

THE GENUS CLEMATIS, PAST AND PRESENT

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It is fairly unusual for a business to be set up around an entire genus. Normally, a person who is interested in a specific genus will specialize in one section, especially if that person is a nurseryman — he will produce the best selling species or cultivars from that genus. If a person is a private collector then usually that person becomes a fanatic specialist. If a botanist becomes involved in a genus, he too, specialises, usually, along a fairly narrow pathway.

What I am about to describe to you is the way in which our company has collected many different clematis species and cultivars and the way in which a concept is being carried out: that concept is a mixture of the specialist collector, the plantsman, the nurseryman, and also with the businessman's view to making money. What we have tried to do is combine all of these different angles: the fascination of collecting, successful cultivation, and the mass production and modern selling techniques.

During the last 25 years, clematis species and cultivars have been collected from various parts of the world. Our company now holds the National Clematis Collection for the National Council for the Conservation of Plants and Gardens. This, of course, has opened up many doorways for the collection of old cultivars and obtaining more species that have been almost lost to cultivation in gardens. From the sales point of view, this gives us a most prestigious position.

Our retail sales are divided into two: specialist, unusual plants for the collector and keen plantsman, and the sales of the more popular species and cultivars for the gardeners who are looking for a plant to produce a mass of colour with a flowering period as prolonged as possible.

With regard to the wholesale side of our business, we sell clematis liners to nurserymen who grow the plants on into a larger plant to their own specification; with additional sales of clematis that go direct to garden centres, where young plants are sold with a pictorial label. Specialist packs are also put together for supermarket sales in the UK and in Europe with special presentation cases. The final portion of our wholesale sales go to mail order companies in the UK and Germany.

With this outline of our clematis sales you will be able to see that the genus is sold to a wide range of customers, from

the specialist collector to the housewife who buys the clematis in a supermarket on an impulse sale.

I am now going on to describe some of the clematis species and cultivars that have been introduced into England from the sixteenth century and that have contributed greatly to the genus as it now stands; many of these species that were introduced in the eighteenth and nineteenth centuries are still very popular.

One of the first species to be introduced into the UK was *C. viticella* which is a European species producing its flowers on current years' growth. The flowers of *C. viticella*, vary in the wild from a mauve-pink through various shades until it reaches a deep, purple-blue. Queen Elizabeth I was known as the virgin queen and *C. viticella*, introduced during her reign, was known as the virgin's bower.

This species has given rise to many small flowered hybrids, which lend themselves to many uses in the modern garden.

We prefer to allow the *C. viticella* hybrids to scramble through low growing shrubs and they are particularly ideal for scrambling over winter flowering heathers. The winter flowering heathers are allowed to flower at the normal time; dead heads of the heather are removed after flowering, allowing the clematis to produce its growth from a plant which was pruned down the previous November. The clematis come into flower from the beginning of July and flower until mid-September, all clematis stems and top growth is then removed in November when each plant is pruned down to about 6-9 inches, to allow the heathers to flower freely.

Some of the better *C. viticella* cultivars are 'Venosa Viola-cea', which has a purple-veined flower on a white background; 'Etoile Violette', which is a rich purple; 'Abundance', which is a wine red; 'Minuet', which has a very attractive flower with deep, rosy-pink veins on a white background, 'Royal Velours', which is a velvet-purple, and one of the most fascinating of the *C. viticella* group — 'Purpurea Plena Elegans' a cultivar raised over 90 years ago that has a very attractive double, mauve-purple flower.

Another European species to be introduced into gardens quite early was the species *C. integrifolia*, which is herbaceous in habit. Its flowers range from pale to deep blue and there is also a very nice sugary-pink cultivar.

C. viticella and *C. integrifolia* were the parents of the first clematis hybrid to be raised. This cultivar was named *C. × eriostemon* 'Hendersonii' and was raised in the late 1830's, in London.

C. recta, another herbaceous species was introduced again from Europe. This produces long stems six feet in length with clouds of tiny white flowers — this plant being a typical English, herbaceous border plant.

Another herbaceous species introduced from China was *C. heracleifolia*. Some of its better cultivars are 'Davidiana', and a slightly deeper, blue form known as 'Davidiana Wyevale'. *C. heracleifolia* was a parent of a very useful ground cover plant, *C. × jouiniana* 'Praecox' — the other parent being *C. vitalba*, commonly known in England as 'old man's beard'.

The American species still prove quite scarce in Europe and are still quite unknown. Species such as *C. viorna*, *C. texensis* and *C. douglasii* var. *scottiae* — the latter coming from the Rocky Mountains. These three species are almost herbaceous in habit, dying back to ground level each winter. *C. texensis* was used in a hybridization programme with one of the most popular hybrid clematis, *C. × jackmanii*, and also with other species such as *C. viticella*. Some of the more dramatic hybrids which were produced are *C. texensis* 'Gravetye Beauty' and *C. texensis* 'Duchess of Albany', which bear flowers like miniature tulips.

Other popular species that were introduced from Europe include the tiny, pale blue-white flowered *C. campaniflora* and *C. flammula*; both coming from Portugal. *C. flammula* is still a popular species and looks most dramatic if it is allowed to scramble through the common green holly. It produces thousands of tiny, almond-scented, white flowers during the late summer months.

Many species were introduced from the Himalayan Mountain range and, more importantly, from China. The *C. montana* group were a most important introduction due to the mass of white or pink flowers produced annually. This plant is an ideal plant for scrambling over conifers, especially pines, or for covering out-building walls. One of the best modern cultivars is *C. montana* 'Elizabeth' which is a pale pink and produces a pleasant, fragrant flower

Possibly the most dramatic clematis species is that of *C. florida* 'Sieboldii' (Syn.: *C. florida* var. *bicolor*) which was introduced from Japan in the 1830's. This species resembles the passion flower. Its growth is somewhat fragile and the plant needs to be grown through a wall-trained, evergreen shrub to produce its best.

Some of the more important clematis species, with large flowers, also came from China and Japan. A few years after *C. florida* and *C. lanuginosa* were introduced from China and *C. patens* from Japan, during the mid-nineteenth century, a great

surge of hybridization took place, which resulted in some 500 clematis hybrids being offered for sale by the end of the century. These three species and many of their cultivars have since been lost to cultivation in the western world. We are looking forward to reintroducing these three species again in the future if we are successful in obtaining seed or plants from Asia.

One of the best yellow-flowered species is *C. orientalis* Ludlow and Sherriff 13342. It was introduced from Tibet in 1947. The species, which produces flowers with very thick, fleshy sepals, is ideal for scrambling over medium sized rhododendrons and will attain a height of some 10 feet.

C. rehderana, a species from Western China, produces rather coarse foliage but with attractive, nodding, greenish-yellow flowers which are produced in clusters and are cowslip-scented, is still not commonly grown. I recently found several forms of this species in China.

C. fargesii var. *soulei* produces many inch-wide, white flowers from April onwards and looks charming if allowed to grow through an evergreen such as the common, English yew. This plant, too, deserves to be more popular.

Some of the more fascinating evergreen Australasian clematis can be grown in England with protection. Of these, there is the fascinating *C. afoliata*; the plant produces a mass of stems that look like an overgrown rush with virtually no leaves. It is known as the 'rush stemmed clematis'.

C. fosteri, another New Zealand species, produces a mass of creamy-green, scented flowers during early spring. *C. paniculata* 'Lobata', another New Zealand species that is also dioecious, produces very attractive, white flowers which have pink anthers. Another of the evergreen clematis, a native of China, is the well known *C. armandii*. This plant has large, leathery-green leaves and produces an abundance of white flowers during the early spring.

Of the more hardy species (another European native) *C. alpina*, has given rise to quite a number of cultivars. These small flowered cultivars are ideal for growing through wall-trained shrubs such as the commonly grown *Chaenomeles* species and do quite well if growing on a north facing wall. They produce their flowers in England during April and early May, followed by very attractive seed heads. Some of the better cultivars are 'Ruby' which is mauve, 'Pamela Jackman' which is deep blue, and 'Columbine' which is pale blue.

The double clematis, *C. macropetala*, which also belongs to the same group as *C. alpina*, is a native of China. *C. macropetala* produces its mid-blue flowers during April/May as also

does the pink cultivar, 'Markham's Pink'

In our gardens clematis are grown in many situations. As you may have noted, we prefer to grow the species and their small flowered cultivars in a natural way through trees and shrubs and some even as ground cover plants. We also encourage our customers to grow the large flowered cultivars through wall-trained trees and shrubs, through open-ground shrubs and also to allow them to scramble along at ground level through summer bedding plants. Species roses also make ideal host plants for clematis.

Some of the early, large flowered hybrids that were produced from the 1850's onwards are still popular today. One of these being the large, white clematis, *C. × lawsoniana* 'Henry' (Syn: *C. × henryi*), and at the other end of the time scale, one of the newer cultivars to be introduced recently is the deep, velvet-red *C. 'Niobe'*, which we acquired from Poland.

The very large flowered clematis are most suited to wall-trained shrubs where their large flowers can be given more protection from wind. The mid season, large flowered cultivars such as *C. 'Marie Boisselot'*, *C. lawsoniana* 'Henryi' and *C. 'Duchess of Sutherland'* are more suited to scrambling over a medium sized rhododendron or cotoneaster where their more sprawling habit can be shown to best advantage over a larger sized shrub

The unusual double and semi-double cultivars such as *C. 'Vyvyan Pennell'* and *C. 'Countess of Lovelace'* or *C. × jackmanii* 'Alba' are best grown through wall-trained shrubs where their huge double flowers cannot be damaged so easily by rain or strong winds. The compact, early, large flowered hybrids make ideal container plants for patios and for growing over low-growing, evergreen shrubs such as *Cotoneaster microphylla*. Their early, medium sized flowers are produced in a range of colours. Some of the better cultivars are *C. 'Edith'*, which is white, *C. 'Dawn'*, which is pale pink and *C. 'Mrs. N. Thompson'*, which is a rich, purple-blue. The later flowering hybrids which produce their flowers on the current season's growth make themselves ideal for growing through shrub and species roses. These include *C. 'Perle d'Azur'*, *C. 'Victoria'* and *C. × jackmanii*.

As you will have noted, we prefer not to grow clematis against a bare wall. We feel that clematis should be allowed to grow in a more natural way, even scrambling along at ground level if required

PRODUCTION

Having grown our clematis through plants in the garden so

that our customers can see how clematis can be grown; having produced books describing this concept of growing clematis, with the writing of articles for the retail gardening press, both in the UK and in Europe, and also by exhibiting our clematis at the world famous Chelsea Flower Show, we do our utmost to publicize the genus to the retail public — encouraging direct sales of clematis from the nursery and also to publicize the genus for the wholesale sales of clematis in Europe. Having collected the species and cultivars and shown how they can be grown, and publicised them, we are then left with production.

We annually produce over 300,000 clematis liners. They are produced along the lines described in my paper given to the Eastern Region Conference, 1977, at Columbus, Ohio. Our production has changed very little since giving that paper. However, we have found it necessary to change our production slightly so that we can produce a heavier grade plant; this means the production of one crop per year. Our clematis are all grown from cuttings.

The cuttings are produced by the young, previous season's cuttings; these are potted during March, allowed to grow for 6-8 weeks when they are all pruned down. When pruning the plants down we achieve two objectives:

1. the plants are encouraged to become more bushy,
2. we produce our crop of cuttings.

The cuttings are rooted on ground level, heated beds with no mist but with 60 percent shade and with manual dampening down of foliage and the entire glasshouse floor area, as conditions dictate. The cuttings are allowed to continue growing in the trays until the following March; during that period the cuttings are fed with a liquid fertilizer. After the potted cuttings have been pruned they are immediately staked and tied, with tying being continued until they attain the size, grade and quality plant that we require.

Dispatch is from the beginning of August and will continue until the following March. The different outlets that take our plants naturally require the plants during different months of the autumn and winter period. Our plants are boxed 25 plants per box. These boxes are stackable, giving a more efficient packing and delivery service to our customers in the UK and in Europe.

You have seen old clematis of the past and their use as a current garden plant; a little insight into their production and I finish my paper by showing you some of the clematis species which are new to cultivation and recently collected by myself in China. These species are yet unnamed and proving what an

exciting genus clematis is and underlining how fortunate I am in being able to collect new species from the wild, grow them, display them, and make a business out of them in future years.

BRUCE BRIGGS. Would you comment on your spray program?

RAY EVISON: When our cuttings are taken they are immediately dipped in a Captan solution. When we are finished at the end of a cutting period we drench with Captan. We then move in with Benlate every 2 weeks as a light drench. We had a botrytis problem this year and had to come in with another compound for that. Basically it is a Benlate program though. When potting on we use a Captan drench to start. Then we use a Benlate drench (1 lbs/100 imperial gallons) at the rate of 25 gallons to 9000 sq ft. Benlate works well for wilt control.

CAMERON SMITH. How do you collect your wild plant material?

RAY EVISON: It is stored in damp moss in poly bags.

GRAFTING UPRIGHT JUNIPERS

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Grafting upright junipers is an ancient process in the field of plant propagation. Many articles and papers have been published in various past IPPS Proceedings dealing with this particular subject.

We do not specialize in upright junipers, however, we do grow *Juniperus chinensis* 'Robust Green', and *J. chinensis* 'Keteleeri' to diversify our line of ball and burlap material. We have grown 'Keteleeri' for many years and like it for the simple reason that it has a full, compact growth habit right to the ground, as well as deep green foliage. 'Robust Green' has been a welcome addition over the last few years because of its dense and dark green color which compliments its irregular form. Both cultivars seem to adapt to our changeable and sometimes harsh weather conditions in New England.

As did many nurserymen years ago, we used *J. virginiana* as an understock for grafting. It made an excellent understock, however, the ever present phomopsis blight problem made