



Yellow hellebores raised for garden effect

I have two claims to fame. The first is that one year I had the most new entries in the *Plant Finder*, all raised in my suburban 65 x 35 feet garden. The second is that (as a result of the first) I had a phone call asking if Roy Lancaster could come with a TV crew to see 'my nursery'. The caller was pretty taken aback when I explained that they wouldn't be able to get the cherry picker into the site.

The speaker at one of our NE Group meetings was Helen Picton of Aster fame, and at the end of her talk she asked if anyone had ever considered raising new asters. Sitting at one end of the audience of maybe 120 members, I had a fascinating view of a group of Hardy Planters breathing in with quiet horror. And I thought 'That's interesting'.

Fast forward to May 2017, and I was giving a talk to our Group. I opened by asking the committee to outline the main purposes of the Society. To their credit, they answered "Conserve, advance, improve hardy plants". But I got a lot of blank looks when I asked what the audience, or the wider HPS, was doing about the 'improve' bit. One lady had a farm and raised sheep, and that was as far as we got.

I assured the members that they wouldn't be getting any deep insights, just practical experience gained mainly through raising yellow hellebores for garden effect.

I had collected plants from noted breeders including Eric Smith, Helen Ballard and Will Mclewin. Like many people with naturalistic gardens, I'd

decided that the dark forms were nice but they didn't show up well in the wider setting. I wanted a few good yellows but I didn't want to pay for them.

What I did have were good stock plants. I wasn't looking to reinvent the wheel, so I looked at what I had:

- 'Sirius' – a strong, creamy-yellow from Eric Smith
- 'Ushba' – a lovely white of good shape and substance from Hellen Ballard
- an unnamed, small-flowered yellow, said to be from Ballards, obtained through an advert in *The Garden*.

What I didn't have, in early summer 2017, was the plants that I had raised from this stock, or any pictures to show.

## Raising new plants

Gerry Parker

My answer to illustrating the practical effects of theoretical breeding was to produce some of my stock of canaries. It was a treat to watch the members' faces when I got a big box from under the table and set out small cages.

The audience knew that they were birds, and identified one as a canary, "because it's yellow". The other birds threw them: the smallest one might be a canary, because it was also yellow. The brown bird... no idea.

I used this stock to show the effects of selective breeding and hidden genes, pointing out that the big yellow bird was a Norwich Canary, in its day the must-have music system for Georgian gents. A breed that is the avian equivalent of a double-flowered old French peony. The small yellow bird was an Irish Canary, less than half the size of the Norwich but with much more vigour. An important point is that the original wild Canary was dull green. Five hundred years of domestication and generations of selection had produced yellow birds.

I knew from experience that the F1 progeny from a Norwich x Irish cross would be intermediate. But back-crossing each year's chicks over say five generations to a pure-bred Norwich would result in a Norwich lookalike with oomph.

I turned to the brown bird, which was a cinnamon

Norwich Canary. That colour was the first mutation to arise in canaries over 250 years ago. It arises from a recessive gene, and the colour of the progeny can be accurately predicted on the day of hatching by eye colour alone. For example, using a breeding pair of cinnamon cock bird and a yellow hen will result in young cocks that have dark eyes and yellow colouring, but 'carry' a hidden gene for cinnamon. But all the hen chicks will have pink eyes and cinnamon plumage.

The practical application in plant breeding is in, for example, breeding double flowers. Single-flowered seedlings from a double-flowered parent will all carry the gene for doubling. Back-crossing them to the parent, or crossing them with each other, will produce double-flowered plants.

I was keeping vigour in

mind when breeding my hellebores. My initial seed-parent was 'Sirius', good in its day, and a good parent, but not up to the standard of modern yellows. The initial cross with 'Ushba' gave better forms with pale cream flowers.

When those seedlings flowered, I crossed the best of them with the small-flowered good yellow from Helen Ballard. Three years of actively 'growing' the resulting plants in pots gave plants of good colour, but worse form.

The answer to the form question was to back-cross again to 'Ushba', for her vigour and good looks. After selecting over ten years I had my garden-worthy stand of yellows. I'm happy with them and they make a good show in front of my bird shed. I call them 'Sirius Improved' in my more pretentious moments.



Green Norwich, the original canary



Yellow Norwich, the Georgian sound system

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Some practical points are maybe worth enlarging on:

1. Method – I don't emasculate plants. I simply take pollen from one parent to rub it on to the stigma of another, taking care to cover the pollinated flower with my secret weapon, perforated bags used for organic wholemeal bread. The bag lets the flower breathe, stops further pollination, and collects the seed when it's ripe. In late May or early June it's just a matter of snipping the flower off, sowing the seed on 50/50 JI and general-purpose mix, topped off with grit. The pots are kept watered, lined down the side of a path, and the seedlings are pricked into ½L pots the following spring.

2. It's important to actively 'grow' the seedlings. I could line out in my allotment but growth would be slower, so I move the plants up to 1, 2 or 3L long toms as they progress. Well-grown plants will flower in about three years.

3. Some plants are easier than others. Some F1 crosses can be easy. I tried my own crosses and had enough plants to sell for a couple of years. It's not, as they say, brain surgery.

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*H. x hybridus* 'Ushba'

What I hope this piece might do is encourage you to think about raising new, good, hardy plants. You won't make lots of money, but it could be very interesting and it's quite fulfilling. A bit like raising canaries.

It might help if I give a few examples of plant breeders from the last century:

Herr Frikart raised *Aster x frikartii* 'Mönch', a hybrid between *A. amellus* and *A. thomsonii*. I gather it was a very difficult cross. But it was one of G S Thomas's top six plants. He didn't say what the other five were.

Mr Russell was a jobbing gardener from York who raised the famous lupin strain on his allotment. They were open-pollinated and

rogued. He sold the rights after many years to a seed firm, on the condition that he had the right to rogue the seedlings. The first year that he did this they were left with 800 out of the 5000 plants they'd raised.

Dr Saunders was a Canadian who raised hybrid peonies. He crossed species, trying everything with everything. His hybrids are still on the market and, in my view, fantastic.

And last, Eric Smith, of *H. x ericsmithii* fame. He bred hostas, hellebores, variegated plants. My favourite British eccentric.

So get to work, and in a few years' time let me and the editor know of your plant-breeding successes. And remember to take photos. 🌸

**Gerry Parker** has been a member of the HPS for over 30 years, and a member of the NE Group since its foundation. He lives in the city of Durham, in County Durham, once described by Graham Stuart Thomas as 'one of our cooler counties'.

Gerry is a retired civil servant, and for some years ran a small nursery selling plants that appealed to him. All declared for tax. And he has 1½ allotments. This is the North East, you know.