



THE

FRITILLARIA

GROUP



The Fritillaria Group of the Alpine Garden Society
Journal 26



Editor: Pat Huff
Botanical advisor: Martyn Rix

The Fritillaria Group welcomes articles, short notes and photographs – especially of plants in the wild—line drawings, and other material concerning Fritillaria.

Copy dates: 1 May and 1 October

Articles are quicker and easier to handle if they are produced electronically, but typed and manuscript copy is also very welcome.

Photographs should be in the form of 35mm transparencies, or on photo CD. If possible, please send transparencies ahead of the copy to allow for scanning. Electronically produced images will only be accepted at a resolution of 300dpi.

The cover photographs were taken by Bob Charman. The image on the front cover is of *Fritillaria minima*, “which grows in the Karbet Pass in Turkey.” Bob adds a botanical description of *F. minima*: Bulb to 1.5cm across, often with bulbils. Stem 4 – 8cm in height. Leaves four to seven, narrowly lanceolate, shining green, all alternate. Flowers one or two, narrowly campanulate, yellow, not tessellated, without scent, often aborting or failing to open properly in gardens. Tepals 1.3 – 2cm long, with a small brown nectary at the base. Style 5 – 8mm, slender, papillose, the branches 2mm. Capsule not winged. South-eastern Turkey south of Lake Van, on rocky limestone slopes in peaty soil at 2450 – 3000m, flowering below snow patches in summer.

The back cover shows images of *Fritillaria michailovskyi*, “which include a rare and delightful yellow form.” *F. michailovskyi*: Bulb to 2.5cm across, sometimes with a few bulbils. Stem 6 – 24cm tall. Leaves five to nine all alternate or the lowest subopposite, lanceolate. Flowers one to four broadly campanulate, purple with a yellow apex, usually not tessellated, having a sperm-like scent. Tepals 2 – 3.2cm, with a linear nectary from the angle of the bell to near the apex. Style 7 – 9mm, trifid, the branches 2 – 3mm. Capsule not winged, but with the dried petals remaining attached. North-eastern Turkey, in screes and stony slopes at 2000 – 3000m

MEETINGS 2010

SUNDAY, 21 MARCH 2010

**SPRING MEETING AND SHOW
Hillside Events Centre, RHS Wisley**

9.30 – 16.00

- 09.00 Staging of Show**
- 09.30 Coffee**
- 10.30 Bob and Rannveig Wallis: Demonstration on Keying Out
Paul Cumbleton: Demonstration on Composts and Drainage
(Both demonstrations to be run simultaneously:
They will be repeated and there will be time to attend both.)**
- 12.30 Show open to public and lunch break**
- 14.00 Janis Ruksans speaks on “Fritillarias from Baltic to Pacific”**
- 15.30 Raffle**
- 16.00 Close of Meeting and Show**

**Autumn Show and AGM: 24 October 2010
To be held at RHS Garden Wisley
Speakers to be confirmed**

CONTENTS

Meetings 2010	1
From the Editor	2
A Mystery Resolved , by Bob & Rannveig Wallis <i>Fritillaria crassifolia</i> subsp <i>kurdica</i> and <i>Fritillaria</i> <i>Michailovskyi</i> , by Bob Charman	10
October Bulb Auction	13
2009 Photographic Competition	14
Rhinopetalums in Iran , by Bob & Rannveig Wallis	15

FROM THE EDITOR

Thanks to the splendid, complementary articles by Bob and Rannveig Wallis and Bob Charman, this issue focuses on the amazing colour variations to be found within a number of *Fritillaria* species in the wild. Such a theme obviously calls for colour photography of the most uncompromising standards, and the writer-photographers do not disappoint. Their example may spur other members on to share their images of fritillaries, either in the wild or in the garden. The Group's first photographic competition, which was judged at the October meeting, should certainly command more entries next time. Those unable to get to the meeting can see Sheila Brown's winning image of *Fritillaria davisii* along with Laurence Hill's meticulous photograph of *F. ayakoana* on p. 14.

This journal is written by and for *Fritillaria* enthusiasts. Anna Pavord's splendid new book, *Bulb* [Mitchell Beazley, 2009], is more general, but certainly struck a chord with me: "Why? I asked the ghost of my *Fritillaria pallidiflora*. 'Why can't I make you happy?'" The first fritillary I ever grew from seed to flowering was *F. pallidiflora*, and it disappeared without trace after I planted it out in just the right spot. Anna recommends keeping them in pots, and I can certainly recommend this book.

A MYSTERY RESOLVED – THE SEQUEL!

Words and Images by Bob & Rannveig Wallis

Our quest for *Fritillaria straussii* reported in The Alpine Gardener 77 (2) 179 – 186 continued in 2009. First of all we returned to Iran in April, purportedly to look for *Dionysias* but we just can't help ourselves and sometimes we look down around our feet instead of up and through binoculars at tiny cushions perched high up amongst inaccessible cliffs. Well, not always inaccessible but that's another story!

Having crossed through the Koorang River below the gorge (which, incidentally, was festooned with literally thousands of *Dionysia archibaldii*), passed by the cliffs above (similarly *D. lamingtonii*) and then climbed the pass which leads over into the Bazoft Valley, we started searching the very steep and high limestone slopes below yet more *Dionysia* cliffs (*D. zetturlundii* this time). Here, on a north-facing slope amongst the inevitable spiny *Astragalus* and budding fennels were a few fritillaries, just emerging from the still moist soil. It was a bit early to be sure about the leaf arrangement but photographs taken there some years before and sent to us by that incredibly observant plant hunter, Dieter Zschummel, has allowed us to confirm the existence of *F. straussii* on this mountain, many miles south of any of our previous finds.

We did descend into the Bazoft Valley at this point and searched for about an hour amongst the what appeared to be terminally grazed stony slopes with large rock outcrops. We found very little except for one flowering greeny coloured *F. chlorantha* in a very tight rock crevice that would defy the teeth of any sheep, a few rather miserable *F. imperialis* (we don't think the sheep like this one until they really get desperate) and one leaf of a fritillary

which, from its bright green colour, looked very like *F. straussii*, but we cannot be sure because *F. imperialis* seedlings look very similar. This whole pass is a major migration route for the Bakhtiari tribes and we were constantly being passed by vast hordes of goats and sheep, complete with their kids and lambs, the very youngest of which were carried in panniers on the backs of the small horses (Figure 1).



The Bakhtiari families on the move over the pass out of the Bazoft Valley. Note that the smallest lambs hitch a ride!

Underneath all these, the horses seemed to carry everything else that the families need in order to camp at night as well. But they all have to eat – to the detriment of the bulbous flora! Nevertheless we recorded all of the above plus *F. reuteri* which forms strong colonies in the wet fields and stream sides on several of the passes.

Our second trip was a long awaited return to the far south east of Turkey with our good friends Bob Charman and David (Dan)

Robbins. Our objective was to try and penetrate into what is a highly controlled military zone to both Hakkari and Yuksekova to seek out more fritillaries. We managed this with a number of quite lengthy but trouble-free delays at army check points and spent our first two nights in Hakkari. We had previously contacted, and were welcomed by, one of the local conservation volunteers and when we met, he suggested that we should visit Cilo Dag. This is an immense mountain which arises more or less between Hakkari and Yuksekova. It has a permanent glacier and what appears to be a very high snow fall since the track to the base of the glacier was blocked and we had to walk. The track follows the staggeringly beautiful Dez valley and since we were preceding any grazing, the flowers were excellent with large colonies of *Primula auriculata*, *Caltha polypetala*, *Corydalis erdelii*, *Merendera kurdica*, and *Ranunculus kochii*. Our first fritillary was *F. minuta* which was in full flower and growing in moist soil. We were surprised as to how robust they were on this mountain compared to those we found elsewhere. There were also a few glaucous leaves of a fritillary which was yet to flower but which could only have been *F. crassifolia* subsp *kurdica*. *F. crassifolia* subsp *hakkariensis* has been reported from here but we did not find it, possibly because the snow line was still too low.

The following day we explored the foot hills of Mor Dag. This large range is situated north east of Yuksekova and approaches the Iranian border near Essendere. The point at which we entered it had been badly grazed. Our guide had promised us that the shepherds were not supposed to go there until later in the year but had they had clearly ignored this embargo. Nevertheless we crossed over to a group of snow patches on the north side of a large ridge and immediately started to find interesting plants which had benefited from the melting snow just a few feet higher up the slope above them. We found *Iris reticulata*, *Puschkinia scilloides*, *Scilla armena*, *Corydalis erdelii* and just a few, single flowered, *F. crassifolia* subsp *hakkariensis*. Of this we are sure because the leaves were bright green compared to the very similar *F. crassifolia* subsp *kurdica* where they are markedly glaucous.

The flowers ranged from green to quite brown in some cases. Later in the day we found more growing on a steep moist slope and, just a few hundred metres away, a good colony of subsp *kurdica* growing amongst rock debris in a slightly drier habitat. In neither case were the two subspecies mixed together.

Our next exploration was to the south of Yuksekova on the way to Şemdinli, the south eastern-most town in Turkey and very close to the borders with both Iran and Iraq. This is the most fabulous road because it goes over two moderately high passes where the habitat changes as one crosses over. The first pass takes one away from typical steppic vegetation and into oak scrub. The steppe comprised cultivated fields and their margins sporting an array of bulbs such as *Gladiolus atroviolaceus* and *Iris lycotis*. These were just too hard to pass by and we spent a good hour photographing the huge and very plentiful flowers of the Iris. Once over the pass, the 2 metre tall oaks were full of *F. imperialis* sadly very damaged by grazing cattle which seem to take out the tops and then trample on what is left. Cattle seem to eat this species more readily than sheep or goats. We did find a few *F. minuta* here growing in surprisingly dry ground for such a snow melt seeker.

At our next check point, we were asked where and why we wanted to go along the road. The word “HiHekler” (flowers) was greeted with a broad smile and rapid response: “ters lale?” (nodding lilies i.e. fritillaria), the officer said. “Evet” (yes) we duly replied. Whereupon, we were invited into the army post to view and admire the *F. imperialis* which marked two grave stones in the small cemetery. We were somewhat relieved to see that the grave’s occupants had been there since the 1940s and were not of more recent vintage!

Tea inevitably followed and another hour went by as they downloaded photographs of their fritillaries for us to take away. Nevertheless we were allowed on our way and frequent stops on our way to the next town, Şemdinli, yielded a few orchids and a

few *Gladiolus* aff *kotschyi*. As one approaches Şemdinli the road goes over another pass which is guarded by yet another military post which looks out over almost 360°. We came to a halt a few hundred yards past the post and started to explore the oak scrub.

The bushes were full of all sorts of interesting things. Within a few minutes we found *Paeonia* leaves and lots of fritillaries. These were not in flower but from their bright green coloured leaves, they seemed to be *F imperialis* until I noticed some stems with the remnants of brown flowers which were not subtended by a whorl of leaves. These were *F straussii* and I let out a shout to let the others know that we had achieved our goal.

It turned out that this was a bad move. Answering, very urgent sounding, shouts from above informed us the soldiers had heard me and wanted to speak to us. Rannveig was duly dispatched to try and chat them up with her rudimentary Turkish, a skill which had so far stood us well. Regrettably, they were insistent that we did not linger here in case we got kidnapped. They were happy for us to go the Şemdinli but to go a short distance from, and in full view of, their military post was deemed too hazardous.

Sadly that was it. We had no wish to go to the town having been warned at a previous check point that this would be unwise (at least after dark) so we turned around and returned from whence we came. We never got a chance to find any photographable flowers to check the actual colour but at least we can confirm that *F straussii* lives on in this distant and well guarded corner of Turkey. The site was at 1900 m, which belied the very warm temperatures which greeted us there in mid May. The whole area, which comprises many square miles of rolling hillsides, is covered in small oak trees and undoubtedly it would yield many exciting treasures should it become more accessible (Figure 2).



Fritillaria straussii grows in the oak scrub on these hills.
Turkey, Hakkari, N of Şemdinli.

The two distinct colour forms which we have found in previous trips are depicted in figures 3 and 4.



Brown coloured *F. straussii* seem to be unusual until one nears the border with Turkey. Iran, Kordistan, S of Marivan.



Green coloured plants predominate further south.
Iran, Kordistan, S of Marivan.

www.fritillaria.org.uk

If you haven't checked out the website lately, do log on for fascinating articles, splendid photographs, and the latest on Fritillaria Group events. Webmaster Paul Cumbleton has been doing wonderful things.

FRITILLARIA CRASSIFOLIA* SUBSP *KURDICA* AND *FRITILLARIA MICHAILOVSKYI

Words and images by Bob Charman

I could not help noticing the confusion over the identification between *Fritillaria crassifolia* subsp *kurdica* and *Fritillaria michailovskyi* at the Group's Autumn Meeting at Wisley. I have every sympathy with any person who makes this mistake. Below are some examples of *Fritillaria crassifolia* subsp *kurdica*, which I was able to photograph with Bob and Ranveg Wallis on a recent trip to the Lake Van area of Turkey.





Colour variants in *Fritillaria crassifolia*

Subsp *kurdica* is a variable plant , but usually has five to seven glaucous leaves. The nectary forms a raised ridge on the inside of the blunt-tipped inner tepal. It grows on mountain steppe in eastern Turkey , western Iran and northern Iraq, in limestone screes and rocky soil by late snow patches. As you can see from the above the plant is very variable and some forms are similar in appearance to *Fritillaria michailovskyi*, whose variants (below) I photographed on the same trip.



Colour variants in *Fritillaria michailovskyi*

A description is as follows. Bulb to 2.5cm across, sometimes with a few bulbils. Stem 6-24cm tall. Leaves five to nine all alternate or the lowest subopposite, lanceolate. Flowers one to four broadly campanulate with yellow apex, usually not tessellated, having a sperm-like scent. Tepals 2-3.2cm, with a linear nectary from the angle of the bell to near the apex. Style 7-9mm, trifid, the branches 2-3mm. Capsule not winged, but with dried petals remaining attached. North-Eastern Turkey, in scree and stony slopes at 2000-3000m.

I do not pretend to be a botanist, just an enthusiastic amateur, but I hope that will go some way to clarifying the confusion. As you will see from these photographs, we also came across this delightful yellow form.

October Bulb Auction

At the October meeting a number of very desirable *Fritillaria* bulbs were auctioned off to an eager audience.

**The species represented included
FF. atlantica, aurea, biflora, carica,
crassifolia subsp *kurdica, euboica,*
hakkariensis, messanensis, pudica and *sibthorpiana*.**

Once established as an annual event, this auction will serve the conservation ends of the Group by widening the cultivation of the more unusual species as well as raising funds. Conservation through cultivation!

Continue saving seed for the Group's Seed Distribution, but also remember the October bulb auction when you're repotting your bulbs in late summer.

2009 PHOTOGRAPHIC COMPETITION



Sheila Brown's study of *Fritillaria davisii* (above) was awarded first prize, while Laurence Hill's images of the Japanese *F. ayakoana* was a hard-to-choose-between-them runner-up.



RHINOPETALUMS IN IRAN

Words and images by Bob & Rannveig Wallis

Having spent several weeks in five different years looking at fritillaries in Iran over the last decade, we have started to see a distribution pattern of *F gibbosa*. It seems to grow, over a vast area, in the mountains which surround the north and western sides of the central desert. Most of places are on the dry (desert) side of the range or in valleys which reach up from it. The altitude mainly varies from about 1200 - 2000 m but it is found at altitudes up to 2700 m further south in the Zagros mountains.

The ground colour of the flowers varies much more than we have seen in those in cultivation and surprisingly, the colour seems to vary with the location. Most of those which were in cultivation at the turn of the last century had flowers with a pink background with a variable amount of purple spotting especially on the back of the tepals. We have found similar plants to be plentiful in and around the Kopet Dag in NE Iran (Figures 1 & 2).



F. gibbosa in its typical habitat in NE Iran
[Golestan, E of Tang Ra]



The most common pink form of *F. gibbosa* in NE Iran
[Semnan, NW of Shahrud]

Some of the colonies are extremely large and it is possible to find plants where the colour also shades into apricot and salmon (Figure 3).



In NE Iran, the pink colour of *F. gibbosa* can vary towards these delightful apricot colours [NE Iran, Khorasan, SW of Bojnurd]...

We have even seen a few yellow ones (Figure 4). However, in this part of Iran, we have never found any which had a white background. The plants here tend to be very robust especially when they grow in the middle of bushes and stems with upwards of ten flowers are commonplace. This is the region where the equally robust “Gorgan” form, which Martyn Rix and others have distributed as seed, originated.



...or occasionally into this beautiful yellow form
[NE Iran, Semnan. NW of Shahrud]

In the Kopet Dag, *F. gibbosa* grows in flat areas where there is evidence of white salt crystals left by evaporating water. If the area is grazed then the plants are primarily under very low bushes of *Artemisia* and *Hultheimia* (Figure 1). Otherwise, it is out in the open between the bushes also. It also grows high (up to about 2000 m) in the mountains in habitat which is quite dry at

flowering time in April. It shares this habitat which plants like *Iris fosteriana*, *Anemone petioulousa* and *Crocus michelsonii*.

F. gibbosa is plentiful throughout the north east and we searched the whole area, even right up to the border with Turkmenistan, for plants which had narrow bottom leaves and would consequently be classified as *F. ariana*, but everything we found had broad basal leaves and were undoubtedly *F. gibbosa*. For obvious reasons however, we did not venture too far in the direction of Afghanistan, where *F. ariana* was reported by Furse in what appears to “no man’s land” between the two countries!

The first *F. gibbosa* we ever saw were located to the north west of Tehran on the road between Zanjan and Miyaneh. Here all the plants had a white or very pale pink ground colour with lots of quite large pink or purple spots merging into large blotches especially at the base of the tepals. Again this is largely evident on the reverse of the tepals (Figure 5).

This seems to be the commonest form of *F. gibbosa* in NW Iran [Zanjan]



There were no deep pink ones like those further east. Similar plants also occur between Qom and Arak so this seems to be the north western incarnation of the species. It seems to grow on both salt flats and on the small rounded hills which form a large part of the landscape between Zanzan and Miyaneh. It shares this habitat with: some fantastic plants of *Iris meda*, *Iris songarica*, *Anemone biflora* and *Allium akaka*.

Further south, we were surprised to see that all the plants were white with a little spotting in a sort of greyish colour (Figure 6).



This colour form of *F. gibbosa* is found in the Zagros populations. This specimen has a bit more spotting than is normal in the area [SW Iran, Esfahan, S of Semirom]

We found it at numerous sites at high altitude in the Zagros between Esfahan and Shiraz. This area is very much the *locus obligatus* of the “Dionysiaphiles” but if one looks around on the ground rather than on the cliffs, especially on the limestone country above such cliffs; it is possible to find fritillaries. *F zagrica* and *gibbosa* are quite abundant here although black *F zagrica* and white *F gibbosa* are quite difficult to spot in the bright light and shadows cast by the very bright sun on the reflective white rocks. Again *Anemone biflora* is a common companion together with *Tulipa biflora*. The type specimen for *F gibbosa* was actually collected in southern Iran by Kotschy in April 1842. The citation reads: “*Schiraz: in declivibus prope ruinas Persepolis*” (= Shiraz: on slopes around the ruins of Persepolis). We did visit this fabulous ruined capital of Darius the Great but we did not search thoroughly for the fritillary and did not manage to locate it there. Others have reported it even further south than this so it is very widespread in Iran. It will be interesting to see if these extreme southern examples maintain the white ground colour.

We seem to have observed a colour cline in *F gibbosa* from various shades of pink in the NE, to white with pink and purple spots and larger blotches in the NW to, white with little spotting in the SW of Iran,. The pink ones which still predominate in cultivation probably originated in NE Iran. All are extremely attractive and grow in dry habitat. It is noticeable that the soils here are very pale in colour presumably owing to lack of humus. Similar dry conditions seem to suit the species in cultivation and several excellently grown plants have been exhibited recently in the AGS shows. The most successful growers use a soil-based compost with plenty of sand and grit but no added humus. They do not water their plants until about the turn of the year and then withhold water as soon as they show signs of dormancy in April until about Christmas time.



£3.50

