

Staphylea at Caerhays

Over the years, in writing articles for the CGS yearbook, I have tried to concentrate on less well known trees and shrubs of botanical interest which ought to be cultivated and appreciated more widely in our gardens. Along the way these have included *Enkianthus*, *Michelia*, *Styrax* and *Stewartia*. This year it is the turn of *Staphylea* whose species have an enormous worldwide geographical spread in the northern hemisphere from Japan and China to Europe and the Caucasus and on to the south east United States.

Staphylea species are mainly small, upright, bushy and, usually, multi-stemmed trees which have great garden merit despite being sadly still neglected by most of us. They flower profusely between March and May depending on the mildness or otherwise of the winter. In autumn the leaves normally produce a colourful display and the large pendant seed capsules are a delight. The common name for *Staphylea* is 'Bladder Nut' which very effectively describes the huge seed capsules which are produced in abundance from much smaller flowers. It may not however be a name which encourages those who have never seen these capsules to rush to acquire a plant!

As children at Caerhays one of the autumn excitements was to collect the pinkish or yellowish 'Chinese Lanterns' from the top of the garden. Since the two main *Staphylea* trees were then about 20ft or more tall this required throwing sticks to knock them off the tree or waiting until they had naturally fallen to the ground in November. We would then spend the evenings dissecting the individual shot sized seeds from the 'lanterns' onto newspaper ready for sowing in the greenhouse in the spring.

The only reference I can find to *Staphylea* in the tree measuring records here which date back to 1964 is from 28th August 1966 when a multi-stemmed *Staphylea holocarpa* was recorded then as being 29ft tall by Philip Tregunna (head gardener) and Alan Mitchell (the first tree recorder). This group of trees expired about 30 years ago but has been replaced in the hope that the grandchildren will also soon enjoy the capsule hunts.

There are seven or eight species of *Staphylea* which are known to be growing in UK gardens. Of those our planting records suggest that we have planted all of them out in the period since the 1990 hurricane (except *Staphylea emodi* and *Staphylea pringlei*). There are also a small number of named forms of two species in cultivation (*S. colchica* and *S. holocarpa*) some of which feature at Caerhays. However, on the ground research with Tom Hudson and Maurice Foster's December 2018 article in 'The Plantsman', clearly indicate that there have been several serious mistakes in the original naming of our collection here which can now be corrected. These mistakes are by no means restricted to Caerhays and there remains much debate about the true parentage and identity of some key plants in other well-known gardens.

The plants here have come from our own seed, gifts from private collections and from the nursery trade in Holland. In a garden or nursery context *Staphylea* are promiscuous when different species are grown in close proximity where they usually flower at more or less the same time. Hybridisation and unwitting muddle has therefore crept in. At least four plants here labelled differently have in fact turned out to be *Staphylea pinnata*. Botanists may perhaps sneer at this but it is probably inevitable in a genus such as *Staphylaceae* which is not widely known or understood.

The first species into full flower here each year is one of the most easily identified and arguably one of the best to try out for yourselves. *Staphylea holocarpa* was described by Wilson around 1908 as 'very common

on the margins of woods and thickets in western Hupeh and eastern Szechuan and the most beautiful species of the genus'. The key thing to remember when trying to identify *S. holocarpa* is that it is the only species which flowers directly from the old wood rather than from the new season's growth.



Staphylea holocarpa – bud



Staphylea holocarpa 'Rosea' – leaf



Staphylea holocarpa 'Rosea' – in bud



Staphylea holocarpa 'Rosea' – flowers full out



Staphylea holocarpa 'Rosea' – a multi-stemmed small tree



Staphylea holocarpa 'Innocence'



Staphylea holocarpa – seed capsules in July at Osborne House in the Isle of Wight

Of the six plants at Caerhays of *Staphylea holocarpa* only one has white flowers (which are pinkish in bud) while four are pink and one is some way between the two in colour. *Staphylea holocarpa* 'Rosea' produces a really impressive show in March largely before any leaves emerge. *Staphylea holocarpa* 'Innocence' has pink buds and flowers which open pink before quickly fading to white. Clearly this is a variable species as regards its flowering colour. In younger trees the flower panicles or clusters are much smaller than in maturity and the individual flowers are ½in long in dense irregular panicles which can be 4in long. Some forms of *Staphylea holocarpa* seem to be more multi-stemmed while others develop a single leading shoot and become small trees.

The leaves of this species have three leaflets; the terminal one is stalked with a stalk of 2-4in long while the side ones are virtually stalkless. Sadly our youngish trees with pink flowers have yet to produce inflated light green or pink seed capsules but these have three compartments and are pear shaped tapering into a sharp point. They are roughly 2in long and 1in wide and contain grey shot-like seeds.

Staphylea holocarpa 'Rosea' has chocolate bronze young leaves which later turn green. The leaves have a woolly underside initially. This plant first received an RHS Award of Merit in 1953 while the white form received the same award in 1924. White and pink forms were clearly found in the wild in China but the pink

cultivars, which are called 'Rosea', are variable as to their pinkness. Maurice Foster has suggested a quest to find the best pink cultivar and give it a new name so that we can then propagate and grow only the very best pink form. The plants at Caerhays are certainly very pink indeed and do not fade that much.

Of equal garden merit for its sheer floriferousness, even as a young plant, has to be Staphylea colchica. This species was introduced to the UK before 1879 and received a very early RHS First Class Certificate when exhibited by Messrs Veitch in the same year. It is described by Bean as 'the handsomest of the Staphyleas'.

It is native to the south western Caucasus and, as such, may even overlap with the distribution of *Staphylea pinnata* in the wild which may account for the confused hybridisation between the two species which has occurred and is evident in some of the questionably named plants in UK gardens.

S. colchica has achieved a height of around 15-20ft at Caerhays. The oldest plants were planted in 1991 after the January 1990 hurricane and appear to have been a gift from John Bond and Windsor Great Park. They have a narrow pyramidal shape with more than one leading stem and grow in full sun. Bean suggests that this species grows 6-10ft tall but, today, there are several examples of small trees in the Tree Register which are over 20ft in height. Even so the Caerhays plant has taken 28 years to reach its current size so it is never going to be a big 'tree'.

S. colchica has leaves with five leaflets but, confusingly, the leaves with flowering shoots usually, but irregularly, have only three. These long ovate leaflets can be 2½-3½in long and the terminal leaflet is stalked while the others are stalkless. The leaves have serrated or toothed edges and shining lower surfaces.



Staphylea colchica – leaf



Staphylea colchica – bud



Staphylea colchica – flowers



Staphylea colchica – seeds



Staphylea colchica – autumn colour



Staphylea colchica – a multi stemmed small tree

The flowers appear initially as erect or horizontal panicles from the tips of the young shoots and can be 4in or more long. The flowers appear well before the leaves are fully developed and some remain over a long period until the tree is in full leaf. This is another feature that distinguishes *S. colchica* from *S. pinnata* whose flowers only appear prominently when the leaves have fully developed.

The seed capsules have two or sometimes three compartments and end in a long point. As you can see here the capsules turn from green to a pale yellowish green as the leaves drop. When the capsules begin to turn brown and the leaves have all fallen they drop to the ground and are then ripe for collecting. The profusion of colourful seed capsules is one of the most attractive features of this 'Bladder Nut' species.

Tom Hudson's form of *S. colchica* has much larger leaves and much larger flowers than our plant but its characteristics key out to the same species as the one growing here.

The most common species of *Staphylea* which is grown in UK gardens is *S. pinnata*. This is because it is a native of Europe from south east France and Italy eastwards to the Ukraine and the Balkans; even extending into Syria. Bean states that it has become naturalised in 'some (unspecified) parts of Britain in hedgerows and copses'.

There are several plants growing at Caerhays, which also date from 1991, and are of equivalent height to *S. colchica*. Their appearance would suggest that they may well grow on to at least 30ft or even more in the next 10 to 20 years. Some of the threes are in full sun while others are in much more dappled shade.

As its name suggests *Staphylea pinnata* has foliage with five leaflets (sometimes three or even up to seven) which are 2-4in long. The thing which very clearly distinguishes this species is that the faintly fragrant white flowers are always pendulous or drooping. The flowers are usually in clusters at the tips of short shoots but sometimes in two or even three tiers. The sepals on individual flowers extend to enclose the individual petals.



Staphylea pinnata – leaf



Staphylea pinnata – bud



Staphylea pinnata – flower



Staphylea pinnata – seeds



Staphylea pinnata – autumn colour



Staphylea pinnata – bark



Staphylea pinnata – growing into a large multi-stemmed tree

The fruits are in two celled rounded capsules which are 1-1½in long and, on our plants, they usually appear in pairs. Some years the capsules remain green or yellowish-green until they are ripe when they then turn brown and drop intact to the ground. Perhaps in colder autumns on some of our plants the capsules turn a highly decorative pink. The seeds themselves are about the size of a pea. Whereas *S. colchica* often holds its seed capsules well into winter after the leaf has dropped *S. pinnata* capsules drop with or shortly after leaf fall.

There is again some variation in the flower colour in this species. Some forms have an attractive pink tint to the back of the tepals and the centre of the flowers. This fades as the flowers mature. Although none of the pink forms have yet been formally named or registered this hints at the start of the confusion over the identification of individual *Staphylea* plants.

With hindsight, we were probably daft to have planted *S. colchica* and *S. pinnata* so close together originally and then to excitedly grow on the seeds for wider distribution thereby contributing to the problem.

There are a few erratically named hybrids here which are supposedly crosses between *S. colchica* and *S. pinnata*. It is far from certain if any are anything like what we acquired them as!

One plant is labelled Staphylea 'Elegans'. It has long distended panicles of flowers which usually have three separate tiers. As you can see the flowers have perhaps more in common with *S. pinnata* than *S. colchica*. However they also have a reddish-purple tinge in bud.



Staphylea 'Elegans' – in bud



Staphylea 'Elegans' – in flower



Staphylea 'Elegans' – bladders

S. 'Elegans' (previously *S. x elegans*) is shown in the Hillier's manual as being another name for *Staphylea x coulombieri* but opinions differ as to whether it is actually simply a form of *S. colchica* or a cross with *S. pinnata*.

Our plant does have leaves with three or five leaflets but the flowers are not 'white' as Bean suggests they should be nor can the flower really be described as being 'halfway' between the two species in size and shape.

Maurice Foster's recent article refers to *Staphylea colchica* 'Hessei' which has pink tinted flowers but the flowers here are clearly not those of a clone or cultivar of *S. colchica* alone.

Neither are they anything like the *Staphylea colchica* 'Grandiflora' which was exhibited by Windsor Great Park at the RHS show in 2017 at the Savill Gardens. This plant was also originally labelled as *S. 'Elegans'* at Frogmore House Garden.



Staphylea elegans – RHS Spring Competition 8-9 April 2017, The Crown Estate, Windsor

If we can conclude anything about our S. 'Elegans' it is simply that it is a pretty decent and different form of S. pinnata rather than being a hybrid between the two species but I am happy to be corrected.

Our plant of S. x coulombieri is also clearly S. pinnata. At this point one is tempted to stop scratching one's head and give up!

With more than a little trepidation (and more than a little searching on the ground) I find that we do have one plant labelled as Staphylea trifolia which is probably correctly named. Two others have been planted out over the years but have died or perhaps I simply cannot yet locate them.



Staphylea trifolia – buds



Staphylea trifolia – leaves



Staphylea trifolia – flower



Staphylea trifolia – seed

This species is a native to the eastern United States and is said to have been cultivated in the UK since 1640. It has downy undersides to its leaves which the other species do not and, as you would expect, always three leaflets which are 2-4in long. The terminal leaflet is long stalked while the other two have only short stalks.

Its flowers are in short drooping panicles and, with us, it is the last species to come fully into flower. The flowers are bell shaped and a dull or creamy white in colour 1½-2in long. Bean described them as ‘dingy’ which I suspect is rather unfair.

The yellowish capsules consist of three cells and are 1¼-1½in long with yellowish seeds. Our plant, which is already 8-10ft tall some 15 years from planting, has yet to produce more than one or two seed capsules.

More certainty exists with our plant of Staphylea bumalda because its flowers are ‘cymose’ in that the terminal flower opens first.

This is a species native to Japan, Korea and western China which has a neat shrubby habit and grows up to about 6ft in height. Its leaves have three leaflets 1½-3in long. The end leaflet is pointed and sessile or stalkless. Our plant has a spreading habit and its new leaves are yellowish at first. You tend to get a little dieback each spring and some pruning or tidying is necessary from time to time.

The flowers are greenish white in terminal clusters in ‘nodding’ panicles. It is also distinguished from other species in that its 1in yellowish seed capsules with two ovate parts are flat and not inflated.



Staphylea bumalda – buds



Staphylea bumalda – a small shrub

One of the two plants which we have labelled here as Staphylea bolanderi are nothing like the true species and are certainly forms of *S. pinnata* if you key everything out as regards its main characteristics. The other appears to be true to name although I may stand corrected!

Staphylea bolanderi is another species from America where it is native from California to Nevada. Here it grows as a two stemmed shrub to about 6-8ft and is very rare in UK gardens. The flower clusters are quite small and appear to emerge from the old wood although they are actually at the end of small new shoots. The key distinguishing feature of this species is that the stamens project beyond the petals. You can just about see this in these pictures. The leaf formation of leaflets is very different to other species too. Our plant has yet to produce any seed capsules.



Staphylea bolanderi – in bud



Staphylea bolanderi – in flower



Staphylea bolanderi – bark

In attempting to sort out the confusion about the naming of Staphylea species the good news is that all of them are extremely hardy, easy to grow, pest free, and easy to propagate. They thrive here in full sun and make excellent ornamental woodland garden shrubs and/or small trees which will tolerate a wide range of soil types with no ill effect.

Once removed from their bladders seeds are easy to germinate in a cool greenhouse and will emerge quickly after sowing either in the autumn or in the spring in a loamy compost. We have had best results here from autumn sowing but the greenhouse must remain frost free. Cuttings will root fairly easily when taken in June after the new growth begins to harden up. Grafting is unnecessary except perhaps to ensure the purity of a particularly fine form.



Staphylea seedlings

I am left wondering about the ‘Bladder Nuts’ which we collected as children. I remember the ‘Chinese Lanterns’ being distinctly pink. This means that they were very probably from Staphylea holocarpa trees as this is the species with the largest bladders and the most likely to have been uniformly pink when ripe.

Without Maurice Foster and Tom Hudson’s help I would have struggled to write this article about the Caerhays plants. The following characteristics key was prepared by Tom. I am grateful to them both for their help and advice.

CGS members are very welcome to request or come and collect Staphylea seed here in the autumn.

Charles Williams VMH, July 2019

Staphylea species – key characteristics

Species	Leaf numbers	Overall height	Flowers	Size of flowers	Seed capsule (this is the easiest way to identify the species)	Seed capsule colour
S. bolanderi	Suborbicular leaflets	6-8ft?	White with stamens extending beyond the petals	Drooping panicles 2'' long in clusters of five to nine flowers	?	?
S. bumalda	Three leaflets (downy on mid-rib and veins)	3-6ft	Greenish white - May to June	1/3" long. Clusters 1.5-3" long. Terminal clusters. End flowers open first (cymose).	1" with two ovate flat and not inflated parts	Yellowish
S. colchica	Three or five leaflets (terminal leaf stalked, others not)	15-20ft	Pale green with white petals recurved at the tips – April	3/4" long. Clusters 5" long. Erect panicles initially.	3-4" long with two or three celled capsule	Eventually yellowish
S. holocarpa	Three leaflets (terminal leaf stalked, side ones not)	20-30ft	White or rose coloured direct from axillary buds of old growth - April to May	1/2" long in panicles 4" long from the old wood	2" long, 1" wide. Three celled capsule terminating in a sharp point.	Pinkish
S. pinnata	Usually five leaflets (occasionally three or seven)	15-20ft	White – April	1/2" long. Drooping panicles 2-4" long. Sepals and petals erect.	1-1.5" long. Rounded two celled capsule.	Yellowish then brownish
S. trifolia	Always three leaflets (middle leaf long stalked, side ones only shortly)	10-15ft	Dingy white - May	Short drooping panicles 1.5-2" long. Bell-shaped flowers.	1.25-1.5" long. Three celled capsule.	Yellowish with a hint of pink
S. 'Elegans' (S. colchica x S. pinnata or the other way around?)	Mostly five leaflets (sometimes three)	10-15ft	White when open, rose coloured especially at the apex when in bud – April	Pendulous panicles. Free flowering.	1-1.5'' long rounded two celled capsule	Yellowish then brownish