

## Soap Plants

Commercially soaps are made by mixing an alkali (wood ashes or the ashes of other plants can be used) with an oil (usually palm oil) and then often adding substances such as herbal extracts or essential oils to give it a scent. Whilst this process can be done successfully on a small scale, we will look at another type of soap that can be produced much more easily.

Many plants contain substances called saponins - these are toxic glycosides and can be found, usually in low concentrations, in many of our foods, especially in beans and some leaves. Fortunately saponins are destroyed by prolonged heat and are also very poorly absorbed by the body, so most of what we ingest passes straight through us. These saponins, however, are not without their uses and one of their properties is to form a lather in water that is a gentle but effective cleaner. A number of plants contain quite high concentrations of saponins and have been used as an alternative soap. One of the best known examples of this, at least in Europe, is our native wild flower Soapwort (***Saponaria officinalis***). This is a perennial plant usually found in damper soils in woods, hedgerows, by streams, etc. It is still used nowadays particularly for cleaning delicate fabrics, including the Bayeaux Tapestry! The saponins are extracted by boiling for a short time and then infusing the whole plant. It can also be used as a hair and body wash. Closely related to Soapwort are a number of other native plants that contain useful quantities of saponins, including Ragged Robin (*Lychnis flos-cuculi*) and many of the Campions (*Silene* spp).



Bracken (***Pteridium aquilinum***) is another native plant that has a report of being rich in saponins, the rhizome is used. This is just one of a number of uses for this ubiquitous weed; a glue can be made from the rootstock, the fronds are used as a packing material - it is excellent for lining fruit baskets where it repels insects and helps prevent rotting, a compost made from the fronds is excellent for tree seedlings. The root and young fronds have been eaten but there is some evidence to suggest that they are carcinogenic.

The Horse Chestnut (**Aesculus hippocastanum**) is a native of S. Europe but has been grown in Britain for so long that you would be forgiven for thinking it was native. Its seeds are rich in saponins and will lather well in cold, preferably soft, water when rubbed between the hands like a bar of soap. A fairly effective cleanser though it does leave its smell behind! The seed is a good source of edible starch if the saponins are first removed by leeching in water and then by thorough cooking. Since this process also removes most of the vitamins and minerals (and the starch is less than exquisite), we'll leave this to more dedicated wild food enthusiasts. Other members of the genus have similar uses.



North America provides quite a number of 'soap plants'. One very interesting plant is the Soap Lily (**Chlorogalum pomeridianum**) - a bulbous plant from California where it grows on dry, open hills and plains and occasionally in woods. Although not often seen in Britain it grows quite well here if given a reasonably rich, well drained soil. The bulb, stripped of its outer covering, is very rich in saponins and can as be dried and grated up as required to be used as soap flakes. This bulb, if given a long slow baking, can be eaten and is said to be very nice - we've not tried it yet and have some reservations, particularly having read that a fibre from the bulb is used as a stuffing for mattresses and to make small brushes. The sap that exudes from a baking bulb can be used as a glue and the young spring growth can be eaten - it is said to be sweet when baked. Altogether a very useful plant.



**Ceanothus cuneatus** is another Californian growing on dry slopes. An evergreen shrub, it requires a sunny position in a light soil - it does not like chalk nor does it like being transplanted - so should be pot grown prior to being put in its final position. Probably not hardy away from southern Britain. The flowers are used and these impart a pleasant aroma. Indeed the N. American Indians often used them when bathing and a bride would traditionally use them on her wedding night. Most other members of the genus could be similarly used.



There are many species of **Yucca** growing in the more arid areas of southern N. America and a surprising number of them are hardy in most areas of Britain if given a free draining soil and a sunny position. These plants were a vital part of the local economy, providing food (fruits, flowers, and flowering stems), fibres for ropes etc, leaves for basketry and as brooms, plus a soap from the root. This soap is said to be a particularly good hair wash. Species to try include Y. baccata, Y. filamentosa, Y. glauca, Y. gloriosa and Y. whipplei.



Philadelphus lewisii comes from western N. America where it grows in gullies, along water courses and on rocky cliffs and hillsides. In Britain it prefers a loamy soil, and full sun or partial shade. The leaves and flowers lather well in cold water, an infusion of the bark can also be used.

**Database**

The database has more details on these plants: [Aesculus hippocastanum](#), [Ceanothus cuneatus](#), [Chlorogalum pomeridianum](#), [Lychnis flos-cuculi](#), [Philadelphus lewisii](#), [Pteridium aquilinum](#), [Saponaria officinalis](#), [Yucca gloriosa](#).

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