



THE

FRITILLARIA

GROUP



The Fritillaria Group of the Alpine Garden Society
Journal 34 Spring 2014



Directions for the Spring Meeting

Coming from the M25 Junction 11 (Chertsey/Woking)

Leave the M25 at junction 11 taking first exit on roundabout onto A317 and follow the signs for Addlestone A318. Follow the dual carriageway until you come to a large roundabout, take the last exit on the roundabout onto dual carriage way sign posted to Addlestone/Byfleet (A318). Continue on this road going straight across two mini roundabouts, then straight through two sets of traffic lights, past the Black Horse pub. About 1 mile further on you will come to a car showroom on your left and a pub called the White Hart. Take second exit on next mini roundabout heading towards Woodham / Woking B385. There will be a road on your left called Common Lane, and row of cottages and then some shops which lay back a little from the road, at the end of these shops on the left is the car park for New Haw Community Centre.

Coming from the A3 Junction 10 M25

Come off at junction 10 and take the A3 heading towards London, leave at the Cobham exit and take A245 heading towards Byfleet, straight through the next set of traffic lights. About a mile further on you pass by the turning for Silvermere Golf course. You will then come to a roundabout, continue straight on A425. At the next roundabout turn right onto A318 following the signs to Brooklands super stores, you will come to a roundabout, turn left past the stores on A318. Go straight across at the next mini roundabout. About 1 mile down the road you will come to a railway bridge controlled by traffic lights. Continue on this road until you go over the canal bridge. As you go over the bridge you will need to keep to the left, turn left at the mini roundabout heading towards Woodham / Woking B385. You will go past a road on your left called Common Lane, some cottages and a block of shops that lay back from the road. At the end of the shops on the left is the community centre car park.

**The Hillside Centre at Wisley has been
booked for our Autumn meeting on 26 October**

**Committee members and contact details can be found on our website:
www.fritillaria.org.uk**

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amana cover photograph
by **Pietro Roseo**



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THE *FRITILLARIA* GROUP OF THE ALPINE
GARDEN SOCIETY

Spring Show and Meeting

A Day with Janis Ruksans

16 March 2014 at New Haw Community Centre,
Woodham Lane, New Haw, Addlestone, Surrey KT15 3ND.

Please note change of venue*

PROGRAMME

- 9.30 Doors Open and Coffee. Plants and Bulbs will be on sale during the day.
10.30 “*Fritillarias* for different growing conditions” by Janis Ruksans
12.00 Pollination demonstration by Rannveig Wallis
12.15 Lunch Break
13.15 “New bulbous irises and crocuses in the wild and garden” by Janis
Ruksans
14.45 Raffle
15.00 End of Meeting

Entry fee £2.00 for members of the *Fritillaria* group and £5.00 for non-members.

Please bring in-flower *Fritillarias* for the show bench!

We have structured the day in this way so that members will still have time to visit Wisley if they wish to do so. We suggest that attendees bring lunch due to the short break!

*Further details of the location of the New Haw Community Hall can be found on their website www.newhaw.cc. Directions are also available on the inside front cover. Visitors Welcome. The *Fritillaria* Group invites members of The Crocus Group and The Iris Species Group to participate at this event. As well as a plant show there will also be a photographic display.

The Subgenus *Liliorhiza* (an Amateur Hobbyist's View)

Words by Ron Mudd. Images by Ron Mudd, and Tony Willis.

[Ron began his series on the Subgenus *Liliorhiza* in the Spring 2013 number of the Journal with an overview of the entire Subgenus, and followed with an analysis of *Fritillaria glauca* in the Autumn 2013 number.)

2. *Fritillaria purdyi*

This species is found in 10, (possibly 11), counties of N.W. California, and 1, Josephine County, in Oregon. The majority of recorded sites are below 700 metres, where it grows in serpentine soils in vernal wet hollows or low places, areas that are generally very sparsely colonised by other plant species.



It does, however, have another habitat on The Palisades (a mountain range in Napa County) where the sterile volcanic soils are wet in winter and spring, and then become bone dry in summer. In a fascinating article for *Fremontia*, Vol. 3, April 1975, entitled 'Propagation of Native Plants, with Bulbs, Tubers, Corms, Rhizomes and Rootstocks' Wayne Roderick and W. Richard Hildreth wrote "*Fritillaria purdyi* is almost impossible to collect as bulbs in the wild, because the bulbs are wedged inbetween (sic) layers of rock and are easily damaged if the rock is moved." They go on to say, "Garden requirements for this species are very difficult to duplicate, and the

plants tend to be short lived in cultivation”.



At the lower elevation sites *F. purdyi* flowers in March and April, but as elevation increases this becomes May into early June. It would seem, however, that plants growing on high ridges, in some sites, will flower early



F. purdyi in the wild

in April given an aspect conducive to early snow melting. These sites are rarely visited this early due to the deep snow still on the ground lower down making access very difficult. It is very possible that this species is far more numerous at higher elevations in a few areas than in all of the lower elevations sites combined. There are reports (pers. comm.) of thousands of plants growing in a few small (1.5 acre) sites. At well populated sites,

limited casual observations (author, 1996 to 2002) would indicate approx. 30% leaf, and flower, vertebrate herbivory, possibly by Brush Rabbits, *Sylvilagus bachmani*, and Mule Deer, *Odocoileus hemionus*.

Each plant typically has 1 to 3 flowers, although 8, rarely more, have been recorded in nature:



In cultivation the most I have seen is 5 flowers on one plant, but this year one UK grower, (pers. comm.), has told me of plants with 12 flowers in their collection. The majority of plants in my collection usually produce one or two flowers each year.



F. purdyi in cultivation

Fritillaria purdyi was described in 1902 by Alice Eastwood (1859 to 1953), and named to honour Carlton Elmer Purdy (1861 to 1945), a nurseryman who specialized in Californian native plants. The description appeared in Bulletin of the Torrey Botanical Club 29: 75 1902, in an article titled "Some new Species of Californian Plants". Following the description Eastwood writes, "This description was drawn from fresh specimens sent by Carl Purdy in whose honor it is named. The specimens were grown in Mr. Purdy's garden in Ukiah from bulbs sent by Mr. Charles Lowe from Kneeland, Humboldt County, California. It was blooming in April in Mr. Purdy's garden and the ripe fruit was sent to me by Mr. Lowe, May 27. He collected it where he had collected the original bulbs. Mr. Lowe also sent blooming plants in April which were not so tall nor so luxuriant as those from which the description was made. The type is in the

herbarium of the California Academy of Sciences. The drawing, from the fresh specimen, was made by Miss Margaret W. Buck.”

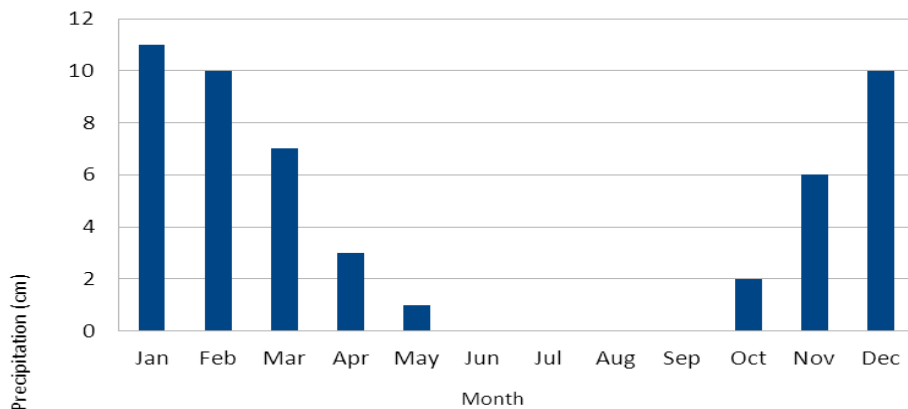
The type specimen can be seen online (with a little digging!) at the website of the CAS - <http://research.calacademy.org> . It is possible that this specimen was amongst the 1500 saved from the burning CAS building, following the 1906 earthquake, by Eastwood herself. Eastwood also named *F. brandegeei* and *F. striata*. Both of these people had long, interesting and illustrious careers and much has been written about both over the years. A quick search on the internet reveals many fascinating details of their lives and works and I would recommend this action to anyone remotely interested in the history of, and the people involved in, studying *Fritillaria*.



Many of the California *Fritillaria* species are linked to some degree with serpentine soils. Serpentine is rare on the earth's surface, but in California about 13% of the geological substrates in the bioregion are serpentine. Frequent seismic activity accounts in some part to this relative abundance. When exposed, serpentine rocks break down into unstable talus, and over time weathering oxidises the iron in the rocks, producing a rich orange colour in the soil. These soils are unusually high in magnesium and iron (leading to the term ultramafic), chromium, cobalt and nickel, with many sites containing levels that are toxic to many plant species. They are also rich in Asbestos (silica fibres) although this is not considered such a problem for plants as it is for us. The soil is very low in nutrients, with calcium being very

scarce, potassium and phosphorous rapidly lost through leaching, and low nitrogen due to limited plant growth. Serpentine soils are, in all but the valley bottoms, very thin. So any water and nutrients that do become available are soon lost. So, from a plant's point of view, serpentine outcrops (often called 'barrens') present a severe, harsh environment, with inhabitants experiencing drought, nutrient stress, heavy metal exposure and exposure to high light levels. Some of the serpentine plant species tolerate these conditions. These are the dominant vegetation and are mainly shrubs, occasionally trees, with low nitrogen due to limited plant growth and necessary root, stem and leaf adaptations. Other species avoid the conditions for most of the time, completing their life cycle while water is available, either from seed or underground storage organs. Obviously the *Fritillaria* are "avoiders", and fortunately are also *bodenrvags*, a term used to describe species that have the ability to grow on and off serpentine soils. A look at monthly precipitation for these areas gives us a clue to one aspect of successful cultivation of *F. purdyi*, although if taken too literally it can lead to failure.

F. purdyi precipitation experience



Seed from plants growing at altitudes less than 700 metres is, in my experience, much larger in size and thickness compared with seed from above 700 metres. This said, I have growing plants from seed from a couple of locations around 2000 metres that is also of the larger type. Whether or not this relates to observations of stable physical differences between higher and lower altitude growing plants, or differences in environmental effects is something I hope to establish.



E. purdyi high seed



E. purdyi low seed

Similar to most of the *Liliorhiza*, the bulbs are fragile and scales are easily detached when transplanting or re-potting, so a gentle touch is required, unless one is propagating.



E. purdyi bulbs

Flower markings vary, but all are easily recognisable as this species, and this probably accounts for the fact that *F. purdyi* has no synonyms.



Cultivation [in North East UK]. - Contrary to what was written by Roderick and Hildreth (above), I find *F. purdyi* to be one of the most straightforward to grow and to propagate, although disturbed bulbs do seem to resent this disturbance and the first year thereafter is crucial to their re-establishment. I grow plants from seed from a number of locations and varying altitudes and all seem to be equally accommodating, providing I follow a few simple 'rules' that I have established for my conditions, primarily being to provide a copious amount of water during the 'above ground' growth period, followed by no water after flowering / seed production until a single drenching

in December. Despite what the precipitation chart shows, I don't like to water again until green growth is seen. Most of the precipitation in December, January and February in nature is snow, locking the moisture up until the thaw releases heavy water volume, which the plants respond to. Unlike *F. glauca*, *F. purdyi* would appear to be more tolerant of a small amount of substrate moisture during the summer months, and certainly succumbs quickly if 'baked' in summer as some have previously recommended, i.e. not kept at stable cool temperatures during this period. Given this treatment *F. glauca* would, here, rot very quickly. So although they are sometimes observed growing close by each other it may be that each is occupying a slightly different micro environment.

All of these plants I grow in pots and in a mix of 2 parts smooth grit to 1 part loam soil. This is still a very sharp mix, but slightly less so than for *F. glauca*, as rapid drying after flowering / fruiting does not seem so critical. Most are never repotted, as given the stable nature of the potting mix, there seems to be no point in disturbing the bulbs. It would appear that some growers in areas that experience summer wet, e.g. parts of Scotland and Northern Norway are able to grow this species uncovered outside all year round for many years (pers comm). When in growth the plants appear to relish as much sunlight as I can give here, but resent a hot glasshouse environment, so all pots are moved outside most days, producing short strong growth. Only on days where the pots are likely to freeze does this not happen.



F. purdyi produces seed readily, and doesn't appear to need more than one clone to do this, although pollination using more than one clone does lead to a better seed set. The Kew electronic Plant Information Centre (ePIC), records that the weight of 1000 seeds of this species is 5.078g.

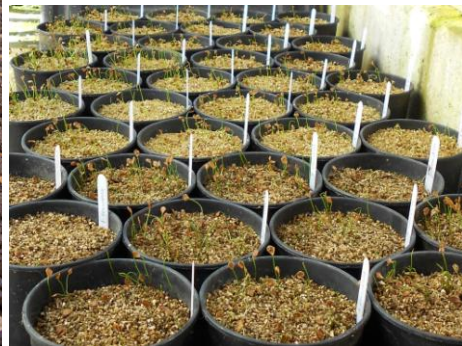


F. purdyi capsules

The seed can be sown thickly on the surface of the chosen medium and lightly covered to prevent movement. Whenever possible it seems to be 'best practice' to sow the seed with the hilum (the 'pointy end' in *Fritillaria* seed) down into the soil. This is not always practical though, especially where large numbers are concerned, and high germination rates can still be achieved by simple scattering of fresh seed on the soil surface. I prefer to do this in late November to early December. Usually the first growth is seen after approx. 90 days.



F. purdyi seed sown



Liliohiza seedlings

Individual scales, detached from a mature bulb, will also readily produce new growth, although I am convinced the parent bulb is weakened during the process.

For a plant that comes from the harsh serpentine environments and is perfectly adapted for life there, *F. purdyi* would seem to be one of the most forgiving of the *Liliorhiza* for cultivation.



Many thanks to Tony Willis for allowing me to use his pictures of *F. purdyi* in the wild.

From Little Acorns Grow!

Words and images by Mike Denny

My parents had a Clematis Nursery in Broughton, and were generally keen plantsmen. Growing in their garden were some common Snakeshead fritillary which I had always admired. In one of their greenhouses they also grew a couple of other varieties of fritillarias, which had been purchased as rice. They never flowered, but instead continued to multiply year on year.

This early experience sparked my interest in the Frits, especially as I had seen a picture of *F. recurva* and made a conscious effort to acquire one. Whilst I was at it, I could collect all the others. Over the next couple of years I managed to acquire a dozen or so from specialist nurseries in the UK. I then built a 4ft x 3ft frame to give them some protection if they happened to flower in the spring. That year (2005) I finally managed to get one of my parents' greenhouse fritillaries, *F. pallidiflora*, to flower.



F. pallidiflora in flower at last!

In a couple of years I had built another frame as my collection was growing, from acquiring plants at AGS shows and the purchase of rice or bulbs from breeders, collectors and other enthusiasts.

I now managed to flower the second of my parents' frits, *F. thunbergii*. I was now on a roll.

The two-frame idea was far from ideal, so a decision was



One of the two frames

made to get a greenhouse (2007), but siting it was the problem. The only bit of free ground was at the end of my garage/workshop and a lean-to would give me the most usable room. On enquiring about readymade

or purpose built greenhouses, I realised early on that the cost was going to be to prohibitive especially as an off the peg greenhouse would not have been the most suitable.



The site

Being a bit handy with bits of wood and a few tools, I thought, how hard could it be to build it myself? So out came the drawing board and the design and measurements were plotted on paper. The next problem was what wood to use. Teak, which seemed to be the manufacturers' favourite, was well outside my £1000 budget, but the common softwoods available locally were prone to deteriorate within a few years. I found a supplier of solid oak in Huddersfield which would allow me to stay in budget.

After ordering 540 feet of 2 x 2 planed oak at a cost of £540 I set about putting in the foundations. A few weeks later I went to collect the wood with a 6 ft trailer behind my car, not realising the weight. The journey home was a nightmare; it got dark, poured down with rain and the trailer started to snake if the speed got over 40mph. It was a relief when I finally pulled onto my drive and could unload everything into my garage.



540 feet of oak



Routing one of the uprights

The next four weeks consisted of sawing and routing. I had decided to rout a groove for the glass and round all the edges. Each frame was made and screwed together, and screws which would be seen when finished were countersunk and a wood core glued and sanded to hide it. It was then given 3 coats of varnish before the glass was fitted.



2 x 2 planed oak, with routed groove



Section under construction



Coring tool and cores to hide screw head

The glass was fitted by removing the top of the frame, the glass was then slid in and then the top spar was refitted. The glass was then held in place by a bead of clear silicon. Vent frames were purchased on Ebay at a cost of £10 for 7. The frames themselves were in perfect condition; it was just the boxes they were in that were really tatty. The glass for the main body was float glass as opposed to greenhouse glass because of the sizes required and for the clarity of the glass. The glass for the vents was 6mm toughened.



Slots routed for glass and edges rounded prior to varnishing



Vents



Door glides

Two auto window openers and a number of builder's planks to make plunge benches brought the final cost to just a few pounds over £1000. Once the greenhouse was complete, all my old plants moved in, filling less than half the available space. Over the next few years, however, due to seed sowing and other purchases, I was almost full. Now I could concentrate on getting my well nurtured and beloved *F. recurva* to flower.



Nearly complete!

During the first summer, the heat was becoming a problem. The greenhouse gets full sun for most of the day, so a wind up/down shade was constructed, using 75% garden shading fabric, a couple of round stair handrails, a bit of 2 wide black fabric tape and a bit of metalwork. This solution really worked well and it could be completely removed and stored for the winter.

I decided early on that I would try and use the same composition of soil for all the fritillarias, just vary the watering to suit. The compost is a mix of 2 parts sharp sand, and one part each of horticultural gravel, loam, leaf mould, composted bark and re-used peat compost, potted into clay pots and plunged into beds of sand. I have had consistent results with this method, but am well aware of their natural habitat. I now have approx 95 varieties of which some 50% have flowered, with many of the remaining ones not yet mature enough.

Although I have had many successes to date, I have yet to see my *recurva* flower. This year it threw up a giant leaf about 6 inches long and 3 wide, but that was it. Still, fingers crossed for next year. Over the last couple of years flowers have been few and far between and pollination has been bad with little or no seed formation. Let's hope for a better year for 2014.



Spring growth



Summer dormancy



Flowering season



Fritillaria aurea/pinardii hybrids in Cappadocia 2013

Words and images by Doreen Mear

Many *Fritillaria* Group members will know committee member Pietro Roseo, but although I knew the name, we hadn't met until the Greentours trip to Nakhchivan and Ararat in May 2013. Pietro had been hearing from tour leader Ian Green about the unusual *Fritillaria* hybrids seen on the trip to Cappadocia the fortnight before, so he did a bit of arm twisting and asked me to share my photos of the hybrids with the Group. I did warn him that my knowledge of fritillarias is very superficial, so any contribution would be more in the form of a photo essay, but that didn't seem to let me off!

Fortunately on these trips a good many superb flowers can be seen without needing to venture far from the vehicle, but it's nearly always the case that struggling further and higher is worth the effort. On this particular day we were travelling from the Cappadocian tourist hotspot of Goreme to our next destination, a skihotel on the flanks of the snowcapped Erciyes volcano. Mid-afternoon we stopped for an hour or so to explore a roadside hill, working our way upwards following a small rivulet, photographing beautiful mats of *Globularia trichosantha* in the turf and sprawling magenta and white *Corydalis erdelii* in the sparser areas. Whilst trying to photograph *Scilla siberica* alongside the stream I almost stepped on a small fritillary looking very like *F. aurea* but with rusty brown tessellated bells. Ian was called over and immediately identified it as a hybrid between *F. aurea* and *F. pinardii*, which he said we would find higher up. True enough, as we plodded upwards, we found the true *F. aurea*, and higher still a range of forms of *F. pinardii* varying in colour from toffee-coloured to plain dark reddish-brown. In between were flowers of every different shape and colouring imaginable.



Fritillaria aurea hybrids

The following day, travelling south-east towards Karamanmaras, we explored a similar hillside, heading for the last snowdrifts and *Crocus biflorus*. Here was another population of *F. pinardii*, of more familiar colouring with a touch of yellow to the slightly flared bells. Among these were fritillarias on steroids, the plants and blooms about 50% bigger than normal.

One of the beauties of getting to see plants in the wild is realising how different they often look from what you know, grow or have seen in books. It's an eye-opener to see the natural variation, and a real thrill to come across beautiful hybrids like those we saw here. If only my *Fritillaria pinardii* at home wasn't having a rest from flowering this year, I could be trying this cross myself!

*“flowers of every
different shape and
colouring
imaginable...”*



Fritillaria pinardii pale form



F. pinardii dark form

Bulbs in the Garden

Words and images by Ian Young

While I can admire the layout of a formal garden and all the work that goes into maintaining it in good order it is not a style that I could ever adopt. My style of gardening is perhaps the very opposite of formality as I try and mimic the chaos of nature – making environments, introducing plants then watching what happens. Layout and design are just as important to our naturalistic style as they are in formal gardens. Most of us start out with a rectangular plot of whatever size to work with but I do not see it as a rectangle but a cube. To me the most critical dimension in any garden that literally lifts it above the average design of many gardens is when you fully utilise the height of plants. Planting trees and shrubs immediately adds this extra dimension, giving you the feeling of being in a garden not just on it – hugged to the ground by an overhead canopy. In addition to the design aspect trees and shrubs help us to create a number of very different habitats such as light and shade within a relatively small garden. Having established this structure we can then look to the under planting which just like in a natural woodland can be very rich, diverse and seasonal. This is where we use bulbs, trying to achieve as many weeks of flower colour in the garden as our climate allows.

Starting in February with the late winter flowering bulbs the very popular *Galanthus*, the snowdrops, can be in flower from early to late winter but do not overlook the Snowflake, *Leucojum*, which are equally deserving of our close attention. The blooming of *Eranthis hyemalis* in the late winter is a real joy to me as it is the first flower of the year to hold its face up towards the sky. Both *Galanthus* and *Leucojum* hold their flowers in a drooping manner to help protect the reproductive parts from the weather but the *Eranthis* is bold with bright yellow flowers that stare skywards. If left to self-seed all of these bulbs will naturalise forming spreading colonies of seedlings and you will find that these seedlings, each a different clone, will become more fertile than clonal plantings that you increase by division of the

clumps of bulbs. We encourage this naturalisation within in the garden for a number of reasons: first, it gives us plenty of healthy offspring with all the vigour of youth; second, we get to enjoy the variations found within the various species and of course hybrids also occur. Third, and in keeping with a natural habitat, it gives us plants of all ages from seedlings to maturity – formal gardens tend to only have mature specimen plants.

The reticulate Iris species also flower early and look so delicate with their flamboyant flower structure but this belies just how tough they are - able to withstand all the frost and snow our weather throws at them.

As the season advances the next wave of bulbous plants come into flower. Crocus in all their great variety and *Corydalis solida* bring the hot colours from purples through pinks to red filling the garden with colour as early as mid-March some years. We can grow these plants side by side with the *Galanthus* etc as they enjoy similar growing conditions and as they tend to come into flower as the first flowers of the year are just going over, they extend the flowering season of a bed. By carefully selecting bulbs and other plants you can have several phases of flowering in the same bed.

Erythronium, *Fritillaria* and *Anemone* are in the third phase of flowering in the very same beds and depending on the weather of any particular year these three phases can merge or be separated as the different plants respond to the ever changing temperatures. Our springs are not clearly defined and depending on which way the wind is blowing we can drift from winter to spring and back to winter again several times in any year. No spring garden can be complete without some narcissus and our preference is for the smaller species such as *Narcissus cyclamineus*, *N. asturiensis* and their hybrids whose scale fits in well with our mixed plantings.

The first erythronium to flower is always *Erythronium caucasicum* followed some weeks later by its close relative *Erythronium denscanis* then *E. sibiricum* and *E. japonicum* come later still. Around the time

that *E. japonicum* is flowering we can expect to see the first of the North American species. *Erythronium hendersonii* is nearly always the first to flower, followed by *E. revolutum* with the peak flowering of *Erythronium* in our garden coming in mid to late April. The erythroniums grow happily in exactly the same beds as all the other bulbs I have mentioned above as they all enjoy the woodsy type soil and the cool moist conditions our garden has to offer.

There is no better fritillary to grace a garden than *Fritillaria meleagris* with its beautiful checked bells. It is easy to grow and increase as long as there is sufficient spring moisture. *Fritillaria pallida* is another wonderful garden plant gracing the beds with its large multiple hanging bells of straw yellow with deep purple spots in the centre. It grows happily side by side with *Fritillaria pyrenaica*, *F. tubiformis*, *F. acmopetala*, the *F. montana* group and many others. The best of the American species in our garden are all the forms of *F. affinis* and *F. camschatensis*. Both flower and set seed on a regular basis as well as increasing by rice grains. The largest of all, *Fritillaria imperialis*, is always spectacular but do not expect their large bulbs to flower every year. It can take them two or three years to achieve flowering size again but by having a number of bulbs, all raised from seed, we get flowers every year. Over the years we try more of the *Fritillaria* that we have grown under glass in the open garden and to date have always been pleased to watch how well they grow when released – embarrassingly they sometimes grow better in the garden where they do not have to rely on our attention. For a number of years now we have been trialling growing bulbs in beds of just sharp sand with amazing success – all the bulbs we have tried in this medium have thrived and we are encouraged to try more of the so called ‘difficult’ species.

While our cool moist climate suits many bulbs we do not do so well with those that come from hot dry habitats, but we have succeeded with some in a narrow bed at the base of a south facing wall. This offers the hottest driest conditions you are going to get in our open

garden. We have to grow the species that require a proper dry summer rest in one of our glass bulb houses.

Back in the general garden another woodland genus, the Trilliums, love growing up through a carpet of Dicentra and Corydalis. When you look at the structure of the plant—a long stem bearing leaves and flowers at the top—it is apparent that trilliums have evolved in exactly this kind of situation. Like so many bulbs they do better when growing in communities rather than when grown as isolated specimen plants.

I spoke earlier of using all three dimensions when planting your garden and now I remind you that gardens are four dimensional – one bed can and should be used fully to deliver as much interest for as many weeks of the year as possible. We continue to develop our mixed beds by observing them during the year, watching for gaps that appear, both in space and time, that could be filled by adding another plant to the community. There is no reason why you need different beds for different seasons as the correct choice of plants will give you almost perpetual interest. The beds that had so much colour in the spring do not look empty as they start to die back with the approach of summer because their retreating leaves are replaced by the emerging shoots of summer flowering bulbous plants such as *Dactylorhiza* orchids, forests of *Arisaema* and beautiful *Roscoea* species. *Nomocharis* with their stunningly spotted flowers are a must for any early summer garden and lilies of all types can give us flowers from spring through until early autumn.

By August we can often detect the first signs of autumn. Humans follow the year by the calendar months and often discuss how some flowers are later or earlier than normal, but it is important to realise that plants do not follow this calendar. They respond to seasonal conditions: changes in temperature, moisture and light levels.

The passing of summer is celebrated by the blooming of *Cyclamen purpurescens* followed closely by *C. hederifolium*. These can flower

right up until the heavy frosts and snow arrive in November. *Colchicum* are another classic of the autumn flowering bulbs in our garden and we make full use of them, always planting them carefully to take into account that their leaves will appear in the spring. Please do not refer to these beautiful flowers as they are all too often called 'autumn crocus' –it is one of my pet hates as they are nothing at all to do with *Crocus* and if you do call colchicums 'autumn crocus' then what are we to call the genuine autumn crocus of which there are so many? *Crocus nudiflorus*, *C. speciosus*, *C. kotschyanus*, *C. vallicola*, etc. all grow well in our garden. By now we are entering the winter months and most bulbous plants retreat underground completely. Cyclamen and a few species of corydalis have leaves throughout the winter, reminding us that they are there as well as giving the garden some winter decoration before the whole cycle starts off again in a little over a month's time



Fritillaries and others blooming together in the author's garden

Answers to *Fritillaria* Crossword #1 in Autumn
2013 Number

Across : 1. red, 2. rapid, 4. pink, 6. *camschatcensis*, 9. Gogh,
10. storm, 11. Van, 12. drier, 13. tendrils, 16. mist, 18. organ,
20. a hot, 21. bed, 22. *involucrata*, 26. scent, 27. Pere

Down : 1. *recurva*, 2. rock garden, 3. dice, 4. *pinetorum*, 5.
Kashmir, 7. *argolica*, 8. Ante, 14. storage, 15. *conica*, 17. seed,
19. gives, 23. cat, 24. alp, 25. Me

The photograph on the back cover is of
Fritillaria alpina and was taken by Bob Charman

A line of explanation...

Brian Mathew writes that he may unwittingly have given the impression on p 17 of the Autumn number that Andy Byfield is no longer “still with us”. Nothing could be further from the truth! “He is still very much so and is still a conservationist.” Brian has “contacted Andy to explain that it should really be ‘is’ instead of ‘was’! My intention was to explain that he was in Turkey as a conservationist.” Apologies all round for any misunderstanding.



£3.50

www.fritillaria.org.uk

