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Fig. 1 *Pteridophyllum racemosum*

If I were asked to name my favourite group of plants it would certainly be the early-flowering woodland perennials that start to flower in the short days of late winter and herald the arrival of spring. Some are ephemerals – the ‘here today, gone tomorrow’ sort of plants that pop up, flower and then disappear in a matter of a month or two, only to reappear with more vigour the following year. Others flower briefly in early spring but keep their leaves into mid-summer or beyond. Our native flora include many examples of both types of life cycle. Celandines, bluebells and wood anemones are ephemerals, while primroses and violets are early-flowering species whose leaves can remain almost throughout the year. Snowdrops, although introduced, have become ‘honorary natives’ and are among the best known and most loved of our early woodland flowers.

Though I greatly enjoy all our native woodlanders and have actively encouraged their establishment in my garden in East Yorkshire, this article considers only the alien species I have attempted to introduce. Most are North American, but the final two are Asian. These plants do not require an actual woodland in which to grow, just dappled or partial shade that can be provided in most gardens by companion planting, buildings, or boundary hedges.

Dicentra cucullaria (fig. 2) is a charming species from the north-eastern states of North America and Canada. It has been in cultivation in England since the mid-1700s, but it is still not well known or commonly planted. It is probably the most extremely ephemeral species I grow, seen above ground for only 8–10 weeks. However, unlike some of its rather fussier, larger relatives including *Dicentra peregrina* and some *D. spectabilis* cultivars, it

returns reliably each spring for its brief spell in the sun.

Its common name is Dutchman’s Breeches, as the individual flowers with their paired spurs look like the traditional baggy trousers worn in Holland. In North America it is known as Staggerweed because domestic animals which graze on it develop breathing difficulties, become uncoordinated, and ‘stagger about’.



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Fig. 2 *Dicentra cucullaria*

Brief encounters with a few shady characters

Peter Williams

This reaction is caused by a very poisonous alkaloid produced by the plant as a chemical defence against smaller, natural grazers. Being poisonous appears to be a feature of many ephemeral species and is probably needed because damage to their leaves or below-ground storage organs would seriously affect their chances of survival when they have such a short growing season.

D. cucullaria does best in real or simulated deciduous woodland conditions (such as growing beneath deciduous shrubs), with humus-rich soil that is not waterlogged in winter. In early March the fresh-green feathery foliage erupts from the soil and flowers are produced very quickly. Each year I am surprised by the sudden re-appearance of flowering plants in areas of the garden where I would have sworn that only the previous day there was nothing but bare ground. In fact the leaves had probably been emerging and

unfolding for a few days but had remained unseen by me – just like large docks or nettles are invisible when I weed, but which become all too obvious when I'm showing a visitor around the garden!

The flowers are usually shining white, which makes the plants stand out well against bare soil or leaf litter, but 'Pittsburg' has off-white flowers with a pinkish hue, and the horribly named 'Pink Punk' (fig. 3) has darker pink flowers and slightly glaucous foliage. Both are attractive but I much prefer the wild species.

D. cucullaria is extremely easy to propagate vegetatively; in fact, it is difficult to stop it spreading around the garden accidentally, but delightfully. At the base of the stem, the rootstock is composed of numerous small bulblets (fig. 4). They're easily broken off and each one can form a new plant that will flower in just a couple of years. Hoeing or other soil-disturbing activities over

dormant plants will certainly disperse the bulblets, which will pop up the following spring; but unwanted plants are not troublesome and can be removed easily. Plants can be divided in spring just as they emerge and are on the point of flowering. They tolerate being lifted, root-washed and potted or replanted without noticeably sulking.

I have never observed seed on my plants, probably because they are not self-fertile and require pollination by long-tongued bees. In areas where the plants grow naturally, pollination is frequently performed by queen bumble bees searching for nectar after emerging from their winter quarters. I have noticed that the flowers in my garden often have holes in the spurs where short-tongued bees have raided the nectaries without achieving pollination.

D. cucullaria vanishes just as rapidly as it appears, and it is always 'at rest' by mid-May.



Fig. 3 *D. cucullaria* 'Pink Punk'



Fig. 4 Bulblets

Isopyrum biternatum (figs 5 & 6) is a low-growing herbaceous perennial which starts its growth period not in the early spring but in the late autumn. This is simply a modification of the ephemerals' strategy of growing while the dominant vegetation is leafless, and demonstrates that, like many ephemerals, it is very hardy and can grow well at low temperatures in the coldest days of the year. It is another native of North America and southern Canada but

in many northern locations it is an endangered species. As the name suggests, the leaves are compoundly divided and superficially look a little like those of *D. cucullaria*. It is a member of the Ranunculaceae, a family that provides gardeners with many excellent woodland plants.

The white flowers are freely produced in clusters and its bright yellow, pollen-rich anthers attract insects. This species does not produce nectar but is

fertilized by insects as they harvest the pollen. Flowers are produced over a period of a month or so, and the plant spreads well, but not threateningly, in shady situations. Division of this species is easily achieved by cutting, or pulling apart an established clump or pot in autumn or spring. New divisions grow away easily and flower well in the first year. The leaves die back rapidly as the days lengthen and plants have effectively disappeared by mid- to late May.



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Figs 5 & 6 *Isopyrum biternatum*

Erythroniums are true woodland ephemerals that occur in many parts of the northern hemisphere. Their annual above-ground tenure is only slightly longer than *D. cucullaria*, but their arrival and departure are less dramatic.

My first attempts with this group were with Dog's Tooth Violet, the European variety *E. dens-canis* (fig. 7), that I tried to grow as an alpine glasshouse subject. The result was abject failure! I knew nothing about the species but was tempted to purchase a few bulbs because

the photographs in the autumn bulb catalogues looked so appealing. I thought that the tooth-like bulbs should be planted horizontally, in peat-based compost, in the sort of shallow clay pans used by growers of alpine plants. Only stunted growth and deformed flowers resulted, and the bulbs were either smaller at the end of the growth cycle than at the beginning, or were dead. My only defence for such ignorance is that it was in the pre-internet era, when I was a young and enthusiastic, but poorly informed, gardener. I soon

realised that erythroniums needed to be planted quite deeply, preferably vertically, and with the tip of the 'dog's tooth' uppermost. I also learnt that many species and cultivars grew far better in the garden than they did in pots.

In recent years I have encountered a new problem with growing *E. dens-canis* and most other pink/purple species and hybrids. Each spring, beautifully marked leaves appear (that look like the camouflage on trout – hence another of the plant's common names, Trout Lily)

Fig. 7 *Erythronium dens-canis*Fig. 8 *E. californicum* 'White Beauty'Fig. 9 *E. 'Pagoda'*

and a host of pointed buds can be seen to develop and extend. The flowers begin to colour, and the petals just start to reflex, when they suddenly disappear. At first I thought rabbits were responsible, but the decapitation continued after I had successfully excluded those pests. The culprits, I now know, are pheasants. We are surrounded by land used by local shoots and each winter a number of birds seek refuge in our garden and enjoy the seed put out for the wild birds. Pheasants, like all birds, are attracted to red-coloured flowers (and fruits) and seem to be particularly attracted to pink/purple erythroniums.

The white- or yellow-flowered types are never damaged and it is these that I now grow. The most successful cultivars in my garden are the American species and hybrids especially the relatively late-flowering, *E. californicum* 'White Beauty' (fig. 8) and its pale-yellow offspring 'Pagoda' (fig. 9). The former quickly forms strong clumps, and the latter has spread all around the woodland edge and even invades the lawn. The leaves of 'Pagoda' have rather insignificant markings and are somewhat less attractive than other cultivars, but it just does so well that I could not be without it. 'Pagoda's' other parent, *E. tuolumnense*, is smaller, and has brighter yellow flowers, but does poorly in my garden. I do, however, grow it successfully as an alpine glasshouse specimen in a deep pot of soil-based compost!

I was given my first trillium by an old university friend about ten years ago. It was a small specimen of *Trillium grandiflorum*, which I planted on the shady northern side of a small woodland bed where I grew azaleas, dwarf rhododendrons and early-flowering miniature bulbs. The plant grew away well in my sandy acid soil, and over the next few years developed into a lovely clump, producing at least 20 flowers each year. As the plant expanded I started to think about propagation, because the idea of a drift of trilliums really excited me. I read that division was the easiest way forward and that it should be attempted just when the flowers have faded. On a couple of occasions I actually approached the plant, fork and spade in hand, but I could not bring myself to 'do the deed' in case I killed it. The courage to go ahead came when I noticed that there were numerous seedlings surrounding the parent (fig. 10).

I lifted the plant, put it in a wheelbarrow, and hosed off the soil (fig. 11). I was expecting to be able to split it easily into separate divisions, each with a growing point, but was alarmed to find a central mass of undifferentiated tissue the size of a small football with the growing points arranged around the periphery. This was the moment when I thought, "Why did I do it, how could I have been so foolish?"

There was no going back, so I cut the mass into two equal parts. From one, I cut twelve sections from the outside edge, each with leaves and the old



Fig. 10 Numerous seedlings surround *Trillium grandiflorum*

flowering stems attached. I potted each division into a 1-litre deep pot with my usual woodland compost made up of 3 parts coarse peat: 2 parts leaf mould: 1 part gravel, plus 3g per litre of 12–14 month slow-release fertiliser. The newly potted plants looked horrible with broken old flower stems and leaves, and I was convinced all would die. The residual mass of tissue had just a couple of damaged growing points and I replanted it near its original spot. I honestly thought that all was lost and felt quite fed up about the situation for a few days.

The following spring I was surprised, and truly delighted, when all the potted trilliums started into growth. I was even more surprised to find that they all flowered. The undivided half that I had replanted was slow to shoot and I really thought it had perished. However, it reappeared about a month later than usual, and once more flowered. I now realise that *T. grandiflorum* is a very easy species to propagate vegetatively and I routinely split



Fig. 11 Washing the trillium rootball

plants when the flowers have faded. They invariably survive and flower the next season.

Many of the seedlings have now reached flowering size and been moved to new locations in the garden. I have also been surprised when trillium flowers open on young plants in totally unexpected places. The seed has probably been dispersed by ants, very numerous in my soil, and the seedlings have grown unnoticed until flowering. I have also observed trillium seedlings appearing in pots of other species in my glasshouse and polytunnel – all are most welcome because it is impossible to have too many!

Expert trillium growers do not appear to rate *T. grandiflorum* very highly. It might be because the leaves are not well-marked or because it is just so easy to grow that it does not present enough of a challenge. Whatever the reason, it is still my favourite, and my dream of having a drift of trilliums is slowly becoming a reality.

The common horticultural strain of *Sanguinaria canadensis* is the variety *f. multiplex* 'Plena' (fig. 12). It appears regularly on the display stands at spring flower shows where it is always admired. 'Experts' can often be heard advising those 'naïve' enthusiasts looking longingly at the beautiful white, fully double flowers, that they should not be tempted to buy a plant because the flowering period is so short that 'If you blink you'll miss it'. Ignore all such advice! It is true that individual flowers last for just a few days, but they are produced over a period of two or three weeks, and the developing flowering shoot is very attractive as it pushes through the soil or litter layer in March. Each flower is 'wrapped' in the lateral lobes of an olive-green leaf that slowly unfolds to display the flower beautifully. When the flowers die, the leaves continue to expand and look attractive in their own right until the middle of summer. If the plant is sited out of the wind, it will be a true delight in early spring, possibly for a month, or perhaps a little longer.

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Fig. 12 *Sanguinaria canadensis f. multiplex* 'Plena'

The genus name *Sanguinaria* refers to blood, because of the red pigment present in the root tissue and plant sap; hence the common name Bloodroot. If a lobe of the leaf is removed, blood-like sap emerges from the cut veins and forms drops that solidify along the cut edge of the leaf (fig. 13). The pigment was mixed with walnut oil or bear's grease by Native Americans as a skin dye for body painting. The pigment is actually another alkaloid poison and has been used in all manner of herbal medicines both by Native Americans and later by herbalists. While the compound certainly has powerful physiological effects, the efficacy of remedies containing the pigment is uncertain, and probably just as likely to be harmful!

My first bloodroot was the common double variety, and it formed a good colony in the bed where I planted my original trillium. Although it is easy to propagate by rhizome division in early spring or autumn, the cultivar, like many other plants with fully-double flowers, is sterile. I now far

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Fig. 13 Blood-like sap

prefer the wild species (fig. 14) which originates from eastern North America. It has a single flower with eight pure white petals and is self-fertile. The flowers have a variable structure but are generally composed of four large and four smaller petals, although petal size and arrangement can vary greatly between individual plants.

The species grows well in semi-shaded environments and I have established a number of plants beneath deciduous shrubs, especially magnolias. The seed pods develop soon after the petals have fallen (fig. 15), and expand for about a month before they become yellow and dry. Pods open to reveal a collection of shiny brown seeds each with a glistening white attachment (fig. 16). The seeds look like small 'fried eggs' (fig. 17) and the white tissue is an elaiosome that attracts ants which aid dispersal – a process known as myrmecochory. Ants harvest the seed, eat the nutritious elaiosome, and abandon the seed which goes on to germinate the following spring.

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Fig. 14 *S. canadensis*



Figs 15, 16 & 17 The seed pod and seeds of *S. canadensis*

To my mind, *Jeffersonia dubia* (fig. 18) produces some of the most beautiful of all early-flowering spring blooms. The flowers range in colour from white through pale lavender to violet and are produced as, or before, the lime-green leaves are expanding. Although the genus name derives from Thomas Jefferson, who served under George Washington and became third US President, this species is not American but Asiatic. (The name *Jeffersonia* was first used to describe *J. diphylla*, an American native I have only just acquired.)

I first grew *J. dubia* in an alpine house because of its reported need for an alkaline soil (my soil is acid, pH less than 5). The plants grew well enough in pots and flowered freely, but after releasing many other captive plants into my garden (attitudinal shift!), and noting just how much better they grew, I decided early this year to release my Jeffersonias.

The results were dramatic. The plants grew and flowered well, and produced numerous seed pods. The seeds have well-marked elaiosomes and again are naturally dispersed by ants. Even without ants, germination is reported to occur readily if seeds are sown just as they are released. In the past I have increased the number of specimens by cutting dormant plants into quarters; this has been generally successful, but individuals are slow to recover and a proportion die.



Fig. 18 *Jeffersonia dubia*

I will finish this account of my favourite early-flowering woodlanders with another Asian species, *Pteridophyllum racemosum* (fig. 1), a Japanese endemic I have been growing for three years. It would be difficult for me to choose between this and *Trillium grandiflorum* in my 'desert island' plant selection. I bought my first plant at an HPS AGM and promptly planted it out. It promptly died! Undeterred, I looked up the biology of the species in the scientific literature and sent a query about growing conditions to the Japanese scientists who had written the most recent account of the biology of species. They advised on growing conditions and recommended a nursery that ethically sourced Japanese natives, and subsequently I placed an order.

Five plants arrived 10 days later, perfectly packaged and in superb condition (fig. 19).

The cost of each plant was less than half of what I had paid for my first plant, despite having to pay the nursery to wash all soil off the roots, get an inspection certificate, pack and then air-mail the plants half way round the world.

I potted the plants (in the same mixture as the trilliums, with Perlite substituted for grit). My research suggested that they needed to grow in deep shade, with no more than a short exposure to direct sunlight on any day, in an acid soil, with a good layer of organic matter; so a few weeks later, when roots began to emerge from the pots, I planted out three individuals in close proximity in the

bed where my trilliums and *Sanguinaria* f. *multiplex* 'Plena' were thriving.

I am pleased to report that the *Pteridophyllum* are also doing well. They have survived two winters and now have multiple crowns. The fourth plant was given to a friend and is also doing well in similar conditions to my own. The fifth is still pot-bound in my glasshouse whilst its future is under discussion ('old self' says keep in captivity in the glasshouse; 'new self' says set it free and let it take its chances).

The leaves emerge in late February and the plant really does look like a variety of fern as suggested by its generic

name which literally means fern leaf. By March, the flower spikes have developed and the white flowers have begun opening. Multiple flowering stems are produced until the end of April. I will probably leave this established group another winter and then I hope to split at least one of the plants the next spring.

Seeds of this species are very difficult to obtain; they do not appear on plant society exchange lists and are not available commercially. The Japanese nursery did not supply seed and informed me that seed-grown plants were very variable and they had selected a number of clones that they propagated by division. A few seeds were formed on my plants last spring, and again this year, but I am not sure whether they developed fully and are fertile. Nevertheless, I have sown them directly into the soil between the three established specimens and await the outcome.

There are so many wonderful sleeping beauties among early-flowering woodland perennials that it has been very difficult to know what to exclude. The plants I've chosen are simply my favourites at the moment – and I've not even mentioned woodland bulbs or some of the anemone species and hybrids! 🌸



Fig. 19 *Pteridophyllum racemosum* on arrival from Japan

Peter Williams loves woodland plants because, like him, they look their best (to misquote Gilbert and Sullivan) 'In the dusk with the light behind them'.