



The Trillium

newsletter of
the Piedmont Chapter of the
North American Rock Garden Society

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An Indefatigable Plantsman . . .

In Memory of J. C. Raulston 1940 - 1996

by Bobby J. Ward

In the 1940s, a wheat farm on the prairies of Oklahoma was the world of nature that J. C. Raulston first explored, and a childhood fascination with flower and seed catalogs was his introduction to the lore and lure of plants. As loving director-caretaker for the eight-acre North Carolina State University Arboretum, J. C. maintained his wonderment and vastly expanded the arboretum's plant collection to some 7,000 taxa from at least 45 countries since its opening in 1976. Through teaching, research, extension service, and a plant evaluation program, he single-handedly galvanized horticulture and the plant nursery industry in North Carolina. Further, his continuing emphasis on special, non-native plants that are potentially adaptable to culture in this country influenced and inspired others far beyond the borders of the Southeast. In short, he catapulted the arboretum from a secret garden into a center of national renown.

Some of the plants that J. C. introduced to nurserymen and the gardening public through the North Carolina State University Arboretum were species from a Korean collecting expedition in 1985 with Barry Yinger who was then with the U.S. National Arboretum. These include *Patrinia scabiosifolia*, *Scilla scilloides*, *Styrax japonicus* 'Sohuksan', *Vitex rotundifolia*, *Viburnum awabuki* 'Chindo', and *Hosta yingeri*. Some species that the arboretum has highly promoted and strongly advocated include the evergreen ground cover *Ardisia*

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Botanizing in China and Kazakhstan . . .

The Celestial Mountains—Tian Shan

by Vojtech Holubec

China has been a difficult country to travel for us in the past. Recently, it became possible to get a tourist visa after showing prepaid air tickets. Dr. Jirí (George) Slégl organised a botanical/entomological expedition to the Tian Shan Mts. in North Western China and Kazakhstan for a group of 14 adventurers from Czech Republic plus one Englishman and one Dutchman.

We were told that free traveling was prohibited. But we learned "that he who asks too much is not successful." We communicated only rather limitedly in Russian and English, but people mostly recognised only: "Ride a horse?" In the regional capital city Urumqi, it was always possible to rent a minibus and, after a lengthy explanation of where we'd like to go, we were able to go roughly in that direction.

Tian Shan lies on the 43rd latitude and is surrounded by basins with deserts. The North-eastern Tian Shan reaches high altitudes of over 5,400 m in several ridges; the most prominent are Borohoro Shan and Bogda Shan. The ridges over about 4,000m are covered with large glaciers. The climate is severely continental: the mean

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Our Next Three Meetings of NARGS

See Page 7 for three upcoming NARGS Piedmont Chapter Meetings—on **January 18, February 1, and February 15, 1997.**

Mark your calendar now.

J.C. Raulston. Continued from Page 1

japonica 'Chirimen'; *Nandina domestica* 'San Gabriel' and 'Alba'; *Rosa* 'Petite Pink' (Scotch rose) and 'Snow Carpet'; *Prunus mume*; *Delosperma nubigenum*; various cultivars of *Hippeastrum* and the now ubiquitous fastigate Leyland cypress, *Cupressocyparis leylandii*. Two unusual introductions by the arboretum include *Liquidambar styraciflua* var. *rotundiloba* (a seedless sweet gum) and *Lagerstroemia fauriei* 'Fantasy' (a selected red barked crape myrtle from one of the five plants in the arboretum that originated from a Japanese collection distributed by the U.S. Arboretum in the 1950s). During the last decade under J.C.'s helmsmanship, nurserymen were the beneficiaries of some 200,000 propagation cuttings annually and a staggering 45,000 plants representing over 250 taxa from distributions through the arboretum.

To choose to spend a day following J. C. Raulston around was to exhaust oneself from the sheer magnitude of his energy. His travel calendar and speaking engagements were consistently overextended. Also, he often tallied up more flight mileage than some airplane pilots. He never boasted of his many visits to botanic gardens, arboreta, or horticultural production areas even though they included all 50 U.S. states, 55 countries, and some 600 public gardens. In his horticultural peregrinations, J. C. drove at least 35,000 miles throughout North Carolina to teach university extension evening classes to landscape and nursery professionals. Therefore, his car was often generously filled with plants (and associated soil) scooped from the gardens, backyards, and perhaps errant side trips of various plant pilgrimages. By his own account he had his faults: he procrastinated; he hurriedly chose junk foods, including popcorn, while galloping between classes; he was an undaunted computer klutz; and he loved *Theobroma cacao*—not strictly the plant itself but rather the heavenly desserts made from it.

In 1990, J. C. attained one of those unrelished decennial birthday milestones—his 50th—and at a surprise celebration that flooded his house with scores of colorful landscape flagging as decoration, students, former students, and friends recited a catalog of the occasions when J. C. touched their lives as teacher, advisor, listener, and dispenser of sage advice. Although a horticultural scientist by formal training from undergraduate work at Oklahoma State University through graduate work at the University of Maryland, this Renaissance man was as equally comfortable at the theatre, an art exhibition, or a symphony as he is in quest

of the sole remaining species of *Cercis* that the arboretum doesn't have.

We were fortunate—indeed the richer for it—to have been contemporaries with such an indefatigable plantsman, teacher, and friend who was an aesthete in both nature and art.

[J.C. won the Marcel LePiniec Award from the North American Rock Garden Society in 1991. The foregoing article is adapted from the citation written for presentation of the award in White Plains, NY, on May 10. J.C. was killed in a car accident on December 22, 1996 in North Carolina.]

Memorials to J.C. may be given to the N.C. Agricultural Foundation with the donation noted "For the Arboretum Education Center in Memory of J.C. Raulston." Mail to Department of Horticulture, NCSU, Box 7609, Raleigh, NC 27695-7609.

That Death Whose Truer Name Is Onward

by Pamela Tennant

Strong in the constancy of change
Unfurl thy spirit's wing,
Soar on the homeless winds and range,
Strenuous, in suffering.

Blaze with thy naked hands the path,
Which thou alone must fine.
And turn thine impotence of wrath,
To courage of the mind.

Wrestle with angels. Fight and fall
And rise again to fight,
Past tears are present strength, and all
Depends upon thy might.

Death is not rest, there is no sleep
For human sorrow there,
The only way to cease to weep
Is to learn how to bear.

[Written in 1910 in England. From a collection of poems titled "Windlestraw;" title suggested by lines from Tennyson.]

Continued from Page 1 -- Holubec

January temperature is -20°C ; the mean July temperature is 20°C —but above zero. Snow cover is low due to a low rainfall except for the higher altitudes in the mountains. Geologically, all visited sites were on acidic rocks except for one small locality with a limestone layer. However, the vegetation there didn't differ.

We also visited the lowest place in Central Asia, the Turpan depression (154m below sea level). The travel to the depression was interesting, much more than the depression itself. We crossed hot desert-like mountains and passed an interesting flat absolute stony desert in about 0m altitude. It was like an artificial gravel road laying from the foot of the mountains somewhere to the horizon. In the depression there were agricultural fields, uninteresting cities, deserts and a permanent dust storm. We quickly returned to the mountains.

In Tian Shan we chose regions from a map according to their accessibility by roads. Our first visit was directed to Bogda Shan, to the Heavenly Lake. It is a beautiful resort and religious site laying on the northern slopes of the mountains. We set up a camp at about 2,050m above the lake. It was a mountain river bank under scattered slim trees of beautiful *Picea schrenkiana*. While building tents on a light place among trees, we noticed thin fading foliage of *Iris ruthenica* and incised leaves of a blue-flowering *Viola dissecta*. Southern slopes around hosted a high mountain steppe with numerous yellow flowering *Eremurus tianshanicus* with fragile emerged stamens. The *Eremurus* was accompanied with dense patches of endemic Tian Shan *Iris loczyi* with narrow leaves and large blue flowers. The seed capsules were half underground plunged into old leaf sheaths. We found a few faded stems of *Fritillaria valujewii* supported by low bushes. Later it appeared that the flowers were greenish outside and surprisingly carmine inside. Somewhat higher on the ridge there were mats of showy creamy *Scutellaria comosa* and *Dracocephalum komarovii*. We found also one last flower of a violet *Pulsatilla campanella* growing everywhere in grass.

In order to get higher on the ridges, a smaller group accepted an offer to rent horses. However, we had to climb a considerable long and steep part ourselves because it was too difficult for the animals. Passing by numerous yurts, we got to a beautiful valley in the head of the mountains. We set up a camp at 3,020m. It was an amazing place on a rivulet island among alpiners. The

valley was closed with a "great wall" of 5,400m high white snowy peaks. Glaciers and moraines were feeding the passing with a bluish rivulet. We raised our tents on a soft carpet of dwarf carexes and festucas with patches of even dwarf *Viola tianshanica*. The *Viola* was interesting with its small compact rosettes of leather-like entire leaves and blue violets. The grassy pastures around were decorated with numerous flowers of blue *Aster alpinus*, large pink *Erigeron allochrous*, showy carmine, 5 cm wide daisies of *Pyrethrum richterioides* with incised leaves and several dwarf *Astragali*. Northern and wet places were full of stems of an unusual plant similar to *Trollius pumilus* with the separate generic name *Hegemone lilacina*. We saw only the latest bluish-white quite rich flowers. Damp flat meadows with running water were orange-yellow with numerous *Ranunculus pseudohirculus*. Red spots of showy red flowers belonged to patches of our native *Pedicularis palustris*.

Rough mineral screes on huge slopes everywhere in Tian Shan were settled by pioneer plants: dark blue *Dracocephalum imberbe*, sky blue to pinkish *Geranium saxatile*, and yellow-orange *Papaver croceum*. Simply a beautiful combination. Higher up and where the screes were softer and moving, we found a tiny *Dracocephalum stamineum*. The plant was hardly 10 cm high; lilac flowers were dotted with emerged dark anthers. Screes of the highest altitudes were preferred by a tiny plant of the *Brassicaceae* family—*Chorispora bungeana*. Its 4 cm long linear pinnatisect leaves were nearly invisible on scree, however large rose flowers completely covering plants appeared from a distance. It is also a typical plant of moving screes.

There are a few nice *Leontopodiums* in Tian Shan. Larger plants from mountain pastures belong to *L. fedtschenkoi*. They have long involucral bracts and long narrow leaves. The other species *L. ochroleucum* prefers high alpine meadows and screes. It is smaller having a compact inflorescence that becomes yellowish when it dries. A closely related species described as *L. nanum* in *Flora of Kirgizstan* grows in screes of high altitudes. The inflorescences are stemless or with a stem up to two cm.

Recent snow fields with clayey wet soil were often inhabited by *Callianthemum alatavicum* and *Lagotis integrifolia* (*Scrophulariaceae*). The former has juicy leaves and large pinkish-white buttercups. The latter is a tiny stoloniferous plant with racemes of white flowers up to 12 cm growing up to the high tundra. *Saxifrages* appreciate severe conditions of the tundra also. There were two yellow species—the lower caespitous plants

two slender white flowering species, *S. cernua* with purple bulbils in upper nodes and similar *S. sibirica* without bulbils.

China is a country of *Saussureas*. Their flowers are tiny as in other Asteraceae, but they form large beautiful or interesting inflorescences. And if the inflorescences are not so beautiful, they form very distinctive bracts: coloured, white, membranaceous, or soft hairy. These plants mostly grow in extreme conditions on mineral screes in the highest altitudes of mountains. One of the most striking species is "snow lotus," *S. involucrata*. Its rich inflorescence is covered with white bracts, and it looks like a huge white iceberg lettuce. And it is also offered by local people for salads. We tried it and it tastes like a mixture of soap and petrol—another country, another habit. This beautiful plant is possible to find hanging out of huge rock walls and among boulders above 3,000m. Two other *Saussureas* of Tian Shan are very tiny. *S. glacialis* is stoloniferous growing in pure scree. Its small rosettes of dentate leaves are covered with inflorescences like small tennis balls supported by white hairy bracts; when the buds open the white balls turn lilac. A similar species *S. gnaphalodes* is caespitous to prostrate, with white hairy leaves. The buds are white and hairy with a mixture of longer black hairs and resemble a huge *Leontopodium*. Flowers are similar to the previous species. The latter seems to be possible to grow. They will require a well drained gritty soil that is not too dry. These plants really provoke growers: "Try us."

The northern range of Chinese Tian Shan is called Borohoro Shan. We briefly visited three places whose flora were quite similar. They were a mountain resort Bayan Gol, the industrial and mining region around Houxia, and a high ridge above the city Kuytun. A short look on steppes near Bayan Gol at about 1,800m revealed a mass distribution of *Androsace sericea* from the *A. villosa* group. It is a low, rather mat-forming species. The timberline is developed on northern slopes only at about 2,500 m. Southern hot rocks host large rosettes of *Rosularia platyphylla*. Beautiful pink flowers with red veins were in rich inflorescences on only 10 cm long stems. Tight fissures were nearly filled with rosettes of dark green linear-lobate leaves bearing large pink inflorescences. They belong to *Saussurea ceterachifolia*. Rough screes were appreciated by frequently larger *Rhodiola linearis*.

There were also many nice species in high grass around the timberline. We identified a large *Ligularia heterophylla* with long floriferous racemes of small yellow flowers like huge candles. *Trollius dzhungaricus* with full large flowers mapped damp spots. Another and

much smaller species, *L. narynensis*, occupied cold shady rocks. It had only 2 to 4 large flowers. Below the trees there were plenty of *Moneses uniflora*, often with large white *Parnassia bifolia* and orchids—*Goodyera repens* and scattered *Coeloglossum viride*. *Atragene tianshanica* (*Clematis*) hung its large white flowers on low trees, and bushes of *Juniperus sabina* and *Primula algida* of the Farinosa group decorated lower grass. Ancient, bonsai-looking shrubs of *Caragana jubata* dominated eroded slopes of ravines. They resemble woody *Astragalus* having pink flowers among dense long prickles of lignified leaf petioles.

Northern crevices and cold rock walls were occupied with an interesting plant like *Omphalodes luciliae* with large white flowers. Later we determined it was *Pseudomertensia racemosa*. We very much enjoyed this unusual find. Cold shady rocks were also suitable places for *Paropyrum anemonoides*. This fragile "anemone" bears flat large white flower on stems coming from juicy green leaves. Its related and nicer species, *Paraquilegia grandiflora* grows here too, but usually higher, from timberline to over 3,000 m. It is found only in tight crevices on open rocks. When in sun the leaves form tight cushions with a woody base. It is exciting to see older cushions fully flowering. The colour is white often with a bluish hue, darker around peduncle insertion.

A very interesting *Boraginaceae* rarely grew on fine scree on the road bank without competition of other plants. Its inflorescence is sessile like that of *Anchusa italica* but flowers are very minor and blue. It is not in floras of Kazakhstan and Kirgizia. Finally we determined it tentatively as *Tretocaria* cf. *pratensis* according to a close flora of Mongolia. The miniature gentian, *G. karelinii*, displayed its relatively large blue and white flowers.

Cold rock crevices from the timberline up to 3,600 m were fully occupied with a woody mat forming *Potentilla biflora*. The higher it was, the better and more compact were the mats. Large yellow showy flowers on short prostrate or nearly sessile stems were shining in the distance. Closely related mat-forming species accompanying the *Potentilla* on screes here was *Dryadanthe tetrandra* (syn. *Potentilla*, *Sibbaldia*). Its flowers are small and, yellow, but its bluish green mats nearly 1 m across and only 3 cm high are superb. Of special attention is *Thylacospermum caespitosum*. You can imagine a green *Minuartia* in the form of sheep-like *Raoulia eximia* of New Zealand. Place it on a rough scree in 3,600 m and that's it. Minor green flowers or rounded fruits do not spoil the plant appearance. Yellow globules thrown on scree in the neighbourhood belonged to a dwarf *Cancrinia tianshanica* of Asteraceae. Its hairy

incised leaves are invisible in the rough stony tundra.

Androsace sericea of mountain steppes was here replaced by *A. lehmanniana* and *A. akbaitalensis*. The former grows in crevices above timberline forming large cushions of soft rosettes with rounded hairy leaves. The latter grows in alpine tundra. It is close to *A. chamaejasme* having compact green rosettes of longer and less hairy leaves.

The genus *Rhodiola* is represented by just one species in Europe. In Asia, there are many of them. *R. quadrifida*, *R. coccinea* and *R. gelida* belong to the smallest. The former two are very similar with juicy small cylindrical leaves, red flowers, and a woody bases covered with lignified old stem remnants. The latter has small flat slightly dentate leaves and yellow flowers. They decorate rough screes up to the glaciers. Particularly, *R. gelida* goes to the highest altitudes on ridges. Also, I have to mention my favourite plant from Mongolia—*Lagopsis marubiastrum*. It is a white-woolly Lamiaceae with brown or yellowish apparent flowers coming from dignified white conic inflorescences. They love moving screes in the highest altitudes.

On the way back we saved two days for a short stop in Kazakhstan. The North central Tian Shan above Alma Ata is called Zailiyskij Ala-Tau. This beautiful ridge reaches altitudes over 4,000m and has several large glaciers. It is easily accessible from the mountain sport resort Medeo. Mountain pastures here were not so heavily or not at all grazed as in China. In general the flora was similar, however we found some additional species. We investigated a huge valley above an emergency dam up to the glaciers. In a mountain boulder stream we found an unusual *Rhodiola semenovii* bearing long brushes of yellow flowers. *Primula turkestanica* from the *P. nivalis* group accompanied the *Rhodiola*. We found it still flowering (dark violet noble flowers) in one cold northern spot. Grassy slopes hosted two gentians growing together. The creamy white *G. algida* (related to *G. frigida*, *G. froelichii*) is circumpolar on the Northern hemisphere. The other was *G. kaufmanniana*, similar to *G. dahurica*, but smaller, with one to three large blue flowers. It was an excellent alpine, which is probably not in cultivation. These plants were accompanied by beautiful *Oxytropis chionobia*. It formed small white hairy patches. Stems bear large 2 to 4 violet flowers forming large pods.

A high alpine scree moraine under glaciers was decorated by plenty of nice flowers. A late flowering *Waldheimia tridactylites* was completely covered with red or rose sessile daisies with yellow centres. Its soft dark green mats of trifurcate leaves were nearly invisible. Yellow balls of *Cancrinia tianshanica* were occasionally

spilled on scree. Numerous dark blue *Dracocephalum imberbe* and *Papaver croceum* with rare dark orange forms appreciated this heavily drained flowerbed. Her Majesty of Alpines, *Saussurea gnaphalodes* was very vigorous here forming large fully flowering patches.

Eritrichum was not missing in these mountains. We found nice hairy cushions of *E. tianshanicum* of the *E. villosum* group in grass and fine scree. Quite large white or creamy flowers were on 5 to 10 cm stems. A top plant for rock gardens will surely be *Erigeron aurantiacus*. Its huge orange inflorescences were solitary on plants in grass, but higher on screes on Talgar Pass the plants were marvellous: very dark orange and low growing, up to 10 cm. They were accompanied by a fantastic *Viola altaica*. Their large blue or rarely light yellow flowers were faced to the evening sun throwing long shades as if they were saying "Good bye" to sun and us.

After a hectic run down, we briefly inspected a wild apricot locality above Medeo, tasting a few small fruits (*Armeniaca vulgaris*). This dry hot steppe slope protected its treasures with thorns on the most of plant species. Heavily injured we left the last locality and pressed to the latest and unbelievably full hot bus to Alma Ata with heads full of thoughts on these wonderful mountains and plants.

Suggested Reading Material

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End-of-Year Plant Collecting Reflections

by Vojtech Holubec

This year was very successful in plant discovering. Our busy travels led to very botanically rich regions, which were not accessible until recently. Traveling to such wild regions always brings unexpected problems, which are necessary to be solved immediately, including drastic changes of the route and programme. It is some times risky, but it always brings unbelievable stories.

The first trip was to Albania, an unknown closed country, even for us; it is also a former communistic regime. We organized a bus trip by our Rock Garden Society of Prague for two weeks, where 26 people were ready to risk to see new alpine. We drove via New Yugoslavia and Makedonia. In our short stop near the Makedonian border we found thousands of *Ramonda nathaliae*. They were in limestone crevices, dried out, with "shrinkled" leaves. We collected a few seeds from the near-empty capsules. This tertiary relic is restricted to a small region, and it was a good finding.

The next aim of our dreams was Korab, the highest mountains in Albania on the border with Macedonia (also Makedonia). First we tried to get there from Macedonia. Our bus driver left us in the side deep valley, and he should have picked up us two days later. We started to climb directly up. When we got to the alpine meadows we were excited with a beautiful panorama of Korab. However, our excitement was short because three Makedonian soldiers with machine guns chased us together and escorted us to their military post. Local officer filled many forms with each of us because of violation of the border zone. Later at night they escorted us to the bus.

We camped near Mavrovo lake and investigated 2,000m hills around. There were plenty of *Geranium cinereum* ssp. *subcaulescens* with purple flowers only up to 10 cm high. We found many *Edraianthus kitaibelii*, *Anthyllis aurea* and *Saxifragas: sempervivum, grisebachii* and a strange small *scardica*, mostly crossed with *marginata*. Next day we went to Albania and to Peshkopi closer to Korab Mts from the other side. Further, there was only a dirt road with bad curves. We looked for appropriate transportation and an old short Czech bus was offered us for \$200 US. At night we got to Cerem, a village on the slopes of Korab, 1200 m high. It looked excellent; we overnighed near an army post. Local people watched our every movement from less than 1 m. Some minor things disappeared. A 3-day hike to 2750 m high Great

Korab followed. It was wonderful. Excellent flora and no army—just shepherds! There were beautiful Saxifragas: in lower altitudes *S. grisebachii* was followed higher by *S. sempervivum* and with something between small *scardica* and *marginata*. Everywhere, grass and limestones were decorated with extraordinary beautiful blue-violet large flowers of *Edraianthus wettsteinii*. Under ridges, perfect white *Ranunculus crenatus* with *Androsace hedraeantha* (1-2 cm) followed melting snow. We bivouaced with them just near the border. Cold screes were full of pretty flowering *Viola grisebachiana* and *Thlaspi bellidifolium*, here in an excellent dark lilac colour form.

The High Korab conus is partly built of acidic schists. The crevices were full of the long-expected plant *Erysimum korabense*. Dark green cushions were completely covered with golden yellow large flowers. We left Korab Mts., and the main troubles began. Our aim was a woody *Viola kosanini*. We crossed Albania in 4 days at a maximum speed of 10-15 km/h, which was allowed on local "highways" all over Albania. Near Kosovo we were terribly attacked by locals throwing stones at night. They wanted to steal all our things. Fortunately police saved us and let us overnight near their post. Several people suffered injuries. The group decided to leave Albania. We crossed Albania to the border, and our group head found that a passport and group money were missing. We had to return to the police where the attack happened. The conclusion was the guarding policemen stole it, but nothing was found. We had to cross Albania again to pick up a new passport in Tirana. During camping near Tirana, thieves took what was still available: several suitcases from the bus load space. I owned just what I had on and three films in my pocket. We escaped from Albania with pleasure.

The next travel was to the Russian Caucasus. As usually, we were well prepared botanically from the Russian literature with an aim to visit certain rich localities. A group of ten people started in Sochi on the Black Sea coast. We visited the very beginning of the Caucasus. It was a botanical paradise. We went through rich *Rhododendron* forests (*R. ponticum*, *luteum*, and *caucasicum*) up to perfect limestone ridges of the western Caucasus. Rich meadows hosted rose *Betonica grandiflora*, magnificent yellow *Lilium kesselringianum*, *Fritillarias*, white *Erythronium caucasicum*, and *Trollius patulus*. Limestones were full of various campanulas. The large dark blue spots belonged to hairy *C. saxifraga*. A new finding, wonderful dwarf *C. suanetica*, was hanging from tight crevices. *C. tridens* (syn *C. biebersteiniana*), related to Turkish-Armenian *C.*

tridentata occupied grass on large boulders. It had the largest flowers at all. Another one of the best species, *C. argunensis* grew on boulders under northern cold walls. The coldest crevices were decorated by curtains of *Omphalodes lojkae*, excellent and a bit larger species than *O. luciliae* from Olympus. The one yellow *Gentiana verna* in the world is called *G. oschtenica*. Everybody must love this unique plant growing in small grass on big boulders.

We crossed the Caucasus on foot and using various transportation we got to the Central Caucasus under the highest mountain Elbrus (5,600 m). This was a beautiful place with a view of snowy peaks of the main Caucasus. It was of acidic bedrocks (mostly granite) with much less rich flora than in the west. High screes were dotted with nice white daisies, *Chamemelum caucasicum* and *Anthemis sachokiana*. Excellent low *Senecio primulaefolius* accompanied them together with white woolly rose *Potentilla divina*. Rich grassy slopes were decorated with white *Anemone fasciculata*, yellow *A. speciosa*, and rare bright yellow *Pulsatilla aurea*. Low grassy tundra revealed dwarf gems: blue villous *Eritrichum caucasicum* and *Gentiana djimilensis*. Top crevices were decorated with tight cushions of *Draba bryoides*. Volcanic rocks of Elbrus hosted dwarf *Senecio candoleanus*, *Campanula ciliata* closely related to *C. tridens* or a little smaller, and the smallest mats of *Veronica minuta*. *Jurinea subacaulis* with sessile 7 cm flowers resembled Turkish *Jurinelas*.

The last time we spent in Balkaria, in a pre-Caucasian limestone ridge called the Rocky Mts. We were looking for *Kabschias* not in cultivation: *Saxifraga dinnikii* and *S. columnaris*. Both are of *oppositifolia* rose colour. The former grows in northern cold crevices, the latter hangs under overhangs like *Dionysias* on southern limestone compact walls. We found also their hybrids and crosses with yellow *S. scleropoda*. Cold crevices were appreciated by rare *Draba ossetica* var. *racemosa*, forming white woolly cushions with white flowers. The best Caucasian *Potentilla oweriniana* is similar to *P. divina*, differing by light bracts.

We also had some troubles in Caucasus. Four of us had bad luck and were taken by army to prison for two days for "violation of border." However, it happened near the chair lift, far from the border. The aim was probably to improve their budget, because they asked \$70 US per person.

In Balkaria, we were attacked by thieves with guns. Thanks to diplomacy of our group head, they left with three torches [flashlights] only. The whole village then tried to improve its image with unusual hospitality. We were accepted like the best guests.

It was a great conclusion to our traveling.

Sincerely, *Vojtech Holubec*

Upcoming Piedmont Chapter Meetings
All Meetings are held at the N.C. Botanical
Garden, Chapel Hill, NC
10:00 am, Totten Center

January 18, 1997

Fred Case

Saginaw, Mich.

"Trilliums"

Members whose last names begin with A through
H bring goodies to share.

February 1, 1997

Vojtech Holubec

Czech Republic

"Czech Crevice Gardening"

Members whose last names begin with I through Q
bring goodies to share.

February 15, 1997

Dorothy Bonitz

Hampstead, N.C.

"Trough Building"

Members whose last names begin with R through
Z bring goodies to share.



In Memory of J.C.

Books to Lift Your Winter Spirits. . .

Letters, Roses, and Gardening Levity

by Bobby J. Ward

While the days are still short and outside gardening opportunities limited, an arm chair of books have provided me with vicarious pleasures and green thoughts till the warmer days return to our Carolina soils. Here are three books on widely diverse gardening topics that will help ease the pain of long nights with snow and ice.

A book that can be read, unhurried, over several days, is *The 3,000 Mile Garden* by Leslie Land and Roger Phillips (Viking 1996, \$24.95). It is a collection of correspondence between the two writers: she in Maine and he in London. Leslie and Roger met at a mushroom conference in New Hampshire in 1989 and discovered in each other deep mutual interests in plants, gardening, food, and the good life. Leslie, at the time was a food and home editor for *Yankee* magazine and the author of several cook books. Phillips was an award-winning garden writer and photographer of books on bulbs, herbs, roses, and mushrooms. *The 3,000 Mile Garden* chronicles four years of correspondence in which Roger wrote of his garden in Eccleston Square in London, of London plane trees, his photographic travels, and of the problems gardening with an association or committee who make decisions on the planting in "his" square. Leslie talked of tulips and tomatoes and of raccoons and deer in Maine—and eventually of her marriage to her friend Bill; she wrote of sharing her time in Bill's garden in New York. The correspondence between Leslie and her doppelganger ego continued after her marriage; the two often shared intimate details of their lives along with recipes and garden sketches, as well as weather and frost reports. The book ends in November 1994 with the closing of Leslie's house and garden for the season in Maine in order to spend the winter in New York, and with Roger simultaneously rejoicing at the successful funding of a fountain by the garden committee in Eccleston Square and the "bulbing" of the square for next spring's narcissus.

I have admired but never grown roses myself, since I have neither the space nor the sun to successfully manage them. However, *Antique Roses for the South* (Taylor 1990, \$29.95) is an informative book whether you grow roses or, like me, enjoy them in the Raleigh Rose Garden. William Welch, a Texas A&M professor of Horticulture, has succeeded in sorting out the names of the roses that graced our ancestors' gardens more than a hundred years ago and that, unlike modern hybrids, were full of delicious

fragrance. The American Rose Society classes any rose introduced prior to 1867 as "antique." Why 1867? That was the year the first hybrid China rose, 'La France', was released. 'La France' was the first of numerous roses that were the result of crossing the long-blooming Asian roses with the shorter blooming familiar European roses. A range of "new" roses appeared: Grandifloras, Bourbons, Noisettes, and Hybrid Teas, and they, too, are included in the book along with the old fragrant roses originally from European stock. Welch and his team of rose rustlers searched old gardens and cemeteries primarily in the South to recover many of the "lost" antique roses that are generously described and brightly photographed in this book. Techniques on planting and landscaping are included. An extensive dictionary lists at least a hundred roses detailing their history, description, and culture requirements. Sources for obtaining old roses from commercial dealers are included.

Finally, a bit of levity in gardening may be desirable particularly after Hurricane Fran rearranged many Tar Heel gardens. *White Trash Gardening* by Rufus T. Firefly, a.k.a Mike Beaton (Taylor 1996, \$14.95), gives the straight story on how to use pickup trucks as groundcover or how to make your own toilet bowl planter. It is redneck gardening humor that teases with such thoughts as "you will know you are a white trash gardener if you use a jelly jar to measure rainfall"; or "if you only plant shrubs where your dog has done the digging." There are directions for growing "taters" and "tomaters" and ten no-fail vegetables. Benton also suggests that if you are tired of eating fried okra, just try a pickled okra on a stomach full of beer. *White Trash Gardening* gives a top ten list of carefree plants that are sure-fire and require little attention to make them grow; among them are honeysuckle, ivy, and cast iron plant. Hints are also given for recycling (put your dead pet underneath a compost of leaves); the difference between a yard and a well-manicured lawn (96 hours of sweat, \$700, and a ton of aggravation); and how to identify helpful varmints in the garden (Your buddy, Mr. Toad). *White Trash* is an easy-read book, one that you will want to pass on to a fellow gardener.

Bobby Ward is an environmental scientist who gardens in Raleigh, North Carolina.



Plant of the Week . . .

Iris unguicularis 'Walter Butt'

by John Grimshaw

Iris unguicularis is one of the greatest pleasures of winter, and the sight of those soft lavender-blue flowers amongst the tangled leaves are a real treat, however often you see them. We still await this pleasure from the common lavender-blue form, but its arrival is anticipated by the clone called 'Walter Butt', which has been in flower for some weeks.

Walter Butt was a plantsman who lived in Somerset in the first half of this century. Amongst his collection was a form of *Iris unguicularis* which a friend of his had collected near Algiers, distinguished by its pale flowers and good scent, as well as a notably early flowering season. Butt's friend, E.B. Anderson, a great alpine grower, thought highly of this plant and distributed it widely under the name 'Walter Butt' after about 1950, when he bought the property from Butt.

As an iris, 'Walter Butt' has huge flowers, which must be 4-5" across when fully expanded, of the most beautiful 'silvery-lavender', as Brian Mathew puts it in his iris book. I can't think of any other way to capture the exquisite colouring. The reverse side of the falls, and this is best seen when the flowers are still tightly furled, is basically whitish, but there is a wash of buff towards the tips that gives them an extremely elegant silky appearance.

Unlike typical *I. unguicularis*, I find that 'Walter Butt' is almost deciduous, losing most of its leaves in summer and regrowing them in autumn, just before the flowers appear. This makes it a tidier plant, and the flowers are displayed much better than in other, leafier forms. Unfortunately my clump has a virus, which sometimes results in slightly deformed flowers, but otherwise has no visible effect: in deeper coloured clones the effect is a horrible mottling with deep purple, and I have thrown out and burnt what was a good collection of named clones because of this. 'Walter Butt' has been spared, as has the typical robust clone, because the virus doesn't seem to do them any harm. I know that I ought to have gone the whole way and destroyed even these reservoirs of infection, but the likelihood of getting uninfected stocks seems remote, and I couldn't do without their flowers in winter. I feel that the flowers are best enjoyed picked for the house; they don't last long, but one doesn't tend to spend long periods ogling flowers outside in December, so in fact you get much more pleasure from them when picked.

[John Grimshaw is a member of NARGS and is on the Committee of the Alpine Garden Society. He lives in Maidenhead, Berkshire, England. The preceding article was posted on Alpine-L on Sunday, December 7, 1996; Harry Dewey and Louise Parsons are co-owners of Alpine-L. Used by permission of John Grimshaw.]

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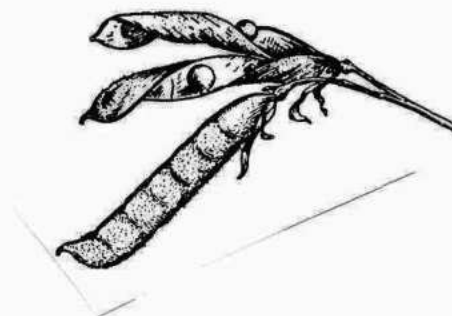
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Winter in Andalucia

by John Grimshaw

The following is an account of my visit to Andalucia (southern Spain) over Christmas and the new Year (19th December to 4th January, 1996). During this period I was staying with friends at Alcaucin, a village about 25 km inland from the Mediterranean at Torre del Mar, Malaga Province. We flew to the Malaga airport on a cheap charter flight.

The area is generally hilly, with mountains rising to 2,000m behind Alcaucin (Sierra de Tejada); there has been a lengthy drought (5-7 years, depending on source) but normally most rain falls in the winter months. The lower areas are generally covered by olive and almond groves, with some arable crops and smaller patches of grapes and so forth. In the river valleys and especially towards the coast there is intensive market gardening under very unsightly plastic; there are also irrigated orchards of citrus and avocados. On arrival the landscape looked very bare; heavy rain had fallen and severe erosion had occurred in places, but by the time we left the countryside was green and spring-like. Most of the green flush was 'weed' seedlings but in many places much of the greenery was derived from *Oxalis pes-caprae*, the pestilential (but very pretty) 'Bermuda buttercup'.

The foliage of *Arisarum vulgare* must also make quite a contribution. This pretty little aroid grows everywhere and seems to be favoured by cultivation. It was in flower, and quite a lot of variation in spathe colour and size was apparent. Most are shades of green with white stripes, but some are a nice chocolatey colour. Most plants have plain green leaves, but a fair proportion have them attractively splashed with white freckles. I could not distinguish any vegetative characters to separate *A. vulgare* from *A. simorrhinum*, which is also common: they grow together in places. In flower the difference is obvious: *A. simorrhinum* has much shorter peduncles, so that the spathe is held almost at ground level; it is always a dark maroon with white stripes, more hooded and shortly puberulous. The spadix is fattened and rounded at the end and does not protrude from the spathe; *A. vulgare* 'sticks its tongue out', and the spadix is much narrower.

I had several desiderata, namely *Iris planifolia*, *Narcissus* spp, *Clematis cirrhosa*, and *Mandragora officinarum*. Unfortunately I didn't see the latter, but the others compensated.

Iris planifolia is a 'juno' iris—from a sheath of leaves

like a leek (about 6" high on a good plant, less in weaker specimens) emerge the beautiful blue flowers, about 3" across. This is amazingly common but apparently always on limestone, often in short turf. We first saw it at El Torcal de Antequera, an area of amazing eroded limestone and then commonly in the limestone mountains above Alcaucin. A good place would be just below the Zafarraya pass (more anon).

Narcissus papyraceus—Driving along the new main road between Casabermeja and Alcaucin I noticed bunches of mistletoe in some olive trees. We stopped and I found to my delight that it was the rare red-berried *Viscum cruciatum*. Turning round to leave I noticed a splash of white in an adjacent gulley—*N. papyraceus*, just coming into flower in hundreds. The scent perfumed the air. It was growing in very sticky clay, both here and where I also found it higher up, but always in rocky places or gulleys where it was safe from cultivation around the olives. It is very variable in shape and size of flower—some starry-petalled and others with good broad petals. We didn't see any other species of narcissus, but may have found the emerging leaves of others in the hills.

Clematis cirrhosa—I saw this in only one place, scrambling through a *Pistacia lentiscus* bush in a small ravine near the village of Periana. The flowers were huge—4 cm long and a gorgeous creamy green-white.

Botanical and horticultural sites of interest included the following:

Malaga town—The Alcazaba (fort) has an attractive small scale Moorish garden, with a sunken parterre of *Lavandula multifida* hedges around a fountain being particularly pleasant. There is an old botanical garden but we didn't find time to go. Otherwise Malaga is not very appealing.

El Torcal de Antequera—National Park with fantastic eroded limestone karstic scenery. 30 species of orchids are recorded and it was very frustrating to see only their young shoots emerging. Obviously a very interesting place in early summer; very little was out in the middle of winter. An exception was the pretty white *Vinca difformis*. All the rocks have *Asplenium ceterach* in all the cracks! At Antequera town are some Stone Age chambers: a pretty buttercup was growing on top of them.

Zafarraya pass—The old road from the coast to Granada crosses the hills through a magnificent natural portal with limestone pillars on each side. These rocks are covered in interesting plants including dianthus and campanula. *Helleborus foetidus* was common and in flower; *Euphorbia characias* was not yet out but abundant. Unfortunately all this area is heavily goat-ridden, and so really interesting plants are confined to goat-free crannies:

I found a paeonia clump at one point with gaping capsules, but unfortunately the seeds were long gone! *Crocus serotinus* ssp *salzmännii* is abundant here, with other non-flowering monocots being rather tantalising.

Granada—the gardens of the Alhambra are amazingly beautiful, although I felt that they would be even better with a good English gardener in charge! The water features are wonderful and round each one in the damp crannies of the walls was a fringe of *Adiantum capillus veneris*—a rare plant in Britain. *Diospyros kaki*—the persimmon—was fruiting, and the pinkish-orange fruits on bare trees looked great. I was particularly pleased to see a colony of *Ranunculus ficaria* (the large flowered species) under some trees. An unconsidered trifle, no doubt, but very pretty.

Sierra Nevada—From Granada it is easy to drive to about 8000' in the mountains, which was then about snowline. We spent about an hour up there—sufficient time to see a few interesting alpine, all solidly dormant of course. Prize amongst these was *Androsace vandellii* in crevices below overhangs; nearby were tufts of a draba and *Sempervivum nevadense*. *Cystopteris fragilis* was growing tucked deep under rocks. At a slightly lower elevation is the 'hedgehog zone', characterized by the hummocks of spiny plants, especially *Erinacea anthyllis*. I have one of these that is four inches across on my rock garden; in the wild the cushions easily exceed 3"! There were several other species of pricklybob, including an astragalus, other legumes, junipers and the crucifer *Ptilotrichum spinosum*. No *Crocus nevadensis*, of course, but when I got home I found that the pot in my alpine house was in flower.

Nerja—On the coast east of Malaga. There are some famous caves here which we were advised to see, but on arrival found that they were horribly commercialized so didn't bother and went for a walk on the hillside above them. This was wonderful, full of botanical rarities such as *Maytenus senegalensis*, which I know well in Africa but grows only on this stretch of coastline in Europe. Also *Buxus balearica* and *Cneorum tricoccon*. In places the hillside was covered by the expanding leaves of *Ferula communis*, but the dominant vegetation was typical matorral, with cistus, lavandula, juniperus, and rosmarinus. Lots of *Chamaerops humilis*. Higher up is a recreation area with parking and a 'jardin botanico'; from here it is possible to walk into the hills. Lots of ophrys rosettes all over, but of course no flowers. A precocious spike of *Dipcadi serotinum* was rather fun however.

I hope this gives an indication of the botanical richness of Andalucia. If you plan to go, I would think March to early May would be best for seeing lots of

flower: it is unbelievably frustrating to see only leaves or seed heads!

[John Grimshaw is a member of NARGS and is on the Committee of the Alpine Garden Society. He lives in Maidenhead, Berkshire, England. The preceding article was posted on Alpine-L on Sunday, January 21, 1996; Harry Dewey and Louise Parsons are co-owners of Alpine-L. Used by permission of John Grimshaw.]

1997 Call for Ephemeral Seeds

This year several rock gardening groups are participating in an exchange of seed with short viability. When seed of this type goes through the seed exchange and dry storage it germinates poorly. Appropriate candidates are members of the Ranunculaceae: aconitum, adonis, anemone, eranthis, glaucidium, helleborus, hepatica, ranunculus, thalictrum; and the genera asarum, colchicum, corydalis, cyclamen, dicentra, dryas, erythronium, galanthus, hacquetia, hylomecon, jeffersonia, lysichiton, salix, sanguinaria, shortia, stylophorum and trillium. This list is not exhaustive, but please restrict offerings to species with known short viability or those which exhibit dramatic differences in germination when sown promptly.

If you have seeds to offer, please fill out the form below and mail it in now—the deadline is March 15. The list will be published in a spring newsletter along with the procedure for obtaining seeds.

When the list is published, these are the directions that will be given to requesters: To request seeds, send a self-addressed, stamped envelope to the donor. (If the donor is across an international boundary, obtain International Reply Coupons.) Write the species name on the return envelope. If you are requesting more than one species from a donor, send the appropriate number of envelopes, though multiple forms of the same species are safe for a single envelope. You are responsible for appropriate packaging and sufficient postage.

Submission form: Ephemeral Seeds for the 1997 Exchange

Your Name & Address: _____

Genus, species and form; Collection Date _____

Mail the form to Tom Stuart, P. O. Box 517, Croton Falls, NY 10519 USA. Or e-mail form to Tom at tstuart@westnet.com. Deadline is March 15, 1997.

The NARGS Seed Exchange

by Ellen Horning

May I have the honor of describing the NARGS seed exchange?

Every year, NARGS members are encouraged to submit their garden- and wild-collected seeds to the seed exchange (some botanical gardens also participate). The result, after what must be incredible labors on the part of the chapter doing the work, is a small book of offerings printed in VERY small print. This year's [1995] list, for example, contained around 7800 entries, separated into garden-collected and wild-collected, with a couple of separate categories for the booty from selected seed-collecting expeditions (Denver Botanic Garden's South African Expedition; Alpine Garden Society 1994 China Expedition).

From this list, each member may select 25 items, 35 if they're a donor, plus (trying to remember)—70 (or 80?) alternates? This entails pulling an all-nighter the moment the list arrives, armed with every reference book you own. An indispensable aid, since hardly any mortal is actually familiar with everything listed, is the *Bernard E. Harkness Seedlist Handbook*. This lists everything that ever appeared in the seedlist up to the time that the handbook (2nd edition) was completed, an ultra-brief description, and a source for more information. This is useful if you live near a library with a world-class botany/horticulture collection. If you don't, it's still useful if you want that very brief description (you will, because the seed list itself will tell you nothing descriptive) and if you want confirmation that a particular item does, in fact, exist.

Once your selections are made, you scrape yourself off the floor, write a check for \$12.50, and mail the paperwork. This is in mid- to late-December (always a good time to take a day, or night, off). The you wait, chewing your nails. After the initial deadline, requests are processed in the following order: foreign donors first, domestic donors second, foreign nondonors third, domestic nondonors fourth, with requests being filled within each category according to order of arrival.

Your seeds arrive in mid-to late-January (I don't know how they do it). You may get hundreds in a packet, you may get as few as two. You almost never get every single thing you requested (well, I suppose someone must). If you were adventurous in your selections, you now spend several days researching germination requirements (here Deno is useful, sometimes) and making

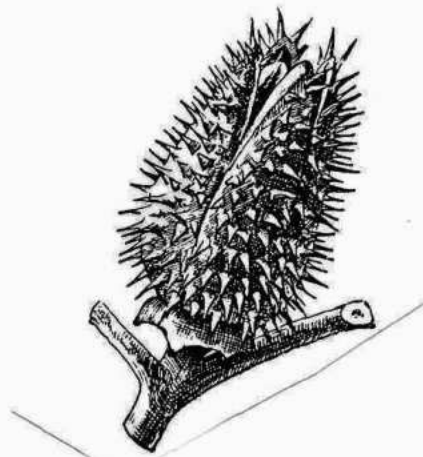
a few guesses.

Eventually you will have some little plants. What are they? Yes, the final delight of the Seed Exchange is the discovery that what you ordered and thought you got is *not* in every case, what you are now growing. The NARGS has a lot of fantastically knowledgeable members, but alas, it has a few who send in misidentified seeds, mixed-up seeds, seeds their grandmothers must have set aside 50 years ago (those don't germinate at all). Those in the know pay close attention to donor numbers in the seed list (these tell you who sent the seed—but only on the rarer items, where they are few enough to list). Then, of course, you need to know those people.

But none of this should scare you off. For some of us, it's the high point of the seed season! Seed offerings are not restricted to rock garden plants (unless, as Steve Marak once said to me, a rock garden plant is anything that will grow near a rock); everything up to trees is included (trees and shrubs do have their own section on the list). It's a great vehicle for experimenting in depth with a new genus (this year, for example, I concentrated on gentians).

If you're not an NARGS member, you become one by sending \$25 to the Executive Secretary, Jacques Mommens, at P.O. Box 67, Millwood, NY 10546. You will receive a quarterly bulletin, assorted other bits of paper, announcements of meetings, and so forth,— as well as the famous seed list.

[Ellen Horning is a member of NARGS who lives in Oswego, N.Y. The preceding article was posted on Alpine-L on Wednesday, March 1, 1995; Harry Dewey and Louise Parsons are co-owners of Alpine-L. Used by permission of Ellen Horning.]



Help for the Shamelessly Addicted

by Donna Moroni

By serving as an NARGS Seed Exchange order-filling volunteer, you can have the satisfaction of dragging seedaholics from around the world deeper and deeper into their not-so-secret vice. Already, the addicted are planning their attacks on the 1996/97 NARGS seedlist as is evident from some of the messages that have appeared on the Internet's Alpine-L mailing list. Last year, a seedaholic's confession (Ellen Horning) appeared on Alpine-L on the Internet, and it is reprinted on page 12 of this issue of *The Trillium* so that you can see precisely how important your work with the NARGS Seed Exchange is considered by those unfortunates that succumb to the siren call of the NARGS Seed List. Ellen's article on her seedaholism, I hope, will spur our chapter members to volunteer.

For the SeedEx work party schedule, please consult the last issue of *The Trillium*.

To volunteer for work with the NARGS Seed Exchange, call

John Dilley, SeedEx Volunteer Coordinator (919) 772-6761, or
Donna Maroni, SeedEx Chair (919) 929-8863, or e-mail to dmaroni@email.unc.edu

"Seed Exchange work is the refuge of people who have nothing better to do." —With apologies to Oscar Wilde

Mailed January 2, 1997



First Class Mail

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