

Curiouser and curiouser

Heather Russell

“Curiouser and curiouser” is what Alice said when she saw her feet at the end of her very elongated legs. She had seen her feet before, of course, but not from that perspective. Fortunately, we do not have to fall down a rabbit hole before we can see the plants in our garden from a new angle.

I hope to encourage you to look much more closely at plants and to examine them in detail. Forget Alice, we have a whole plant ‘wonderland’ in our own gardens. We need to be more observant, examine the details and to ask questions of what we see, to be inquisitive; for a curious gardener makes a good gardener. I’ll illustrate this from my own experience in the garden.

Some years ago I was given a straggly unnamed plant, which grew to about 3ft and bore a succession of simple but beautiful purple flowers. I think of myself as observant and very interested in the plants in my garden, but I have learnt that in reality I miss a great deal. I look, but do not see.

One day, as I walked past this plant, I was stopped in my tracks. It was early afternoon and all the flowers were closed. It suddenly dawned on me that this happened every day,

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Figs 1 & 2 *Tragopogon porrifolius*, Jack-go-to-bed-by-noon, awake and asleep.

though it had taken me several weeks to notice it. I felt rather stupid, and it made me realise just how much more I must be missing!

Stimulated to do some research, I found that the plant was salsify and went by the impressive name of *Tragopogon porrifolius* (fig. 1). The flowers did indeed close at midday, reflected by the common name of Jack-go-to-bed-by-noon (fig. 2), one of those memorable, descriptive colloquialisms. It is heliotropic – the flowers follow the sun around – which is probably why the cell structure of young stems allows you to bend them gently to a new, temporary position. I could feel a fascinating tingling sensation with my fingers when I did so.

I am only a point-and-shoot photographer, but photographs, taken on a macro setting then further enlarged on my computer screen, revealed wonderful detail in the centre of the flower. Interestingly, once I had seen it magnified, I was able to see it clearly with my naked eye. Even though it was very clear, I had not focused in on it until my mind's eye had been informed. Scientists report¹ that most of us initially see only the general picture; autistic people and animals see details. So it pays to take that second look.

I confess to having had a tenuous hold on the terminology and identification of the parts of the flower, but I now had the incentive to learn. I could not ignore the interesting 'sex bits' which are, after all, the whole purpose of the bloom. At the centre of this flower are the anthers, the male pollen-producing parts, five fused together to form a tube – you can see the five white dots on each one. The style grows up the centre of this tube and emerges to display the forked stigma, which is the female pollen-accepting organ. This process starts from the outer edges of the flower and seems to trigger pollen production.

The flowers open up only in good light conditions, and only for about two days, before the sepals close up to protect the developing seedhead. Inside, the large, rough seeds and their parachutes develop, until the head opens up to display a long-lasting 'blow ball' before wind disperses them. I find that the seedheads open more successfully in warmer weather. It is monocarpic, self-seeding lightly in my garden and seems to prefer slightly damp conditions. I enjoy having this salsify around, and it's a reminder to me to be much more observant.



Fig. 3 *Smyrniurnm perfoliatum*

¹ *Animals in Translation*, Temple Grandin, pub. Harcourt

From the first time that I had seen the zingy lime-green foliage of *Smyrniium perfoliatum* (fig. 3) in spring, I had tried, unsuccessfully, to buy it. There seemed to be an aura of mystery around it, as different books informed me that it was ‘an annual’, ‘a biennial’ and ‘a perennial’. Eventually a kind gardener gave me a handful of fresh seed, which was sown between informal planting in a part-shaded position. I eagerly awaited the appearance of plants the following spring, but there was nothing. I was really disappointed. Then I forgot all about it.

At least two years later, in early spring, I noticed two unfamiliar but suspiciously healthy plants that I had no recollection of planting (fig. 4). I suspected a rogue invader and kept a beady eye on them. After a week they were even bigger and I had to know whether it was an unwelcome weed or not, so I forked one of them up. Instead of invading roots, there was a parsnip! A parsnip-shaped root anyway (fig. 5). And then the penny dropped and I realise that it was probably the smyrniium. But what had it been doing for three or four years, and why didn’t it look like a smyrniium?

The answer to the second question was soon solved when in early May some new and very different leaves started to develop at the centre of the remaining plant. The pinnate leaves were left behind at ground level, as larger, more familiar, heart-shaped, perfoliate leaves and stem, all in the luminous lime green I had admired, rapidly climbed to about three feet in height, with insignificant flowers. It shone out among the other plants and set off the scarlet *Tulipa sprengeri* a treat (fig. 6).

On examining a photograph I had taken the following year of another plant at the same stage as my ‘mystery’ plant, I spotted a small seedling with simple cotyledon leaves, and another with two small pinnate leaves, resembling those of the ‘mystery’ plant. Germination of some of the original seed must have been delayed. Piecing things together over time, I have gained great satisfaction from working out the curious life

cycle of this plant.

In early spring, seeds germinate to produce two simple cotyledon leaves that wither away in a few weeks. They are easy to miss, and vulnerable to hoeing and other gardening activities. The following February/March two small pinnate leaves develop, lasting for some weeks before they too wither away. (I suspect that there can sometimes be a repeat of this

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Fig. 4 In their first and second years.

stage.) The third year after sowing there is a cluster of larger pinnate leaves, with the secondary growth developing in late spring, to flower in early May, followed by generous seed production in summer. This lengthy cycle means that it takes some years to establish an annual show of mature flowering plants. I will leave you to do the maths!

Seedling roots resemble miniature parsnips, and it is obvious that the final flowering growth spurt depends on the plant having built up sufficient food reserves. I've found it possible to transplant small second-year seedlings, but have not yet proved that they will survive in pots to maturity.

Recently I came across a very lucid account of the habits of *Smyrniun perfoliatum* in *Garden Flowers from Seed*², confirming what I had, eventually, worked out for myself. Instead of regretting that I had not come across this earlier, I felt a great sense of satisfaction that I had discovered it for myself, through query and observation.

My little colony is not yet mature, but I am optimistic, and it has even occurred to me that I may eventually have to curb its spread. I look forward to being in that position, as Christopher Lloyd writes that it looks wonderful in a vase with poet's narcissus and white and purple honesty.

Optimistic as ever, 10 years ago I bought a very small, unnamed eucalyptus seedling from a local nursery, and planted it in our exposed, north-facing 'wild garden', previously called 'the meadow'. It grew steadily to 10ft over 5yrs and proved to be a very hardy, multi-stemmed, or 'mallee' type Eucalyptus. One June day I caught site of something white in the distance, and on investigation was stunned to see that it was flowering. It had never occurred to me that eucalyptus flower in the UK, and I had not a clue as to how they would look. I had noticed some little stubby growths on the new stems some months before, but admit that I did not bother to pursue the subject! They were, of course, the buds, which are produced along the stem of new growth in summer, to flower the following year.

The flowers were fascinating and beautiful, and every visitor was dragged over to inspect and share in this new discovery. The unusually large number of anthers pushes off the protective cap, or operculum, to open out like a powder puff (fig. 7). The flowers last for about two weeks, but the seeds take months to mature. I have not sown seed but I understand that, if done correctly, they germinate well and grow



Fig. 5 *Smyrniun perfoliatum* roots like mini parsnips.

² *Garden Flowers from Seed*, Christopher Lloyd and Graham Rice, pub. Viking

rapidly. The seedlings are best planted into the ground, where they are to grow, at a very early stage – before the roots have started to circulate around the pot. As they are evergreen and the wood is dense and heavy, the eucalyptus is very prone to wind rock unless the roots have been able to radiate out well to support the tree. Unfortunately, I’ve found this to be true, as a 6ft high potted *E. niphophila* blew down in high wind after 2 years.

I have cautiously identified my tree as *E. gregsoniana*, from the foliage and the attractively patterned bark, which developed around the seventh year, and its obvious hardiness. It is also referred to as the ‘Snow Gum’ as it grows on the sides of mountains where it survives the cold and snow, and I can vouch for that after the heavy snow and weeks of freezing temperatures of the last two winters here in Northumberland. It is clear that the severe weather has damaged the foliage of my tree, but the flower buds seem healthy. I really hope that it survives.

Why this delightful and gracious tree is not better known and grown is a mystery, as its size (up to 12–14ft) makes it particularly suitable for smaller gardens. Its qualities are not obvious when seedlings, and as they need to be sold when very young for immediate planting, I guess that makes them uncommercial for large nurseries. They are worth seeking out.

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Fig. 6 Full grown, it zings with *Tulipa sprengeri*.

There is much beautiful detail to be seen in most flowers; we need little urging to look at them, but I do recommend using a hand lens. Even a very small garden can keep you happily occupied for hours. Selected strains of the annual *rhoeas* poppy are a favourite of mine and always repay scrutiny. Their transient and fragile beauty takes my breath away, especially the elegant colours from the Sir Cedric Morris selections, such as the Mother of Pearl Group, which seed well in my gravel, particularly effective amongst self-set *Eryngium bourgatii* ‘Picos Blue’.

Since I have been looking more closely at them, I have been surprised to see how different coloured flowers also have varying colours of anthers and pollen, further enhancing their allure. And now that I am paying more

attention to the sexual parts of flowers, I have noticed that the poppy's are not typical, and reward enquiry. I've learnt that the male parts, the anthers, are obvious, but where are the female parts, the stigmas and styles? The little felty radiating lines to be seen on the lid of the ovary, or seed case, are the stigmas – the lid is a form of style, and after fertilisation the lid curves up and each point around the edge represents one style. There is one little 'pepper pot' hole between each style. These radiating stigmas vary in number from flower to flower.



Fig. 7 *Eucalyptus gregsoniana*; the operculums (protective caps) are lifting to reveal the flowers.

The common wild carrot, *Daucus carrota* (Queen Anne's Lace), has protective and supporting sepals, which are as beautiful as they are functional, but are seldom noticed. The minute, single red flower in the centre of this white umbel, is often ignored too. It is said to have originated from a drop of blood when the Queen pricked her finger embroidering her lace. It is most probably a homing signal for pollinating insects.

If you want to examine more curious-looking flowers close up, I recommend a wide variety of *Euphorbia*. Each type is similarly weird but definitely different. Then try to work out and name the sex parts. Have fun!

The many forms of bud, or 'petal packaging', are also worth a closer look. The petals within the protective sepals can be furled round, crushed up, pleated or folded. Some, like poppies, have petals crammed in like parachute silk, which need to smooth out in the sun, others burst into life, like the alliums. The common teasel's bud arrangement is mathematical genius, and the flowers open around the equator of the head first, and then proceed simultaneously to the north and south.

I have only recently discovered the lovely *Verbascum blattaria* f. *albiflorum* (fig. 8), a self-seeding biennial which graces my gravel areas with its tall, self-supporting, wiry stems, bearing white flowers with a pink blush on the rear, followed by shiny, dark, spherical seed cases. It was only when my photographs were enlarged on my computer screen, that I saw the glistening hairs on every part of the plant.

Verbascum flower-buds resemble little origami boxes, which open to reveal flowers with sex parts that look like weird spiders. They certainly repay use of a hand lens to reveal the different parts.

Today we accept that these sex parts are the essential working parts of a flower, but,



Fig. 8 *Verbascum blattaria* f. *albiflorum*

a thoughtful and observant gardener and nurseryman, had produced the first recorded plant hybrid. However, he kept his achievement quiet because he recognised the blinkered attitude of English botanists. Although it was many years before the Linnaean system was accepted by the eminent English botanical establishment, world leaders at that time, it was readily accepted by more open-minded botanists in other countries, in particular, the Americas.

Perhaps I am easily pleased, but I find learning about such details gives me a real buzz, and enhances my many perambulations around the garden. I hope that I have persuaded you to look at your garden from a new perspective, to look more closely at your plants and discover the wealth of beauty and detail before your eyes; to be more inquisitive and probing in your exploration of the fantastic plant ‘wonderland’ that is your garden.

The philosopher John Locke³ writing in the late 1600s, eruditely encapsulates my thoughts. ‘There is noe thing constantly observable in nature which will not always bring some light with it and lead us farther into knowledge of her ways of working.’ 🍷

Heather Russell continues to enjoy gardening at Garden Cottage, Bolam, but is learning to pause and consider her plants close up and personal.

³ John Locke to Sloane, 14 September 1694