



THE

FRITILLARIA

GROUP



The Fritillaria Group of the Alpine Garden Society
Journal 43



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

A small specialist journal such as ours relies heavily upon contributions from the members. The Editor welcomes all articles on the genus *Fritillaria*, in cultivation or in the wild, short or long. Please share your thoughts, insights and images with your fellow enthusiasts. The journal won't happen without you.

Front cover: *Fritillaria carica* subsp *serpenticola*

Photo by Bob Charman

Back cover: *Fritillaria thessala* subsp *thessala* var *othria*

Photo by Bob Wallis, who adds,

"There are quite a number of variants growing at the type locality of *Fritillaria thessala* subsp *thessala* var *othria* on Mount Othrys, Greece."

Much more on Greek fritillaries and lilies at our
October AGM/Autumn meeting

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**Fritillaria Group Autumn Meeting and AGM
Birmingham Botanical Gardens,
Westbourne Road, Edgbaston, Birmingham. B15 3TR
Sunday October 28th 2018.
Greece: Its Fritillaries, Lilies & other stars**

08:30am Set-up.

09:30 Arrival, Tea & Coffee

10:00 Fritillaria Group AGM

11:10 'Some Greek frits and other Hellenic stars'. John Richards

12:30 Lunch Break

**13:30 'Lilies of Greece: Gems of the Pindus and Rhodope'.
Duncan Coombes**

**14:45 'Greece: a paradise of fritillaries but what are they?'
Bob Wallis & Martyn Rix**

16:00 Raffle & Close

The meeting is open to the public from 11:10.

An Apology

A gremlin or printer's devil got into the works when the last Journal was published in the spring. John Richards contributed a very important article on *Fritillaria tubiformis* and *F. meleagris* subsp. *burnatii*. His arguments were summed up in an elegant table, which went haywire in the printing. Everyone on email has already been sent a copy of the author's actual table, but it is worth repeating in the Group's journal of record. The table on page 7 of Journal 42 should read:

	tubiformis	burnatii
presence of pruina (bloom)	yes	no
flowers shiny	no	often, usually when mature
flower colour	mid plum-purple	dark brownish-purple
tessellation outside	very little, or absent	yes
filaments	papillose	smooth or nearly so (fid. Rix)



Fritillaria tubiformis



Fritillaria burnatii

The Treasures of Uzbekistan

By Bob Wallis

We crossed the border from Tajikistan at Sariosiyo and this allowed us rapid access to the Baysuntau range, a south western extension of the Pamir. It was in this range from near the village of Pulhakim, that Janis Ruksans introduced a white flowered *Fritillaria* which he thought might be a form of *F ariana*, so one of our goals was to investigate the range of this apparent oddity. We had, mistakenly as we realised, hired a minibus to take our small party of five plus a guide and driver and were severely limited in our access to the mountains. The driver was very concerned about damage to the vehicle so he did not want to go off road and even baulked at a few potholes with a “tsk tsk” sound emitted in a scolding voice as if it was our fault we wanted him to take us to these strange places, which I suppose it was! However our guide, a professional herbalist from Tashkent Botanic Garden, talked to local taxi companies or, in some cases, local herb collectors whom he had worked with and we found alternative transport. After several days of bone shaking in these ramshackle vehicles, we got into the mountains and found lots of small fritillaries. The winter had, however, been unusually mild with little snow and in these southern climes, everything was early so we had missed flowering by at least a week. Nevertheless, with knowledge of the location from various people, we are sure that we had found the right thing. The fruits are winged and having studied many photographs and grown the bulbs from Janis’s collection, we are convinced that this comes within the variance of *F bucharica*. The only difference which we can find is that it tends to have a slightly longer style than the forms of *F bucharica* which we have seen but we do not feel that it warrants a new name. Sjaak de Groot has very kindly shown us photographs of one colony of the

plants when there had been a snowier winter and there are up to six flowers per stem in some of them. The species is very common in the hills between Pulkhakim and Dekanabad.

On another day we took another jaw-rattling minibus into the Hissar Nature Reserve. This is about a couple of hours drive east of Shahrizabz and is another wonderful area once one finds spaces which are ungrazed. On one walk up a sloping valley, we came across lots of *Iris warleyensis* varying from pure white to the more normal deep blue, *Tulipa lanata*, *Primula baldshuanica* and *Allium nevskyanum* in a steep stone slide but the prize was the huge number of *Fritillaria olgae* just starting into growth. It was literally under every bush on these steep sides, clinging on by its tendrils or even growing unsupported if it had germinated too far away from a convenient holdfast. Again the soil was very stony and the slope very steep. The fritillary was always growing in partial shade under deciduous *Lonicera* or higher up under the evergreen shade of junipers. My GPS calculated that its altitude range was from 1800m to 2450m at which point the ground was still under snow so we suspect that it achieves even higher altitude than this. Once again the wetter open ground was just covered in *Corydalis ledebouriana* dotted with a few *Colchicum luteum*.

Shahrizabz is the birthplace of Tamur (Tamerlane in much western literature) who was the founder of the Timurid dynasty and conquered huge swathes of Asia in the 14th Century. His palace was within the walls of this city and the gigantic gateway has been partly restored and now stands at about 35m tall but still only half its original height. Extensive restoration is currently going on and it is going to be an amazing place to visit in years to come.

It is only a short run from Shahrizabz north to Samarkand and very conveniently, the road goes over the Zeravshan range on a pass known as the Charvadar Pass (1740m) as long as you travel by a small vehicle. Buses are banned on the mountain routes. The whole area is characterised by enormous, probably granite boulders which have become so eroded as to appear like huge grey tortoises spread over the hills. One year, on the way up, we found quite a few purple *Iris stolonifera* in flower. In wet spots, metre tall *Iris magnifica* was living up to its name with up to 8 pale blue or white flowers open at the same time in the axil of each leaf. In drier spots the shorter, *Iris warleyensis* took over and all the time as we searched we were finding *Corydalis*, *Anemone petiolulosa*, *Eranthis longistipitata* and tulips: *Turkestanica* and *T. fosteriana*. We were amazed at the colossal *Ferula turkestanica* which were just opening their flowers and were already four feet tall and will end up nearer to six once they set seed. At last, perched on a north-facing ledge and in the granite grit slope below we spotted *Fritillaria bucharica* again. These were quite different from the forms we had seen in Tajikistan, and indeed those from the Pulkhakim area, having many more, but smaller flowers, per stem. We counted 12 flowers on some specimens.

And so, on the Samarkand. What can we say? One can spend days here (and we did!) and still not see all the fabulous buildings. The mausoleums are exquisitely tiled both inside and out; the gateways are cavernous and the madrassas quiet apart from the shrieking of Minah birds. It is one of the must see cities of the World and it can now be reached rapidly from the capital, Tashkent by a high speed railway.



Fritillaria bucharica, Chavarder Pass, N of Shahrizabz, Uzbekistan, 1740m

We are going to restart our botanical tour out of Tashkent and to find *Fritillaria* we need to go to the ski resorts of Chimgan and Baldersai which are in the Chatkal range, a western extension of the massive Tien Shan. Unfortunately, there had been a power cut when we got to Baldersai so the chair lift was out of action. I am glad that we weren't on it at the time! For this reason we decided to walk up. We passed lovely yellow *Iris orchoides* on the way, growing in the grit right by the road side. Soon we were in areas that had only just emerged from the snow and *Gagea gageiodes* was everywhere with *Corydalis ledebouriana* and *Gymnospermum albertii* also much in evidence. In the distance we saw what looked like a lateral moraine of very shaley material which appeared rather bare but we knew that this would be a good place for a closer look. On working our way closer, it was clear that the yellow dots we had seen were *Tulipa chimganica*. This seemed to prefer the top of

the ridge but on its sides, growing in very wet conditions of flowing snowmelt water was an excellent pink form of *Fritillaria stenantha*. It looked like the place would be taken over by herbaceous plants later in the season as the huge architectural leaves of the rhubarb, *Rheum ?turkestanca* were just emerging as were several other unidentifiable things.



Fritillaria stenantha, Above Baldersai, Uzbekistan, 1830m

Chimgan is just a few km away so we spent a rather rainy afternoon there. We did not have time to walk all the way up the valley so we headed for a side valley which had a large snow drift in the bottom. In the soggy bottom we found lots of *Colchicum luteum*, on the gravelly sides *Corydalis*

ledebouriana was joined by another much rarer species, the lovely grey-leaved *C darwasica* with its flesh pink flowers and deep pink lipstick. Just below the top of the bank we found a good number of *Fritillaria sewerzowii* with flowers that appear brown until we looked inside where they were bright green. This is quite a tall species, perhaps 45cm and widespread throughout the mountainous parts of Central Asia so we will see this again. Growing with it were a few *F stenantha* for good measure and the climax of an excellent although rather rushed day. Another time we should spend more time here and in Baldersai.



Fritillaria sewerzowii, Chimgan Valley, Uzbekistan, 1650m

Uzbekistan stretches eastwards from Tashkent and over a ridge into the Fergana valley. We looked in several places for *Fritillaria ferganensis* in the entrance to the Fergana area but in vain. The *Tulipa vvedenskyi* were magnificent and the Juno Iris were already over so could not be identified with any certainty. We even found a few *Tulipa greigii* but the rain started in torrents so we decided to abort the mission and try again another day. However that will have to be in another year as it was time to move on. Our next trip will be to approach the mountains around the Fergana valley but from the Kyrgyzstan side.

Plant hunting in Kazakhstan

By Rannveig Wallis

Kazakhstan is the largest land locked country in the World, stretching from the Caspian Sea to China and is 1000km north to south making it larger than the whole of western Europe. The population is only 17 million which equates to 15 per square mile but, because many live in cities, it is possible to drive 100km or so and see no sign of humans although there are plenty of animals, sheep, camels and particularly horses. Fortunately for us, our main interest is in the mountain ranges, which skirt the southern and eastern borders and not the vast steppe areas which cover the whole of the rest.

Almaty (until recently the capital), is situated in the foothills of the Tien Shan. This range lies east-west and forms the border with, from west to east, Uzbekistan, Kyrgyzstan and China. The highest peaks are at the eastern end. The foothills are well wooded and provide a suitable habitat for white *Atragene siberica* with herbaceous *Primula kaufmanniana* and *Cortusa broteri* growing nearby. In spring the higher alpine meadows are covered in two superficially similar looking yellow tulips (*T dasystemon* and the slightly nodding *T heterophylla*). They are

in fact in different sections. They share the alpine turf with plants such as *Crocus alatavicus*, *Allium atosangunium* in both dark purple and yellow forms, *Gagea emarginata* and the stunningly beautiful *Trollius lilacinus*.

There are plenty of dwarf irises to be found. Some, like *I ruthenica* are firmly established in cultivation. Others like *I scariosa* and the beautiful pale blue, *I loczyi* less so. To reach the mountains further north we must drive over huge areas of featureless steppes. They are sparsely colonised by plants such as *Stipa*, *Artemisia*, *Rheum* and occasional large patches of a yellow *Eremurus*. Yellow tulips like *TT kolpakowskiana*, *behmiana*, *iliensis* and *tetraphylla* vye to confuse the unprepared amateur botanist and send them scurrying for the latest monograph. *Fritillaria karelinii* is an early flowering



Fritillaria karelinii, Ili River valley, Kazakhstan, 500m.

steppe species growing in open places. Like all the plants on the steppe, they cope with cold winter temperatures with lots of snow and very hot dry summers. In April the winged seed capsules are already fully formed. To see the flowers it is necessary to be here in late March. The individual flowers grow widely scattered in sparsely colonised areas. *F karelinii* is easily recognised by its flared, rather narrow pale pink tepals and flowers with just one nectary bump always on the dorsal outer tepal. This distinguishes it from the other pink flowered *Rhinopetalums*.



Fritillaria ruthenica, Dzungarian Mountains, 1300m

Moving north-eastwards, the first set of mountains to arise from the steppe on the Chinese border is the Dzungarian Range. The foothills are well clothed with shrubs such as *Berberis* and trees like *Prunus padus* and one or two *Malus* species. This is, of course, the part of the World where our cultivated apples originated. It is curious that as soon as the hills rise just a little above the altitude of the steppes, that shrubs and trees become plentiful. Presumably this means that the hills receive much more rainfall, probably as thunderstorms, in summer in addition to the snow melt in spring. Here *Paeonia hybrida* makes large pink splashes in the undergrowth. Of paler hue but equally spectacular is *Corydalis shanginii* subsp *shanginii* and its less striking relative *C ledebouriana*. The shrubs provide attachment for the tall clinging stems of *F ruthenica*, a member of the small but widespread *F montana* group. We puzzled for several years about the identity of this species. It has many more tendrils than the forms we grow in cultivation and in particular it sported tendril-like leaves on an extension of the stem above the flowers. I do wonder if the plants in cultivation may have some hybridity with *F montana* or whether they originated in a much more westerly location where the features have developed slightly differently. The second Fritillary in this locality is *F pallidiflora*. A few grew in shade amongst the shrubs. One even had *F ruthenica* using it as a support but the vast majority grow in open sunny areas. Here they are much smaller, 20cm or so. It seemed to us that the flowers were yellower and fewer to the stem than the forms in cultivation. Unlike most of the fritillaries in this area they show no sign of tendrils. The yellow flowers of *F pallidiflora* are echoed by the beautiful dwarf

rhizomatous *Iris bloudowii* which is in the Psammiris section related to the better known *I arenaria*.



Fritillaria pallidiflora, Dzungarian Mountains, S of Alakol Lake, 1500m



Iris bloudowii



Fritillaria pallidiflora grows in both woodland margins and sparse shrubs in the Dzungarian Mountains of Kazakhstan. South east of Alakol Lake, 1650m

The Tarbagatay mountains are more or less devoid of trees but at lower levels have a dense covering of a cream-flowered *Spiraea* species. Seasonally wet grassy places at the bottom of the slopes are the home of huge numbers of *F. meleagroides* which dot the meadow with numerous dark brown flowers. Pink, and therefore easily recognised, *Tulipa patens* shared this damp habitat. In these hills, large plants of both handsome yellow *Corydalis nobilis* and the sumptuous pink goblets of *Paeonia hybrida* hide the rather quieter white flowered *Fritillaria verticillata*. This uses the *Spiraea* for support as it scrambles up with its tendril-like leaves to open its flowers above the bushes.



Fritillaria meleagroides, Tarbagatay Range, North of Ay, Kazakhstan,
700m

Moving further north to our last set of mountains, we arrived in the Altai mountains, at the border fence between Kazakhstan and China. On our way up, the check point was unmanned – may be the soldiers were visiting the “КИОСК” (ing?) shops (Kiosks) in the local village. We had found *F verticillata* in the previous set of mountains but it was at its most vigorous here. Individual specimens used whatever they could to support their long stems, bushes, grasses or even each other. The strongest specimens had up to seven pure white flowers per stem. Plants of more modest stature included *Erythronium sibiricum* and the smallest plant of the *Berberis* family, the eponymous *Gymnospermum altaicum*.



Friillaria verticillata, Marble Pass, Altai Range, 1250m

We understand that the closely related *F albidiflora* has also been found in these mountains but we had neither the time nor the necessary permits to go any further into this remote border area.

We left feeling that we had not achieved all that we had hoped to but may be this is the best way and we will leave something to be investigated for another visit.

The Seed Distribution 2018

If you have seed or bulblets available, please do donate. The seed list really does depend upon all members contributing if they can. And remember that donors get priority when requests for seed are being dealt with.

Details of this year's distribution will be on the Group's website and will be emailed to all members for whom we have an email address. If you don't have on line access, and wish to receive the information and/or the seed list in printed form, please contact me by email, phone or letter.

We request that all donors of wild collected seed comply with the conservation laws of the countries they visit. For more information about the Nagoya Protocol, CITES and the CBD, please see the Conservation section on the AGS website: <http://www.alpinegardensociety.net/plants/conservation/>

KEY DATES

Deadline for donations: 29th August 2018 (If your donation will be later than this, please send details of species and whether it is seed or bulblets).

List publication: 3rd September 2018 (If you want a list, but have not received one by 7th September please inform Pat Craven).

Current Literature

By Bob Wallis

A new yellow-flowered *Fritillaria* species (*Liliaceae*) from Mt. Tisseon, continental Greece and its taxonomic relationships.

Georgia KAMARI, Athanasios ZAHOS, Ioanna SIAGOU
Phytotaxa 328(3): 227-241(2017)

It is quite unexpected to see a new taxon described from Greece which has been well researched over the years and this one does indeed seem to be distinct. *Fritillaria phitosia* Kamari, Zahos & Siagou *sp. nov.* is a yellow-flowered plant with a divided styles and flared square-shouldered bells. It is confined to a remote peninsula on the east side of mainland Greece, just across the water from the island of Evvia. The authors have chosen to compare it to other yellow flowered species which occur around the Aegean Sea and it is clearly distinct from all of these in its square-shouldered bells caused by the nectaries being 3-4 mm from the base of the tepals. All the other comparators cited have the conical bells where the nectary is less than 1mm from the tepal base.

I found myself asking: what if we ignore the colour for now and compare it to the other square-shouldered species which occur in Greece i.e. namely the *Fritillaria graeca* group. All of these have deeply divided styles and, although brown flowered, often have occasional yellow flowered variants within the population. In this case *F phitosia* it would be indistinguishable from *F graeca* itself or particularly from *F rhodocanakis*. Notably, fully yellow forms of *F rhodocanakis* are common on the island of Ydra some 200km to the south.

I wonder if *F phitosia* is a case of natural selection of the yellow variants based on local conditions of for example; pollinator

preference? Nevertheless the fact that it is a local race of a geographically separate taxon, persuades me that it is worth the new name and therefore adds to the list of 30 species which are known to grow in Greece. I wonder how its DNA compares to others in the group.

SUBSCRIPTIONS 2018-9

We have recently been informed by the AGS that they are no longer able to collect Direct Debit subscriptions for the Group. The Group Committee has not yet had an opportunity to discuss the ramifications of this and other changes that the AGS have intimated. Additionally, a number of members have paid twice in the current year because they have not cancelled their Standing Orders. In consequence the Treasurer will contact every member in August/September informing them of how much, and how, to pay for their subscription for the coming year.

An Invitation

The Lily Group invites all Fritillaria Group members
To
Their Annual Bulb Auction
At
The Edinburgh Botanic Garden
On
Saturday, 20th October 2018
Full details will appear on the Lily Group website:
www.rhslilygroup.org



£3.50

www.fritillaria.org.uk

