high levels of anthocyanins (red, purple pigments) exceeding many other berry crops such as blueberry, blackberry and strawberry. Anthocyanins are strong antioxidants. Maqui juice has been shown to protect low-density lipoproteins from oxidation and human endothelial cells in culture from oxidative stress, suggesting that it could have antiatherogenic properties. The wood is used by artists and in the production of musical instruments. Maqui is an excellent landscape plant. Chad Finn

Further reading

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Elaeocarpus floribundus oil fruit

Oil fruit, *Elaeocarpus floribundus* Blume (*Elaeocarpaceae*), is distributed from India and Myanmar to Indochina, Assam to Yunnan, Thailand, Malaysia, Java, Borneo and the Philippines. The English names are oil fruit, Indian olive and rugged oil fruit. Other names are hahauwan and kemesu (Indonesia); malangau (Philippines); medang biawak, medang teja and mesang telur (Malaysia); muat doi, man som and kalon (Thailand); and com trau (Vietnam).

Uses and nutritional composition

The sour fruit is edible. The tree is harvested for timber that is used in light construction. An infusion of bark and leaves is used as mouthwash for inflamed gums in Sumatra. In Malaysia, the leaves and bark are used as a poultice on ulcers. An extract of the leaves and bark is used as a tonic.