



THE

FRITILLARIA

GROUP



The Fritillaria Group of the Alpine Garden Society
Journal 30 Spring 2012



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serpenticola,
photographed by Bob Wallis



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Enthusiasm for the genus *Fritillaria*

embraces taxonomy, certainly, cultivation, of course, but also a curiosity about the plants' history, various practical uses and representations in art. This number of the journal offers fascinating articles that instruct and inspire. We need more! I would love to hear of members' successes (or failures) with seed from the list, or an appreciation of their favourite fritillary, or a report on what they saw in the wild. Share the enthusiasm.

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Fritillaria Bulb Cultivation

The Spring Show and Display of
the Alpine Garden Society's Fritillaria Group

Sunday, 18 March 2012
Hillside Events Centre, RHS Garden Wisley, Surrey

The doors will open at 9.00 for coffee. Paul Cumbleton will share his "Tips, Tricks and Technology" at 10.00. We will break for lunch between 12.30 and 2.00, when expert grower Rannveig Wallis will talk on "Maintaining A Bulb Collection". There will be a raffle at 3.30 before the show closes at 4.00. Plants and bulbs will be on sale throughout the day, and there will be photographic displays on view in the Main Hall and the Garden Room.

Date for your diary: Autumn Meeting and AGM
23 September 2012 at RHS Garden Wisley

Fritillaria Group Committee

Committee members and contact details can be found on our website:

www.fritillaria.org.uk

Of Kotschy's and Olivier's Fritillaries

Bob & Rannveig Wallis

Over the years, we have become very interested in the habitat, distribution and variation of fritillaries in the wild. The first reason was to gain a better understanding of how they might be grown better in cultivation and the second was to help us identify species more easily. One problem is that many species are represented by very few clones in cultivation, so our knowledge of variation is quite limited. A second is that all species are described in the Linnaean system of nomenclature by reference to a type specimen, in this case a squashed and dried (and usually achromatic) example which is lodged in at least one of the herbaria across the world. Any departure from this "type" can only be catered for in the formal "description" which accompanies each and every species. The observation and recording of variation from the type will help us to draw a kind of virtual boundary around species and compare that with the same sort of limits for similar species to check overlap and demarcation.

Fritillaria kotschyana and *F. olivieri* are morphologically very similar and, in some forms, are quite difficult to tell apart. We have explored the north of Iran considerably in the last 12 years and found plants of both species in numerous sites across the Talysh and Elburz mountains and as far south as the Central Zagros. The variation, distribution and habitat preferences of both species are quite different so we have summarised them here.

The two species are separated on the basis of a number of subtle and rather inconsistent morphological differences, the features of which are best described by reference to the key in Martyn Rix's article [1]:

Perianth not or faintly tessellated; stems usually papillose at ground level; leaves 7 – 10 times as long as wide = *F olivieri*

Perianth clearly tessellated; stem glabrous; leaves 2 – 4 times as long as wide = *F kotschyana*

The use of the words “not or faintly” and “usually” illustrates how very close these species are and also how unreliable one single character can be. The only clear difference seems to be in the width of the leaves. We grow plants of both species from historic collections, namely *F kotschyana* Furse 2530 made N of Kandovan Pass, and *F olivieri* Furse 2057 (East of Sanandaj) and EK Balls 83 (Kuh-e-Elwend, West of Hamadan) and the above characters do indeed seem to hold true.

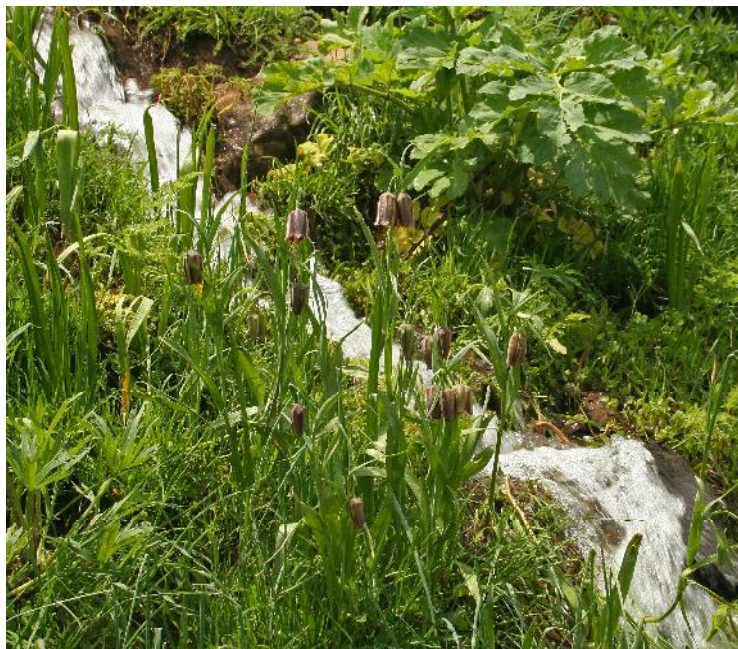
In the wild, however, things are not so clear. Plants on one site to the east of Zanzan, puzzled us for a time and in fact have helped us to sort out the two species for ourselves. The area is more than 200 km northeast of the published sites for *F olivieri* and about 50 km southwest of those known for *F kotschyana*. The plants were growing all the way down the banks of what starts out as a small stream at 2500 m and becomes a raging torrent lower down as more and more snow melt water joins it. At high altitude the plants were still in bud but by following the stream downwards, we came across many in flower. We measured the ratio of the length to width of the bottom leaves of six plants and found the ratio to be 4.9 times as long as wide; precisely in between the ratios quoted for the two species. The stems were glabrous at ground level and the perianth in some specimens, very faintly tessellated. A few days later on the same trip, we came across what was clearly *F kotschyana* in several different places in the Elburz and Talysh mountains. Leaf ratios ranged from 2.7 to 4.5 times as long as wide, i.e. plants in one colony, in this case from the Talysh mountains, east of

Khalkhal, were again intermediate between the ratios in the description.

It is not until one recalls the habitat that things become a little clearer. The literature is quite clear that *F olivieri* grows in wet places and is always associated with wet soils by flowing water. Thus field notes for Furse 2057 state “1800m beside stream in damp meadows” and those for the Kuh-e-Elwand sites read “in tall grass at edge of river, 2100m (BSBE 1666)” and “granite earth, very porous and damp above stream (Furse 1985)”. Those for *F kotschyana* never mention water and indicate that the sites are rather drier: e.g. rocky slopes under *Paliurus* scrub 2000m (BSBE 843 observed north of the Kandovan Pass in the Elburz mountains”, and among large *Rumex* (Furse 2530 N of Kandovan), or “2150 m in shrubbery (Wendelbo 335, Haraz Valley, S of Amol)”. On the basis of this, it is most likely that our Zanjan plants on the river side are indeed *F olivieri*.



Typical habitat for *Fritillaria kotschyana*.



Typical habitat for *F. olivieri*

Having now seen many colonies of both species we can now fill in with our own observations. At lower altitudes in the Elburz, *F. kotschyana* seems to grow well under small shrubs, especially where these are associated with rock outcrops but usually at or above the deciduous tree line (see photograph on p 5). At high altitude, 2900 m and above, we have seen it growing in stabilised screes in full sun where even the shrubs, apart from a few prickly *Astragalus*, are unable to grow. In these conditions on the Kandovan Pass, it shares the stony soil with wonderful dwarf *Tulipa biflora*, a yellow form of *T. montana* and immense colonies of *Iris demavendica* which flower later in the year. In the Talysh Mountains, it grows in open turf amongst taller herbs (especially *Papaver orientalis* and *Colchicum speciosum*)

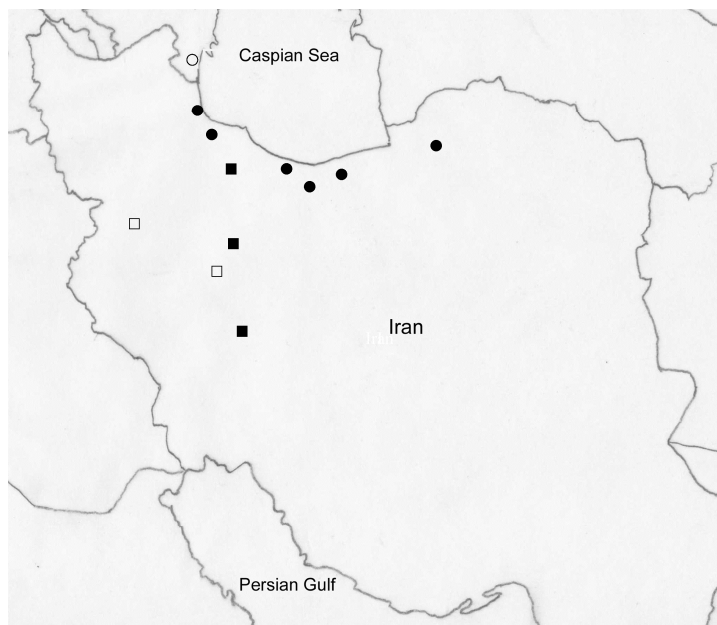
and at the upper limit of the beech forest. Here, it shares its environment with *Galanthus transcaucasicus* and *Corydalis cava* and later in the year becomes shaded with the fronds of bracken.

F. olivieri, on the other hand, is always associated with small rivers and streams where it grows in silt which is wet, and usually quite boggy, as the snow melts. Presumably this dries a bit later but we cannot imagine that it is ever bone dry where the bulbs are situated (photograph on pp 6-7).

As intimated above the geographical distribution of the two species is different and does not seem to quite overlap (see map below). We have observed *F. kotschyana* along the full length of the Elburz mountains and the Talysh mountains as far as the border with Azerbaijan. We have never seen it outside of these two ranges. It grows at high altitude (1900 – 3000 m) on the slopes facing the Caspian Sea or just on the top of some of the passes, notably on the Kandovan Pass. The Caspian Sea is the largest land-locked lake in the World and the only way in which its water level is maintained is by a cycle of evaporation and condensation in the form of mist rain and snow on the adjacent mountains. Consequently, the slopes facing the Caspian have high precipitation and humidity which supports the wonderful Caspian forests. At sea level, the annual rainfall is around 1000 mm. This increases to almost twice this at 600 m a.s.l. but then declines so that rainfall where the fritillaries are found is of the order of 300 mm and this falls mainly as snow in the winter or rain in autumn and spring with a dry summer so *F. kotschyana* grows in a dry climate where soil watering is mostly in the spring.

Fritillaria olivieri has a more southerly distribution and is much more widespread than originally thought. We, and others, have searched high and low for it both east of Sanandaj and on

Kuh-e-Elwend from where it had been reported many times in the 1960s and before, but we have never relocated it at these sites.



Distribution of *FF kotschyana* (circles) and *olivieri* (squares). Open symbols represent pre 1979 records not verified by the authors. Closed symbols post 1999 observations.

Both are quite heavily grazed now by the herds belonging to nomadic people and there has been considerable building development on the NE face of Kuh-e-Elwend because of its proximity to the large city of Hamadan, so possibly the plants are no longer there. It does however occur in suitable habitat in quite small colonies in the Zagros (e.g. SW of Aligudurz), NE of Hamadan and of course at the place discussed above, E of Zanjan. The climate in all of these places is typical of the Asian steppes with very cold snowy winters and then rapid thawing

followed by a warm dry summer. It is quite a dry climate so for example, in Hamadan precipitation is of the order of 325 mm per year and occurs almost entirely in the period November – May. That in Sanandaj is similar, but it is somewhat less (250 mm) in Zanjan. This of course reflects the rain/snowfall in the cities. That in the surrounding mountains could be considerably more.

Similar plants to *F kotschyana* occur across the NW border of Iran, in the Azerbaijan Talysh. These were described as *F grandiflora* by Grossheim in 1919 but subsumed within *F kotschyana* as subspecies *grandiflora* by Rix 1977 pending further study. The difference between the two is once again rather small and there is overlap in the characters. Thus Rix uses the following differences in the key:

Stem 8 – 25 cm high; perianth segments 2.8 – 4 cm
long = subsp *kotschyana*
Stem 35 – 53 cm high; perianth segments 3.7 – 5.2 cm
long = subsp *grandiflora*

F kotschyana subsp *grandiflora* is only known from its type locality: “USSR, Talysh, prope pagum Leric, in rupibus, 4000 ft”[translated as: near the area of Leric, in rocks (1100m)]. It is larger in all its parts but it comes from a much lower altitude than *F kotschyana* subsp *kotschyana* in Iran and might be expected to grow a bit larger. We have grown *F kotschyana* subsp *grandiflora* from a collection made in Leric and under our conditions, the flowers have not approached the size of those in the type description. They do however have a uniform, deep mahogany colour and are very attractive.



F. kotschayana subsp. *grandiflora* *F. kotschayana* subsp. *kotschayana*



Dissection of subsp. *grandiflora*

Dissection of subsp. *kotschayana*

Seedlings from these plants are much more varied in colour and look very similar to plants we have seen about 100 km to the south over the border in the Iranian Talysh near to Khalkhal. Without having seen the Lerik population to assess its variability, it is not possible to give a view on the sustainability of subspecific rank.

The flowers of *F. kotschayana* in Iran are quite varied even within single colonies. The photographs on the facing page illustrate some of the forms we have seen in the Talysh and the Central Elburz mountains. Some forms are quite tessellated, others are

less so. We particularly like the plants from the eastern end of the distribution (SE of Ramiyan) some of which have immense deep mahogany flowers which overlap with or even exceed the range given for *F kotschyana* subsp *grandiflora* yet they occur at the opposite end of the mountain chain, more than 600 km away from Lerik.

F olivieri is also quite variable and in some forms, flowers have the suggestion of some tessellation.



Above: Colour variants of *Fritillaria olivieri*



Above & below: *F kotschayana* forms from the Talysh and Central Elburz mountains showing tessellated and deep mahogany variations within colonies.



We have grown both species in cultivation for many years with varying degrees of success. Both are avid producers of bulbils so clonal potsful can be built up without the need to raise from the rarely set, seed. As one might expect from its altitudinal and shade preference, *F kotschayana* is quite happy under cool conditions with a reasonably dry summer. We grow it in a shady greenhouse which does not allow the bulbs to dry out completely. It shares this area with *F pyrenaica* and some of our Californian *Erythronium*. Following the last extremely cold winter we are a little concerned that some of the pots did not come into growth at all so we are in a state of trepidation pending the annual repot. Perhaps hardiness is a concern!

F olivieri also grows quite well in a pot but we have always been amazed by the bulbs growing in Jim Archibald's polytunnel. Here, the clone Furse 2057, is planted in the

ground which is raised only a few inches above ground level and is covered all year round with a netting-sided polytunnel on a north facing slope. They are watered from autumn until spring but the soil retains some moisture all year round. They flower every year on stems approaching 60cm tall and make immense bulbs. One important feature seems to be that they remain in growth until at least the end of May so the foliage is feeding the bulbs for several months. In our hands, we grow this and the others in pots and try not to get them too dry or hot in summer. Ours die down much earlier, our bulbs are smaller and they do not flower every year. We should learn something from this and may be try some outside in a dry (for west Wales!) spot or may be just a larger pot.

Acknowledgements

We thank Pat Craven for suggesting that we write this article and for constructively reviewing the final version.

References

1. EM Rix. Fritillaries in Iran. Iran Journ Bot 1(2) 76 – 95 (1977)

Plant Photography Part I: Formal Portraits of Plants

By Jon Evans

In 2010, I gave a talk on plant photography at the Autumn meeting of the Fritillaria Group. Afterwards I was asked if I could produce an article on the same subject for the group Journal. Rather than exhaust the patience of the readers by gathering all my thoughts into one long article, I have broken the content of the lecture into three component parts, each of which forms the subject of one shorter article, with the intention that the latter parts could appear in subsequent issues:

- Formal Portraits of Plants
- Outdoor Plant Photography
- Close-ups of Plants

One of the jobs I do regularly for the Alpine Garden Society is to take the photos of plants at shows for inclusion in *The Alpine Gardener*, using a relatively formal studio approach to achieve the type of images required by the editor. Many of the photos here were taken in such circumstances, at AGS shows, but the same approach works equally well for photographing your own plants at home.

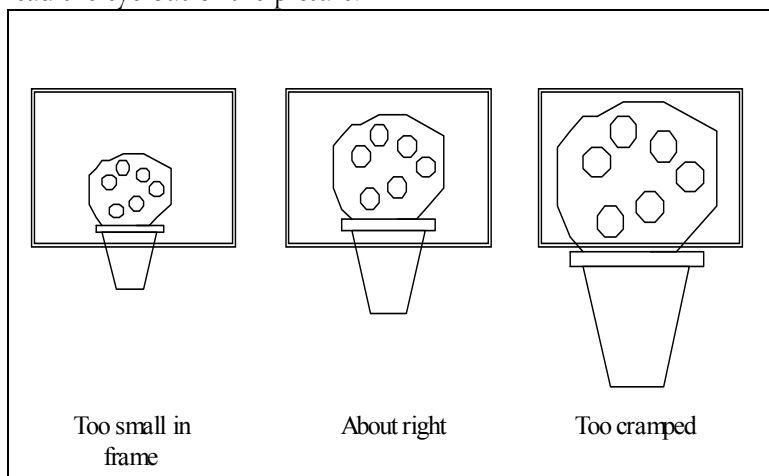
Composition

When taking photos for *The Alpine Gardener*, the usual requirement is to include the whole plant or group in the frame, unless the plant is really tall or straggly. The whole of plant should be in focus, and there should be nothing distracting in background. Ideally, the background should be featureless, darkened, and out of focus.

In most cases a simple central positioning works fine for this; I usually move to 'portrait' mode for taller plants including many bulbs. The main subject (the plant) should be comfortably framed; it is important that it should not be cropped at the edges, and the space left around it is important. I aim for the subject to fill $\frac{3}{4}$ of the frame – the framing should not be so tight that the plant is squeezed by the edges of the picture, but I don't want a small pot dwarfed in the middle of the image either.

Usually I try to leave the front rim of the pot just in frame, as this contains the bottom of the image. Problems occur when

e.g. with some cyclamen, there are overhanging stems and leaves; normally I will try to include these, leaving a small border of pot at the bottom of the image, but sometimes this is not possible. Similarly, with very tall, straggly plants, it can be better to capture the top part of the plant, and exclude the lower stems and pot. The important thing is to keep the bottom edge of the image looking neat and compact, without anything to lead the eye out of the picture.



If a plant has errant stems which look untidy, these can usually be eased *very* carefully back into the main body of the plant.

Where to take the photographs

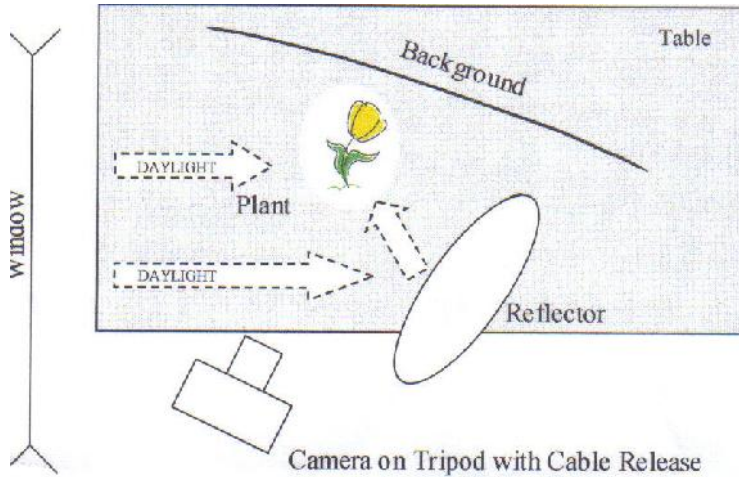
You need to find a location where there is adequate space, and where the lighting is suitable. Sometimes the best location may be outdoors, which is fine so long as the weather – sun, wind, rain – cooperates. When working at home, it is often possible to set up a temporary studio in the greenhouse.

I try to find a place where I will get strong daylight (near a window if indoors), but not direct sunlight, during the period when the photos will be taken.

Setting up a 'Studio'

I prefer to set up my background at an angle to the window, using a combination of daylight from one side of the plant, and a silver reflector to soften any shadows on the other side, like this. Note that a piece of cardboard covered in silver foil, or simply a large sheet of white paper, can be used as a reflector, though the ones sold by camera shops which collapse to a small round disk can be more convenient to transport.

I normally use an AI sheet of Canford card (a light flexible card which can be bent slightly to soften shadows and create a gentle gradient of colour), usually in Forest (a green which often photographs bluer than it looks to the eye) or Gun Metal (grey). Any mid- to dark-grey will work well.



Stiffer card or fabric backgrounds can also be used. Sometimes light cream or light grey can be effective. Personally, I find black or white backgrounds hard to work with, causing problems with exposure, colour and contrast in the resulting images, though I have seen excellent results produced using these backgrounds.

If there is nothing suitable to attach the background card to, I place a chair on a table and tape or clip the background to that. This is normally the easiest improvisation.

Sometimes I place a sheet of card on the table beneath the pot and the background, which ensures the table isn't visible if my framing slips off the bottom of the background.

I always use a tripod and a cable release or remote. This means that when necessary I can use slow shutter speeds and small apertures to achieve maximum depth of field. I try to avoid using flash, except for diffused fill-flash on occasion, but I

always take my flash gun with me to shows, in case the weather conditions make it necessary!

When should I take Photos ?

There are some plants whose flowers close later in the day or if the light changes (e.g. *Crocus*, *Romulea*, *Townsendia*, some species of *Gentiana* etc). Also, some plants will flop or deteriorate in direct sunlight e.g. *Erythronium*, *Crocus* (again). At a show, I try to photograph these plants first, or immediately I see them in good condition.

Photographic Routine

When taking photos, I try to follow the following process:

- Find a plant I wish to photograph, and remove it to my 'studio'.
- Note down the details of the plant (or take a snap of the plant with its label clearly visible).
- Carefully **remove** any visible labels from the pot.
- Place the plant in front of the background.
- Sometimes, I raise the plant up a bit on e.g. an upside-down pot (usually when a plant is in a very small pot), or tip it slightly towards me using a wedge (or folded paper !) – be **extremely** careful doing this, and ensure it is still stable. This helps to isolate the plant against the background, and removes the table from the field of view. The tilt allows me to look down on the plant from a higher angle; this is often valuable with cushion plants, less so with fritillaries.
- Does the plant make a good composition ? Are the stems separate and not in front of each other when viewed through the lens ? Are enough flowers pointing

towards the camera? I often rotate the pot seeking the best aspect, or rearrange the stems carefully. If the plant is your own you can remove any blemishes (damaged leaves, dead flowers etc) with care.

- Take at least two images of the plant, and then consider whether there are features worth highlighting in a close-up shot.
- **Replace** the plant label where I took it out from the pot.
- Return the plant to where I got it from.

Exposure

- Taking pictures in this way, with a tripod in a relatively controlled environment, I normally find that I am not much concerned with the shutter speed for the images I am taking, and usually set the auto-exposure mode to Aperture-priority.
- Depth of field – I choose a small aperture between f11 and f18 so that the depth of field is maximised. I tend to avoid using apertures smaller than f18 because the diffraction within the lens at very small apertures results in a loss of sharpness. This might be less crucial if using a fixed length lens (e.g. 50mm) rather than a zoom lens, but I find the flexibility of a short zoom (28mm-135mm) valuable, particularly in the confined spaces and time constraints at shows.
- Metering. I tend to use centre-weighted metering rather than spot metering. Although there is a temptation to use spot metering in an attempt to ensure that the correct exposure is achieved for a selected spot on the plant (a white or dark flower), what happens is that this gives a mid-tone exposure for that flower, which is seldom the desired result.

- Exposure compensation. My camera (and many other digital cameras) has a slight tendency to over-expose, resulting in burnt out highlights, particularly on plants with light flowers against a dark background. Also, over-exposure tends to ruin the image; under-exposure can usually be corrected in post-processing. As a result, I tend to set it to under-expose by $2/3$ of a stop as a default setting, and to change this when necessary for particular images.
- If I have any concerns about the exposure (light flowers on a dark background, dark flowers on a light background etc) I try taking 'bracketed' images to ensure that one is correctly exposed. On my digital camera, I can review the picture I have just taken, and check it is exposed correctly, and use the histogram display to check the highlights and shadows; I am always concerned to ensure that the highlights are not burnt out.
- Movement – one problem with taking images at small apertures is that you have to use quite long exposures, particularly if the light is not as good as you would wish. I often find my camera is set on speeds of 1 to 2 seconds. As a result, any movement in the subject, either from draughts, or vibration from passing footsteps, can result in blurred images. I try to keep a look out for this, and take additional images if I suspect the plant may have moved.

Other Technical Considerations

Some other things to consider when taking formal portraits of plants are:

- Focus – it is crucial that the foreground should be in focus; even one flower out of focus at the front of the plant can detract from the quality of the image. Although normal guidelines tell you to focus well into the subject, I normally switch the camera lens to manual focus and focus close to the nearest flower I can find, to make absolutely sure that is sharp. In case I make an error with the focusing, I always take two copies of each image, refocusing in between.
- Sunlight – if you are not using a north facing window, you risk the sun moving round until it shines on the 'studio'. Watch for this – the bright highlights will spoil the images. If necessary I rearrange the layout of my table so the plants are not in direct sun.
- Reflector – the light cast by a reflector is very sensitive to slight movements and changes in angle – so I always adjust the position of the reflector while viewing through the lens. Be aware of shadows not only on the plant itself but also those cast on the background behind.



A pot of *Fritillaria* aff *bithynica* grown by Bob and Rannveig Wallis and photographed by Jon Evans

Growing Fritillaries in Alaska

By Clay Koplin

I took very few pictures of my gardens this year. I successfully flowered those in the photographs in this article, and include a picture of the new plunge beds I built last fall. Despite a horrible winter, I did not lose much. The covers are essential as we receive 160" or roughly 4-5 meters of rainfall annually, during all times of year. Our long, wet winters punctuated by cold spells ranging down to -25C, make it a difficult growing environment. It is also usually overcast and raining in summer, so Himalayan rain belt and other wet location bulbs do okay here. The long daylight hours in summer are our only saving grace.



Fritillaria meleagris

Fritillaria nigra

Fritillaria michaelovskyi and *Ff. nigra* and *meleagris* in the photographs are all Janis Ruksans stock. I also flowered *F. meleagris*, *F. crassifolia kurdica*, and *F. pudica* from seed, all first time bloomers from seed planted in 2004 or 2005 from the first SRGC trades I participated in. I also flowered *F. pallidiflora* and *F. orientalis* from Ruksans stock, and all bulbs looked well when I repotted this fall. Three different pots of *F. meleagris*



The new covered plunge bed

started from seed also flowered. They split and set seed well here. I also flowered *F. camschatcensis* "Amur" from Janis Ruksans, and am sure that the open pollinated seed will produce some crosses with my local Alaska form as they were in close proximity. I will harvest that seed this weekend. [Mr Koplín wrote this article at the beginning of September 2011.]

I was given 6 bulblets of *F. aokiana* by Laurence Hill, but lost them to the cold winter. I have not had success with any North American forms, I believe the cold winter is tough on them. My *F. bucharica* from Ruksans declined dramatically. I am hoping the plunge beds will help, with the covers to control rain. I successfully flowered *F. pudica* from seed in uncovered raised beds that get a lot of snow cover under the eave of my greenhouse. All of my seed-started *F. pallidiflora* are doing very well, and I expect blooming stocks soon. *F. crassifolia kurdica* seems to be doing very well also, as I have bloomed two separate pots.

The *F. camschatcensis* are from local wild stock and grow freely and rampantly all over the Copper River Delta and up into the mountains in Coastal Alaska here in Cordova. I posted a couple series of alpine valley flower photographs on the SRGC website under the blooming now or flowering now section that shows a little of my area.

I manage the small electrical utility here, and we have just completed the three large construction projects including a hydroelectric project, and more of my time is getting freed up. I am adding three more covered plunge beds this fall, and hope to take a lot more pictures at home and in the wild next fall. I ordered a couple more *Fritillaria* from Janis Ruksans so may have more to share in spring.



Fritillaria camschatcensis

A Collection of 17th Century Dutch Fritillary Tiles

Courtesy of Mr T T Mantel

By 1600 Dutch tiles were moving away from the polychrome ornamental style typical of those of Southern Europe to a more representational character. Each tile now bears an individual motif, such as a soldier, an animal or a plant. The drawings are charmingly naïve and full of life. They are contained in a circle or square, with the four corners having blue and white decorations that form a pattern when four tiles are put together. The Chinese motif in the corners of this particular tile reflects the enthusiasm with which the Dutch greeted the first imports of blue and white porcelain from China in 1602.



The lovely tiles reproduced here are from the collection of Mr T T Mantel of Holland and date from 1620-1640. Early in the 17th century kilns for earthenware and tiles appeared in Utrecht, Delft, Gouda, Hoorn, Enkhuizen, Makkum and Bolsward. As Mr Mantel explains about the collection: “These kind of tiles were not produced in Delft, but in several other Dutch towns like Hoorn, Haarlem, Rotterdam, Middelburg, etc. etc. Nearly every town of importance had its own tiles industry. Tiles were produced by often very small firms, and of course they didn’t always make flower-tiles. And Fritillaria-tiles appear always mixed with tiles with the image of several other flowers, so they are rare to find. The tiles without corner pieces are particularly rare.” [A quick internet search revealed a set of 5 17th century Dutch tiles with 4 birds and one Crown Imperial for sale in a New York gallery for \$650 each. They are both rare and highly prized.]



As everyone knows from the tulipomania saga, the early 17th century was a time of incredible enthusiasm for the new bulbous flora then being introduced into the Netherlands.

Along with tulips, the Dutch physician Carolus Clusius introduced fritillaries to Holland. His breeding experiments during his time as a faculty member at the University of Leiden were largely responsible for making his country the bulb capital of the world.

Although the artists who drew the individual motifs were not trying for the botanical accuracy of a Clusius, some species, particularly *Fritillaria imperialis*, are immediately identifiable. Mr Mantel's collection gives a glimpse into 17th century Dutch horticulture as well as interior decoration. It wasn't all tulips. We are very grateful to him for sharing it with us.





£3.50

