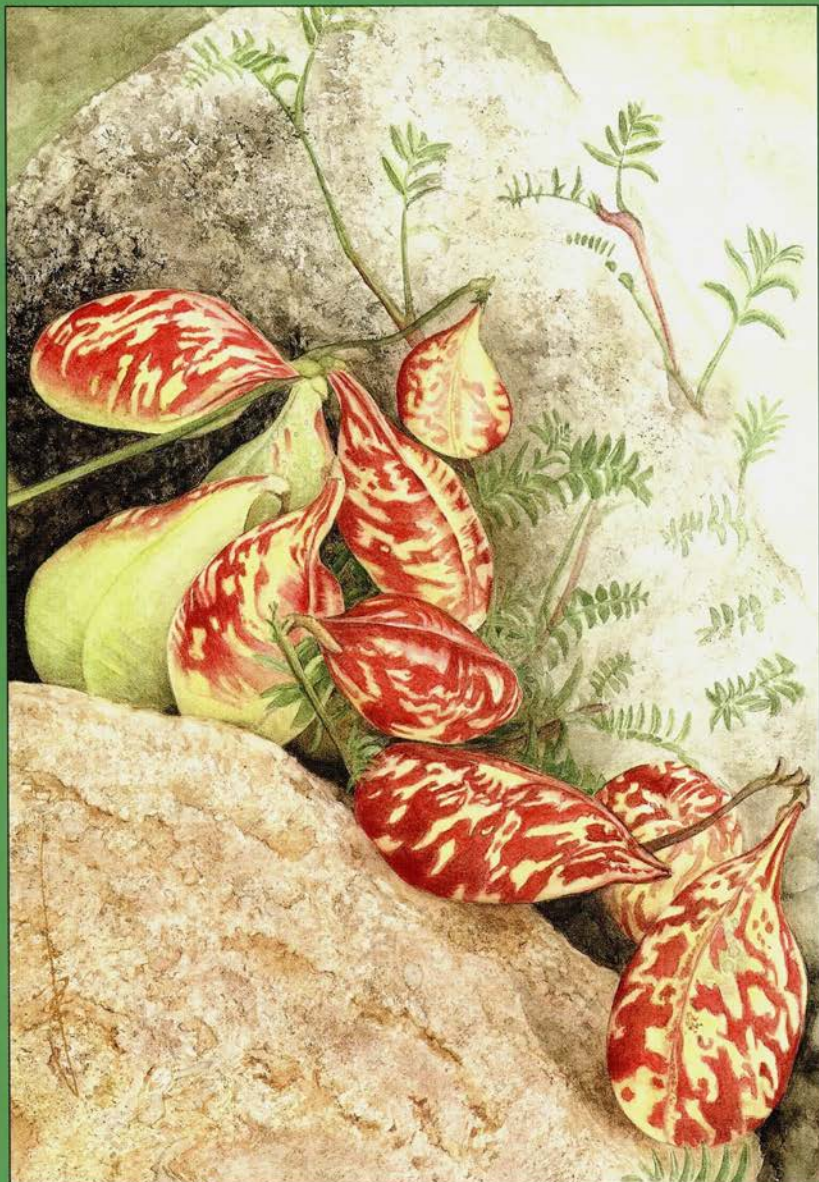


ROCK GARDEN *Quarterly*



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Front cover: *Astragalus whitneyi*. Painting by Cindy Nelson-Nold.

Back cover: *Erigeron aureus* on Mt. Rainier. Photo by Dick Redfield.

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ROCK GARDEN

Quarterly

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Contents

Tiny Bulbs for Troughs, JANE MCGARY	242
Up in the Air Rock Gardening, ABBIE ZABAR	251
Manhattan's Rocky Gardens, LOLA LLOYD HORWITZ	255
Growing Cortusoid Primulas, GERALD TAAFFE	256
The Chinese Grab Bag, JIM MCCLEMENTS	276
Some Scented Mints from the Southwest, SALLY WALKER	278
A Horticultural Prague Spring, BOBBY WARD	280
The Lure of the Garden, ROBIN MAGOWAN	287
PLANT PORTRAITS	
<i>Trillium pusillum</i> , GENE E. BUSH	290
<i>Petrophytum</i> , REX MURFITT	291
<i>Saxifraga catalaunica</i> , IAN YOUNG	293
BOOKS	
Leopold, <i>Native Plants of the Northeast</i> , rev. by LIS ALLISON	295
Adams, <i>The Art of Garden Photography</i> , rev. by DIANNE HULING	296
Heims & Ware, <i>Heucheras and Heucherellas</i> , rev. by WALLY WAGNER	298
Wharton, Hine & Justice, <i>The Jade Garden</i> , rev. by JANE MCGARY	298
NARGS NATIONAL AWARDS	
Marcel Le Piniec Award: Ron Ratko	300
Carlton R. Worth Award: Robert Nold	301
Award of Merit: Iza Goroff	302
NARGS Coming Events	303
Annual Index	315

Tiny Bulbs for Troughs

Jane McGary

Let me begin with a disclaimer: I don't have any troughs. I'm terrible at building things. I haven't bought any troughs because I live alone in a tall house on a hilly site, far out in the country, and considering any large acquisition involves planning how to move it, singlehanded, uphill or upstairs. But I do have plenty of gardening friends who have troughs which I admire very much, and I've read the literature closely. As for bulbs, I have lots of them—more than 1200 taxa at last count—and I grow them mostly in pots plunged in sand, an environment similar to the restricted space of a trough. Thus, I'll risk answering a question posed to me from time to time: What bulbs are good to plant in troughs?

There are two main reasons to plant bulbs in troughs. First, you may have some bulbous plants that need conditions you can't supply in your open garden, such as sharp drainage or a special soil; or they may be too cold-tender for your climate and need to be in a container that can be moved under shelter for the winter. Second, you may want to add seasonal flower color to a trough "landscape" primarily composed of foliage plants such as dwarf conifers or rock ferns.

The first criterion to consider is the size of the plant. Many plants with bulbs (in the broad sense, including corms and tubers) flower on short stems when the leaves are not yet well developed but later develop elongated stems and foliage that might look messy in the trough. The plants recommended here all have foliage of very modest dimensions and flowering stems that are usually no more than 4 inches (10 cm) tall.

Next, we don't want the bulbs to increase so fast that they choke the trough. Most bulbous plants coexist with shrubs and small perennials quite well; the roots in most genera are in growth for only part of the year, and they aren't too extensive. As anyone who has ever made the mistake of planting *Muscari armeniacum* in the rock garden will know, however, there are thugs in the bulb community. Most of the bulbs recommended here can produce offsets below ground, but none are overenthusiastic.

Those who leave their troughs exposed to all weathers will want to know about winter hardiness. It's very difficult to predict this in the case of bulbous plants. Many of these tiny bulbs are from alpine environments, and in areas with

serious winters, especially if snow cover is reliable, these are likely to remain dormant until spring is safely under way. Unless otherwise noted, all the bulbs described here have survived temperatures down to about 18° F (–8° C) in my bulb frames, while the plants were in growth. In a trough raised above the ground, however, all plants are more vulnerable to freezing than they would be in the ground—and the bulb frame is essentially in the ground, since the pots are plunged to the rims in sand.

Many of the plants mentioned here will be unfamiliar to some readers. They are almost all natural species, not horticultural hybrids (which, after all, have been selected for showiness and vigor, not what we want here), and they're rarely seen in commercial bulb catalogs. The sources listed at the end of this article can supply some of them as bulbs, but the best way to build up a collection is to grow them from seed. There are plenty of choices in the Seed Exchange list every year, and more are available from the sources mentioned.

Now let's sift through the popular genera of bulbs to find the miniatures. We can begin at the turn of the year and look at various genera in a typical succession of flowering.

It's hard to recommend *Galanthus* (snowdrops) as trough plants because even the smaller species have a fair amount of leafage. Moreover, these plants prefer a deep, cool root run. The precious autumn-flowering *Galanthus reginae-olgae* would be all right in a larger trough, and this species named for a queen does deserve a throne. Galanthophiles (enthusiasts of this genus) have selected a number of short-stemmed sports of larger species, but I'd want to see the fully developed foliage before deciding how to place them.

The earliest *Crocus* species and cultivars of the year are known as "winter-flowering." The most familiar are those sold as "snow crocus" or as *Crocus chrysanthus*, which may be that species, *C. biflorus*, or hybrids of the two. Most of the commercial varieties produce copious long leaves after flowering which must be allowed to mature if you want the new corms to develop properly. Still, they're cheap and easy color for a trough in winter. If you're willing to grow your own from seed or order from Europe, more rewarding unusual species bring flowers to midwinter. My favorite very early bloomer is *Crocus leichtlinii* (photo, p. 257). Its pure pale blue color is mostly on the underside of the tepals, so it is particularly attractive when closed in dull weather—something to consider when choosing early crocuses. Moving along to the "spring-flowering" species (we'll look at fall-bloomers later), *Crocus minimus* sounds like a good "tiny" choice, but the commercial form isn't very small; plants I raised from wild-collected seed are, though. Another favorite at this time of year is the brilliant little *C. gargaricus*, a gold so deep it's nearly orange. The white *C. fleischeri* flowers here in January, but its flowers lack substance. One of the smallest, also white, is *C. pestalozzae*, a rapid increaser which could be scattered among other plants.

The genus *Romulea* is closely related to *Crocus*, but the Mediterranean species of the former have rather small flowers. There are a great many species from South Africa, some of them extremely showy, which should be tried in frost-free situations; a few of the South African species have been proven to stand a few

degrees of frost. The Mediterranean romuleas increase quickly by both offsets and seed and can become pests where suited. A strain of *R. bulbocodium* that circulates under the name 'Knightshayes' has large, rich violet flowers and persists in the open garden for me.. A good one for northern gardeners to try is *R. nivalis*, a snowmelt plant from the mountains of Lebanon with attractively striped flowers.

Spring is not the season most people associate with *Colchicum*, but there are a number of species that flower then, and most of them are much smaller than the familiar autumn-bloomers with their lavish foliage. *Colchicum szovitsii* (photo, p. 257 comes in either pink or white—some named white forms have been introduced by Janis Rukšans —and blooms right at the soil surface before producing leaves of modest proportions. A top choice for troughs is *C. kesselringii*, a snowmelt plant from the mountains of Central Asia (p. 257). Its white, violet-striped flowers look more like those of a crocus than any other colchicum. It isn't hard to maintain if given plenty of water in its winter growing season, followed by a dry summer rest; the dryness could be ensured in a trough by combining it with drought-tolerant plants such as cacti, or with dwarf conifers that would use up the moisture from irrigation or rain. Perhaps the easiest spring colchicum to grow is *C. hungaricum* (p. 257) from southeastern Europe, which can have pink or white flowers; its stiff little leaves, fully emerged at flowering, won't smother any neighbors. Closely related, and merged with *Colchicum* by many authorities, is the genus *Merendera*. Bulbs can rarely be purchased, but it's possible, though tedious, to grow plants from seed, and all species are small enough for a trough. Like *Colchicum*, this genus has both spring and fall bloomers.

A genus name likely to be new to many is *Acis*, but its members are old friends: the genus *Leucojum* (the "snowflakes") has been split recently and the small species with very narrow leaves moved to *Acis*. The most familiar garden plant among these, *Acis autumnalis* (syn. *Leucojum autumnale*), is not a good choice for a trough because it offsets copiously and soon makes a big clump with many leaves. Its less prolific relatives are also less cold-hardy, but all of them are good trough plants. *Acis trichophylla* has hair-fine leaves and widely flaring flowers of white or pink (photo, p. 258); the pink form seems more robust than the white. *Acis nicaeensis* flowers later in spring and has slightly more substantial leaves and bell-shaped pure white flowers. The exquisite *A. tingitana* is too big for our purposes, but *A. longifolia* might suit; I haven't flowered it yet, but Loren Russell in Oregon's Willamette Valley is growing it outdoors.

Even the little "Roman" hyacinths and the several subspecies of *Hyacinthus orientalis* are too large and leafy, but their relatives in the genus *Hyacinthella* ("little hyacinth") are perfect trough subjects. They have only two short, broad basal leaves and flower on short stems. As far as I know, all have blue flowers, from sky-azure to indigo. The only species seen in commercial catalogs is *Hyacinthella dalmatica* (photo, p. 258), and you should snap it up if you see it, because there is nothing cuter. A number of other species can be grown from seed, for which the Archibalds' list is the best source. I've grown *H. nervosa*, *H. acutiloba*, *H. lazulina*, and *H. atchleyi* for some years in the bulb frame. They don't increase by offsets

and have to be propagated from seed; someday I'll have to try "scooping" the bulbs as growers do to force hyacinths to produce bulblets.

Pretty as they are, most *Chionodoxa* species are too big or too enthusiastic, or both, for our troughs. There is a little one, *Chionodoxa nana*, but its flowers are almost too small to see. I have a few plants of *C. tmolii*, which do not increase and have a wonderful blue color, so it may be a candidate. *Chionodoxa sardensis* is small but increases and self-sows copiously; it has very dark blue flowers, quite early. I recently saw the "small" *C. cretica* in the wild, and given its ability to grow up through shrubs to 30 cm or more, I think it's more for the rock garden. The related *Puschkinia* is lovely with its ground-level, pale blue flowers, but it later produces a lot of foliage and I find it best for use under shrubs.

The genus *Gagea* is closely related to the tulips but very different in effect, and it contains many tiny plants suitable for troughs. Most species have starry yellow flowers, but a few, such as *Gagea graeca*, have white ones. The only one I've grown for many years is *G. fibrosa* (photo, p. 258); it makes a compact clump of minute bulbs in a dense mat of fibers (hence the name) and produces many bright yellow blossoms in late winter. You have to give a gagea two or three years to form an effective clump. They're easy from seed.

There are a number of *Ornithogalum* species that flower at ground level, but most of them later produce long, fairly broad leaves. My choice for the most "contained" is *Ornithogalum fimbriatum*, named for its "fringed" or hairy-margined leaves. Perhaps rather tender, it has a curious flowering pattern here: it produces short stems in winter that open their flowers right at ground level, and then in late spring it throws a few flowering stems about 4 inches (10 cm) tall.

If you invest in corms of *Tecophilaea cyanocrocus*, you'll probably want to keep them safe, and a trough is a good place for them if it's fairly dry in summer. The gentian-blue flowers are famously beautiful, and the leaves are relatively small and tidy. I find that it flowers better in the bulb frame than in the frost-free greenhouse often recommended for it; if it's too warm, it tends to elongate without blooming. Try to get hold of seed: you can have flowering plants in as little as three years, and certainly in four.

I can't think of any attractive *Muscari* species restrained enough for a trough, though the very pale blue *Muscari pallens* might qualify. Their near relatives in *Bellevalia* tend to be either large, dull in color, or both. The most desired species in the latter genus, *Bellevalia forniculata*, however, has flowers exactly the color of *Meconopsis grandis*. Like many other growers, I find it difficult; it comes from alpine meadows and probably wants a decided winter dormancy and moisture well into summer. It does bloom here, though, and at least in its present, no doubt dissatisfied state, it's small enough for a trough. Happier, it might be larger.

I won't venture far into the trendy (and expensive) genus *Corydalis*, except to say that there are a number of small tuberous species that flower in early spring. Most of them produce a lot of attractive foliage, but it withers by the end of spring. Judging from photos of plants in the wild, the dry-growing ones frequent screes. One of my favorites is *Corydalis henrikii*, which I'm fond of for its heavy, early bloom, and for the fact that its namesake, Henrik Zetterlund, gave me my

start of it a number of years ago. A vast list of species and selections in this genus can be found in the Rukšans catalog, which clearly distinguishes the dry-growers from woodland types.

One of the regular January flowers in my bulb frame is, surprisingly, an *Iris*: *I. stenophylla* (photo, p. 258), a member of the Scorpiris section, commonly known as “Juno irises.” It’s tiny indeed, only about 3 inches (7.5 cm) high in flower, with leaves barely taller at maturity. I grew it in the early 1990s from seed from the Archibalds, and after more than a dozen years it’s only in an 8-inch (20-cm) pot. Recently Harvey Wrightman kindly gave me another miniature Juno, *Iris kuschakewiczii*, which blooms about a month later. There are other small Junos, all difficult and expensive. The other early irises are in the Reticulata section, but *Iris reticulata* itself and its commercial forms and hybrids are probably too leafy for our trough (the leaves on a healthy plant can reach 10 inches (25 cm)). If you have a trough, moderately irrigated in summer, that suits high alpine, you might try the choice and exquisite *Iris winogradowii* there.

The great show of very early spring in my bulb garden is created by the genus *Fritillaria*, which I collect avidly. The earliest to flower are members of the Rhinopetalum section from Central Asia, rather stout plants for the most part. Two slender ones whose rarity and demanding nature suggest trough cultivation are *Fritillaria gibbosa*, which has white flowers dappled with soft purple, and the taller *F. ariana*, with pink flowers (photo, p. 259), a desert species that has done well here for about 14 years in the bulb frame, planted in an extra-sandy medium and kept carefully dry except during its growing period from late winter to late spring. *F. alburyana* is another pink one, but hard to obtain and even harder to grow well; it tends to flower while the buds are not clear of the soil. *Fritillaria minuta* is small in flower but not in the size of the whole plant; however, *F. minima* is a really little one that has been slow but steady here.

Colorful small “frits” coming a little later include *Fritillaria pinardii*, a widespread, easily grown species with much color variation—one with a bright copper-orange interior, grown from Archibalds’ seed, is shown in the photo on p. 259. Deep purple *F. armena* can be fairly short, though variable. Some short-growing yellow ones are *F. aurea*, the rather leafy *F. conica*, some forms of *F. carica*, *F. collina*, and golden *F. euboica* (photo, p. 259). There are two good yellow ones from the American West: *F. pudica* (the form ‘Richard Britten’ is very short-stemmed, but I find it a weak grower compared to those I’ve grown from wild-collected seed), and gray-leaved *F. glauca* from northern California. *F. glauca* ‘Goldilocks’ is a commercial selection; however, purchasing it and other *Fritillaria* species through mass-market bulb catalogs is not always satisfactory because these bulbs, which lack a protective tunic, easily become dried out in storage and may not perform well.

There are three similar species that are especially rewarding as container plants because they bear very large flowers close to the soil surface: *Fritillaria latifolia* (photo, p. 259), *F. tubiformis*, and *F. kotschyi*. The scapes (flowering stems) of all three become a bit longer after the flowers fade and the leaves mature. All of them seem to do best with a little moisture in summer.

A big group of frits, mostly flowering toward the end of the season, are green with more or less checkered brown-purple stripes. *Fritillaria graeca* has recently been taxonomically revised, and I can't figure out which of my plants belong to which new name; however, there are some short ones in the complex. *F. crassifolia* subsp. *kurdica* is a very easy species, green checkered brown, neat and tidy; it's available commercially. The other subspecies, *crassifolia* and *poluninii*, are hard to obtain. One favorite is the amenable *F. bithynica*, which holds its flaring, softly shaded flowers, two or three on a stem, with elegant poise.

I've mentioned the two yellow-flowered American species, but the West holds a few more of modest size. *Fritillaria biflora* is short but leafy, and it increases very fast. Precious trough space is better set aside for the choice *F. striata* from southern California, if its December-emergent foliage can be protected from hard frosts; its nodding white, pink-stippled flowers are very sweetly scented. The endangered but easily grown *F. liliacea* also emerges early but flowers a bit later. *F. purdyi* is a slow increaser, bearing cream-colored, black-checked flowers close to the ground. Probably the greatest challenge to flower among these species is *F. falcata*, from deep screes in southern California; its white flowers checkered with red almost exceed the spread of the succulent leaves.

Daffodils in troughs? Not likely, you may think, if the only miniatures you've seen are the horticultural hybrids, which tend to be leafy, if short. For what rock gardeners consider miniature, you need to turn to the species. You also need to be willing to turn off your rock gardener's compulsion to have the right name on the labels, because the nomenclature in the genus *Narcissus* is controversial enough to make us nonspecialists throw up our hands in despair.

The first to appear are forms of *Narcissus cantabricus*. I suspect that the subspecies *monophyllus* and *foliosus* have become hopelessly mixed in cultivation, but the former tends to flower earlier than the latter. My favorite in this complex is one I grew from seed from the Scottish Rock Garden Club exchange, where it was listed merely as *N. cantabricus*. The seeds produced uniform plants which flower on 2-inch (5-cm) stems, bearing pure white, upfacing flowers (photo, p. 260). Similar plants have been illustrated in British journals as "variety *clusii*," which appears to be just a horticultural name. In January *N. hedraeanthus* (photo, p. 260) appears: a truly tiny snowmelt species from the mountains of Spain, tolerant of severe summer drying. *N. bulbocodium* subsp. *nivalis* is a half-sized hoop petticoat, blooming six weeks or more before the larger types. Any form of pale yellow, widely flaring *N. romieuxii* is worth growing; the lovely selection 'Julia Jane' is popular and commercially available. The littlest daffodil of them all is *N. scaberulus*, with linear leaves that lie flat on the soil and flowers the size of a small pea, on stems 3–4 inches (7.5–10 cm) tall. *N. assoanus* (formerly *N. requienii*) is a little golden trumpet daffodil with stems that lean at a distinctive angle.

Anything named *Narcissus rupicola* ("rock-dweller") should attract a rock gardener, and in fact this is one of the best species for a trough. More of a show is put on by its near relative *N. calcicola* (photo, p. 260; it doesn't actually need lime soil), a similar plant with as many as five flowers per stem where *N. rupicola*'s flowers are solitary. A white version is *N. watieri* (p. 260; sometimes considered a

subspecies of *N. rupicola*) from Morocco, and *N. atlanticus* has soft cream flowers. All these flower rather late in the narcissus season.

There are little tulips, though I don't grow many of them—the open winters here don't seem to suit most species. Almost all, however, produce large leaves that take their time going over.

I'd rather turn to the American “analog” of the tulip, *Calochortus*. Here again, we have to search for short ones, and even those produce long basal leaves, but only one or two in many species. I'll break my rule about height to allow *Calochortus amoenus*, a favorite of many growers for its two-tone rose flowers; mature bulbs can bear stems to about 12 inches (30 cm). Some short-growing ones are *C. subalpinus*, *C. elegans*, and the rare *C. coxii* (from Northwest Native Seeds).

Now that we're in the American West, we can look among its other later-flowering bulbs for miniatures. The “**Brodiaea** complex” offers the common *Brodiaea terrestris*, which increases rather fast, and the rare species *B. jolonensis* and *B. minor*, sometimes available from Telos Rare Bulbs (see source list). The shorter *Triteleia* species are deep yellow *T. crocea* from the Siskiyou, pale yellow *T. dudleyi*, *T. ixioiodes* subsp. *anilina* (the other subspecies are taller and stouter), and the Arizona endemic *T. lemmoniae*. The last-named came to me via Sally Walker's seed list and embarrassed me by flowering, after about seven years lurking in the bulb frame, as soon as I had published the remark, in *Bulbs of North America*, that “we know of no record of it in cultivation.” It's quite small, with brilliant gold flowers.

The bulbous genus that carries the garden from late spring through summer is *Allium*. When I think of tiny onions for a trough, the western American species come first to mind. There are quite a few species, generally found in scree, which have just one or two narrow leaves (often withered by flowering time) and a showy umbel of flowers at or near ground level. *Allium platycaule*, *A. siskiyouense*, and *A. falcifolium* have fairly large sickle-shaped (falcate) leaves, but these are rather ornamental in themselves and not numerous; both bear large heads of bright pink flowers. *A. cratericola* is popular and very small. *A. campanulatum* rises just a little taller; my plants came from Ron Ratko's seed collection and are particularly deep pink, almost violet. I'd avoid the similar but taller, pale pink *A. membranaceum*, which is invasive here. The small species native to my own area are *A. crenulatum*, which has substantial flowers varying from white to mid-pink (often deepening as they age), and *A. tolmiei*, a Columbia Plateau rarity I haven't grown yet. Some dwarf species from the inland West include *A. aaseae*, minute *A. simillimum*, *A. scilloides*, and *A. robinsonii* (onion expert Mark McDonough's favorite small American species).

Mark McDonough recommended some more *Allium* species for this article. He wrote: “*Allium albidum* subsp. *caucasicum* from Turkey keeps its green strap leaves throughout the growing season, with little clusters of white flowers in July–August. Japanese *A. togasii* and Mongolian *A. tuvanicum* are small enough to consider in a trough. *Allium flavum* subsp. *tauricum* and many allied species look good in a trough. Besides nearly prostrate forms of *A. flavum* subsp. *tauricum*, there are *A. kurtzianum* and smaller forms of *A. paniculatum*. By far one of the most delightful small onions in a trough is the Turkish *A. sibthorpiianum*. Another

species that I grow in a trough, because it is too easily swamped by other plants in the open garden, is *A. moschatum*, with short, firm, thread-thin leaves and small white or pinkish flowers on wiry 4–5-inch (10–12.5 cm) stems, flowering July–August. *Allium perdulce*, from the central and southwestern Great Plains, is so slow-growing that it is best maintained in containers. The rich pink flowers are powerfully perfumed like sweet carnations, so planting them in a trough will make it easier to enjoy the enticing fragrance.”

I’ve hardly touched on bulbs from the Southern Hemisphere, but I encourage those who live in warm-winter climates to explore the riches of the Cape bulbs. If you like the effect of a trailing plant cascading over the edge of a trough, you might like the remarkably tough *Tropaeolum brachyceras*, which has tiny, attractive leaves and produces its bright yellow flowers here from late January into April, right through hard frosts. It will drape down or (its preference) climb up other plants. Somewhat more tender but readily available is *T. tricolor*. I also grow the small purple-flowered *T. hookerianum*, but it isn’t as good a performer as *T. brachyceras*. Some people like to grow *Rhodohypoxis baurii* in troughs; it comes in many color forms, some named, and often shows up in garden centers in spring. The hardier South American *Oxalis* species are good container plants: *O. adenophylla*, sold in mass-market bulb catalogs; and the less available, slow-developing *O. enneaphylla*, *O. laciniata*, and their hybrids, which flower in midsummer here. There are myriad *Oxalis* from South Africa, but most of them increase extremely fast through bulbils that permeate their vicinity. I’ve found the lovely little *O. obtusa* winter-hardy outdoors, but I wouldn’t combine it with most other plants in a trough.

As we pass beyond summer, some of the same genera we saw in spring appear again with their fall-flowering species. The first *Colchicum* in flower here, most years, is *C. alpinum*, closely followed by similar *C. corsicum*. Both have two modest leaves. *C. boissieri*, which grows from peculiar wormlike corms, has good pink flowers. *Merendera pyrenaica* (syn. *M. montana*) is one of the earliest and easiest of its group, sometimes merged with *Colchicum*. The littlest colchicum is *C. pusillum* (“puny”) with starry white flowers; it’s pretty once it builds up a good colony. My favorite fall species for containers is *C. cupanii*, which comes in both pink and white; its small, rather prostrate leaves emerge just after it flowers in late fall, and it hasn’t survived in the rock garden but flourishes in the bulb frame.

Sternbergia offers glowing yellow fall color, and it also offers some miniature species. The most sought-after one is *S. colchiciflora*, which produces tiny pale yellow flowers just poking out of the soil, before the leaves emerge; it is definitely a treasure to be carefully maintained, if you can grow it from seed. More accessible is the recently introduced *S. greuteriana*, with clear yellow upfacing flowers and stoloniferous bulbs which give steady, though not excessive, increase (photo, p. 261). I also have a half-sized *S. sicula* (or *S. lutea*?) which arrived as *S. sicula* subsp. *graeca*.

Most rock gardens host at least one species of fall-flowering *Crocus*, and each gardener has his or her favorite. Setting aside big, leafy species such as *C. speciosus*, *C. niveus*, and *C. medius*, I recommend the following for trough culture. If you can get one of the reliably blooming forms of *C. kotschyanus* (that is, not the usual

Dutch form, which increases at the expense of flowering), put it in a trough with arid-land plants. The related *C. karduchorum* is a choice rarity with lovely, much-divided white stigmas. *C. robertianus* has substantial lavender flowers and makes a nice pair with white *C. boryi*. *C. longiflorus* and *C. nudiflorus* are both deep lavender-violet. The exquisite *C. banaticus*, lavender or white, likes cool conditions. *C. tournefortii* may be a bit tender, but its peculiar habit of keeping its flowers open in any light and temperature can be a benefit. Late in the season, *C. ochroleucus* with white-and-gold flowers is very hardy but may increase more than you want; and *C. laevigatus* has surprised me by flourishing in the garden despite its reputation for needing frost-free conditions. The latter is reliably in flower at Christmas. Fall is also the season of the saffron crocuses (*C. sativus*, *C. cartwrightianus*, and others), but all produce long, persistent leaves and prefer plenty of room to grow their massive corms.

The minor players of autumn include many *Cyclamen* species, of which *C. intaminatum* (photo, p. 261) is the smallest. We come back to *Acis* here with *A. rosea* (syn. *Leucojum roseum*), recommended for frost-free situations—a very small plant with rose-pink flowers and a sweet fragrance that seems to be unique in its genus. As mentioned, don't put ramping *A. autumnalis* (*Leucojum autumnale*) in your trough. There are some fall-blooming *Scilla* species, mostly with ethereal lavender spikes, but the one you want to showcase is *Scilla lingulata* subsp. *ciliolata* (photo, p. 261). It has small, thick-textured basal leaves and glorious stubby spikes of pure blue flowers set off by darker blue anthers. It comes from Morocco, but like many bulbs from there, it is tougher than I had expected. You can even grow *Narcissus* in fall: the best-known one is *N. serotinus*, which has fragrant flowers like a tiny *N. poeticus* and does best with a dry summer. *N. humilis*, which I also grew from seed, is unique in not having a corona (the "cup" of the flower) and was once placed in its own genus, *Tapeinanthus*. I haven't tried the peculiar *N. viridiflorus*. With bulbs, there is always something new to try!

Jane McGary is editor of the *Rock Garden Quarterly*, a position that sometimes calls for the rapid production of copy, hence this article.

Sources

Telos Rare Bulbs, P.O. Box 4147, Arcata, CA 95518 <rarebulbs@earthlink.net>

Jānis Rukšāns Bulb Nursery, Rozula, Cesis distr., LV-4150 Latvia
<janis.bulb@hawk.lv>

Monocot Nursery, St. Michaels, Littleton, Somerton, Somerset TA11 6NT, England
Jim & Jenny Archibald, 'Bryn Collen', Ffostrasol, Llandysul SA44 5SB, Wales, UK
<www.jjaseeds.com>

Northwest Native Seed, Ron Ratko, 17595 Vierra Canyon Rd. #172, Prunedale, CA
93907 <oreonana@mbay.net>

Up-in-the-Air Rock Gardening

Abbie Zabar

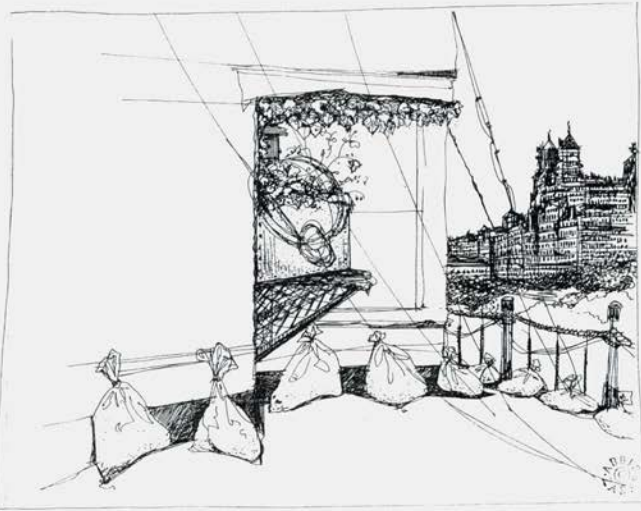
I see chunks of concrete flying by my windows, landing in my plantings. Or about to break the glass roof of my greenhouse where I'm working. The noise of jackhammers has been going on all morning, along with the vibrations. Putty-colored dust covers everything meant to be green. To garden under demolition scaffolds and in between schedules of hardhat crews is more than a leap of faith. Often I think it's nuts.

But we're all dealing with what we've been given, reaching for Paradise any way we can get it. No matter where I present my talk, "Gardens! In Spite of the Odds," heads in the audience are shaking in amazement. As well as in agreement. The topic is universal.

My garden is rooted in New York City—zone 6B, if all you go by is the hardiness map of the U.S. Department of Agriculture. Yet there's much more to this picture.

The steel frame construction of New York City's early twentieth century architecture has been rusting away for decades. Concrete slabs of skyscrapers from the 1950s and 1960s have been on overload. The joke used to be that half the buildings in the city were below code. But it wasn't until a terra cotta balcony crumbled to the ground on the Upper West Side, instantly killing a Barnard College freshman, that Local Law 10 was passed. In 1979 owners were made responsible for making their properties safe with more than just Band-Aids. Buildings of seven stories or more were mandated to be inspected every five years. Potentially hazardous conditions in facades and parapets facing public walkways had to be cured. Still, in 1997 bricks tumbled off the back of a building in midtown Manhattan, Chicken Little-style. Next thing you knew, there was Local Law 11: *all* outer walls must be made safe.

In recent years the urban skyline has become a landscape of bright blue tarps and orange protection netting. More and more it looks like Christo not only won the right to do his thing in Central Park, but to wrap the city as well. Our streetscapes are filled with detours, dumpsters, and loading docks. You can hardly walk anywhere without ducking sidewalk bridges. But New Yorkers have bigger problems to worry about. Typically we've become so blasé about any



New York City skyline view from terrace, with sandbags, cable ties, etc.

inconvenience that the word *CAUTION* on yellow barrier tape doesn't even register. Yet this is staggeringly valuable real estate, and between the infrastructure improvements to older buildings and endless new construction, the proof is always in your face. As well as in your garden.

I live with sandbags, hoists, outriggers, the drone of jackhammers, and the endless fallout of debris. Plus nonstop parleying with contractors. No, I don't have deer, mole, or vole problems. I've got a stream of powder that rivals the inch and a half they say falls yearly on Rome from hundreds of ruins dissolving in the wind. I'm afraid to find out what the pH of my soil is. After all, Cleopatra's Needle—the Egyptian obelisk that sits in Central Park and used to be covered with legible hieroglyphs—has crumbled more from acid rain than from all those years out there in the desert.

Yet I want climbing roses in my hawthorn trees with hips and berries for the birds, underplanted with fraises des bois for me; I'd like some architectural topiaries to mimic skyline follies, and green walls to hide those I don't want to see. But everything has to grow in containers on top of an apartment building with exposed vistas. Russell Page, one of the most acclaimed English landscape designers of the twentieth century, wrote in *Education of a Gardener* (1962): "If I were to choose a site for a garden for myself I would prefer a hollow to a hill-top. A view usually means wind, and a windy garden is unrewarding." I first read that over thirty years ago. But this is where I garden and, as in life, the challenge is to make what you have—or don't have—work for you. Derek Jarman, the filmmaker and theater designer, started with a desolate stretch of pebbles and flotsam that faced a nuclear power station. By the time he died that inhospitable and most improbable landscape in Dungeness, Kent, was more than a cult destination; it was a paradise of creativity.

Up here, widely fluctuating temperatures go from searing heat in the summertime to smooth sheets of ice covering the roof in the winter and tempting enough to skate on. There are also desiccating winds, gale-force storms, and merciless sun. Plus every few years, drought warnings are issued by the D.E.P.

Somewhere between the elements and the water restrictions I began to imagine hardy little alpiners, growing in native urban flotsam. Maybe they'd enjoy precipitously living above Central Park's tree line and outcrops of glacially polished rock. One alpine led to another. The top of my windy terrace turned out to be the perfect site for a rockery. Granted, one with New York City attitude.

My crevice-loving alpine plants not only acclimated but thrive in soil-filled cavities, chipped and chiseled out of granite pavers (see the drawing). I'm using local urban cobblestones, liberated from heaving tree pits or found abandoned on city streets. Like most gardeners, I was scavenging before recycling became law.

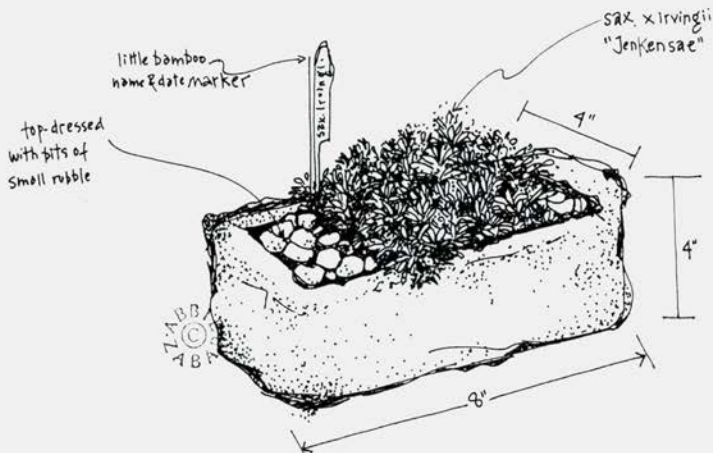
To an age-old tradition of hand-carving troughs for barnyard animals, I've added muscle. It's payback time for all those hardhat crews (a.k.a. Abbie's vole-mole-deer problem) all over my terrace gardens.

I draw an outline of the "setting bed" on the top face of the stone. The cobblestone is then cradled on a sandbag so the hardhat working the mini-grinder won't bust it when he scores my wax-crayoned lines with a diamond blade. To make the chipping easier grooves are also crosshatched within the outline. The actual routing out of that area is done with a 1-inch chisel nib locked into an electric-powered chipping gun. What will become the planting bed should go down at least one and one-half inches, and deeper would be better. Finally, with a three-quarter-inch masonry bit on an electric hammer drill, a drainage hole is bored through the bottom—as well as the underside—because you don't want to crack the stone after all that good work is done.

Just as Gertrude Jekyll devoted areas in her gardens to a particular plant—or to those that would look showy in only one season—I cultivate a single alpine variety in each cobblestone. Besides the old-fashioned auriculas with the farina leaves I've always loved (a photo appears in the spring 2004 issue, p. 126), I usually want it to be a compact grower with foliage that will form a tight little pillow. There's Baldasare Mineo's cobwebbed sempervivums. And even with names like *Sempervivum* 'Icicle' or 'Silver Thaw' these babies just want to climb up on the rock ledge and loll away like sunbathers. I've got succulent *Orostachys* from Lola Horwitz, who promised I'd only have to press those glaucous bits of leaves into the soil when she handed me a bag of them at one of our plant sales.



A setting of rock garden plants in English troughs and New York City cobblestones. Each container is planted with a single variety alpine plant.



But if I lean toward the lime-encrusted saxifrages that Larry Thomas brings me back from Winter Study Weekends, it's because the speckled silvery edges highlight the sparkling mica chips in the granite containers, and vice versa (photo, p. 262).

According to the British alpine-garden authority Royton E. Heath, "There is no other genus of alpine plants which is more suitable for troughs . . . small, compact and attractive both in and out of flower, than the genus *Saxifraga*." And in my 1912 copy of *Saxifrages or Rockfoils*, from "The Rock Gardener's Library," Reginald A. Malby, F.R.P.S. writes "It would be difficult to find a family of plants so varied in appearance, flowering over so many months of the year, and so neat and attractive at all times, as that of the Saxifrage or Rockfoils." But it took the early twentieth century alpine-plant collector and writer Reginald Farrer to sum it up: "The encrusted or silver saxifrages make up a race so ahead of every other in general that a rock garden can be glorious with nothing else and without them could not be really glorious at all."

To keep the crown dry, I top-dress with the same crushed slag used on highway paving jobs. The rubble "mulch" prevents the soil surface from baking out in the sun and inhibits weeds, in addition to giving a groomed appearance. Admittedly with a Stone Age look.

But there's the rub. I garden in cobble troughs at the top of an apartment building built on solid bedrock, where fifteen thousand years ago this steel-and-concrete city was nothing more than a boulder-strewn landscape of gravel, sand, and bare rocks.

Abbie Zabar began her city gardening with pots on a windowsill and moved on to topiary and other container specialties on a penthouse terrace. Her artwork has been exhibited widely. Her book *The Potted Herb* received the Garden Writers of America 1989 Award of Excellence. A second book, *The Growing Gardener*, features her artwork and hand-lettered text in depictions of the plants, birds, and insects on her terrace through the seasons. She is a member of the Manhattan Chapter of NARGS.

Manhattan's Rocky Parks

Lola Lloyd Horwitz

The New York metropolitan area may not be a gardener's paradise, but it ranks high in the proportion of public park space to city area. A coastal estuary, wooded upland or "Great Lawn" are among the choices available to New Yorkers in their parks. Some of these are jewels among the world's urban parks and have been the subject of extensive writing. Not so evident to visitors, but essential to each neighborhood, are the small parks, the community gardens, and "vest-pocket" parks tucked into the narrow spaces between skyscrapers.

Two very small gardens of interest to rock gardeners, and within easy reach of each other, are the Irish Hunger Memorial, dedicated in 2002, and Teardrop Park, built in 2004. Ironically, although the borough of Manhattan in its virgin state was covered with rock outcrops "to die for" (just look at Central Park), these two gardens are in Battery Park City, which is entirely built on landfill. Much of this landfill came from the excavation for the World Trade Center and the complex subterranean infrastructure below the large Twin Tower Plaza. Through a tragic shock of history, we can now see the seven-story-deep excavation that raised Battery Park City out of the Hudson River. (For more information, go to www.batteryparkcityparks.org.)

LOOKING AT Teardrop Park first, we find two acres wedged between four residential high-rises that flank the eastern and western exposures and some of the northern and southern exposures. Understandably, the plantings have to tolerate part to full shade, but the park's south-facing slope maximizes its exposure to the low-angle winter sun. Several of the adjacent high-rises are "green" (planned with conservation in mind), which works well with the conception of this park. The irrigation is done with reclaimed "gray water" or captured rainwater, and the maintenance of the park—in fact, of all Battery Park City's plantings—is done according to sustainable landscape practices: the fertilizer used is compost tea created from a mixture of Battery Park City landscape and food waste.

The landscape architect, Michael Van Valkenburgh, worked with two artists, Ann Hamilton and Michael Mercil, to create "a central theme of designed nature." Three play areas for children of different ages merge into the naturalistic

terrain to create sudden grade changes using huge blocks of stone. Wherever you enter this park, you are struck by the emphatic presence of oversize chunks of rock. My reaction was twofold: “Wow, maybe Manhattan really looked like this a long time ago”; and “They really took the concept of the crevice garden to the extreme!” But I achieved a more considered critique when I dropped my rock gardener’s point of view and took in the rockwork as art. There are plenty of plants to enjoy—almost 90 percent of them native to New York state—but they just don’t happen to be growing so much *in* the crevices as in close proximity to stone. Some have been planted on very steep inclines, using a new chopped-plastic-fiber product mixed into the soil to help prevent erosion. Native East Coast rhododendrons, viburnums, *Clethra*, winterberry (deciduous hollies), common witch hazel, and other shrubs have been used with native trees and perennials, including five species of native ferns. There is even a small marsh with stepping stones that includes a huge rotting log, sedges, sweet flag (*Acorus calamus*), Solomon’s seal (*Polygonatum* sp.), and cardinal flower (*Lobelia cardinalis*).

The designer and his team exploited many of the ways we encounter rocks in nature. If there is an abundance of upfacing crevices, there is also the focal point of the Ice Wall, dividing the garden in half, which emphasizes crevices on its vertical face (photo, p. 262). This monumental wall suggests a giant undulation of strata pushed out of the earth, complete with a dripping waterfall. The constant dripping is meant to create a dramatic ice formation in winter, such as we can see in the Adirondacks. Even without the frozen waterfall (kinks were being worked out during its first winter), the visitor is struck by the careful angling of the huge pieces of bluestone, and by the height, length, and dark, brooding quality of this complex construction.

We know we are in a constructed, semi-fantastic landscape when we pass through a vaultlike opening in the wall and find an entirely new shape, size and color to the geology on the south side. Where slices of stone were the medium on the north side, here the landscape is sculpted from chunks like those fallen out of the Shawangunk ridges in the Catskills. There is nothing miniature about the scene; its disorder suggests a gigantic boulder-strewn slope interspersed with sidewalks and play equipment.

I look forward to visiting this park in each season to watch how nature makes its own moves on the massing of stone. Where the designers envisaged the stark beauty of crevice after crevice, sans plants, I expect to find certain wildlings setting seed and finding just enough dust, grit, or humus to grow. And where the grade is so steep that the intended plants lose their grip, other plants may move in to make their home. It is a park that speaks of adventure to its young visitors: the rocks provide an uncommon climbing terrain, though I hope everybody stays off the Ice Wall. For the rest of us, Teardrop Park offers striking contrasts to its surroundings, quiet benches with long views southward, and the possibility that our imaginations will take off—no small achievement for an urban park.

IF YOU APPROACH the Irish Hunger Memorial (five minutes from Teardrop Park) from the largest adjacent east-west street, Vesey Street, you will see what might



Crocus leichtlinii flowering in January (upper left; p. 243).

Three spring-flowering *Colchicum* species (p. 244): upper right, *C. szovitsii*;
lower left, *C. hungaricum*; lower right, *C. kesselringianum*. (J. McGary)



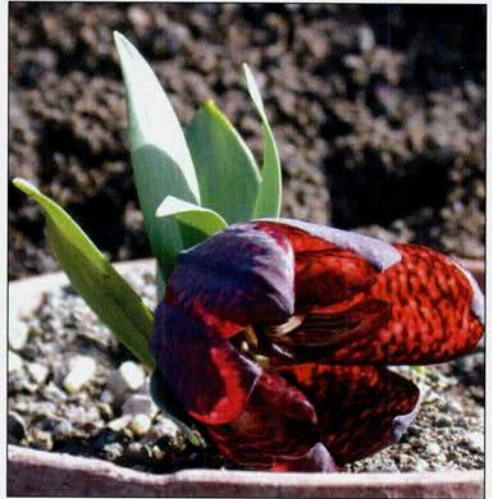


Unusual early-flowering small bulbs include *Acis trichophylla* (upper left, p. 244); *Gagea fibrosa* (upper right, p. 245); *Hyacinthella dalmatica* (lower left, p. 244); *Iris stenophylla* (lower right, p. 246).
(J. McGary)





Some colorful small *Fritillaria* species (p. 246): upper left, *Fritillaria euboica*; upper right, *F. ariana*; lower left, *F. pinardii* with copper-orange interior; lower right, *F. latifolia*. (J. McGary)





Variety in miniature species of *Narcissus* (p. 247–248): upper left, *Narcissus hedraeanthus*; upper right, a short form of *N. cantabricus* sometimes called “clusii”; lower left, *N. calcicola*; lower right, *N. watieri*. (J. McGary)





Tiny bulbs for fall (p. 250): above, *Scilla lingulata* subsp. *ciliolata*; lower left, *Cyclamen intaminatum*; lower right, *Sternbergia greuteriana*. (J. McGary)





Rock gardening in New York City. Above, Abbie Zabar's penthouse-dwelling succulent plantings (p. 251; A. Zabar); below, the Ice Wall at Teardrop Park (p. 255; L. L. Horwitz).





Primula species of the *Cortusoides* section (p. 274). Above, *Primula kisoana*; lower left, *P. saxatilis*; lower right, *P. cortusoides*. (Jay Lunn)





Some forms of *Primula sieboldii* (p. 275). Above, named forms 'Plum Pretty' and 'Snowflake'; below, unnamed selections, all in the Lunn garden, Hillsboro, Oregon. (J. Lunn)





A lavish collection of *Primula sieboldii* varieties (p. 275) in spring in the Lunn garden. (J. Lunn)

Trillium pusillum (p. 290); the flowers turn pink as they age. (G. Bush)





Above, unidentified *Tricyrtis* species received from China (p. 277) Below, *Tricyrtis latifolia* and *T. macropoda* for comparison. (J. McClements)





Plants from the "Chinese grab bag" (p. 276); above left, a dwarf *Disporopsis* species; above right, *Paris polyphylla* var. *alba*; below, *Ypsilandra thibetica*. (J. McClements)





Scented mints from the Southwest (p. 278): above, *Salvia clelandii* (left) and *Salvia vaseyi* (right), both in San Diego County, California; below, *Monardella lanceolata* (left) in Riverside County, California, and *Monardella macrantha* (right) in San Diego County, (S. Walker)





The churchyard garden built by the Prague Rock Garden Club (p. 281), with spring flowers and *Gentiana acaulis*. (B. Ward)





Two views of Vojtěch Holubec's rock garden (p. 282). (B. Ward)





Two species of *Petrophytum* (p. 291) growing in basalt dry walls in Jane McGary's garden near Portland, Oregon: above, *P. cinerascens*; below, *P. caespitosum*. (J. McGary)





Saxifraga catalaunica (p. 293) in its habitat at Montserrat, Spain, and in cultivation. (A. Young)



appear to be an alien spaceship, its platform tilted towards the earth. As you get closer, you realize that you're looking at a small ruined building on an inclined plane, and that the ruin is surrounded by a stony field with a path meandering through it. To gain access to the field, you must circle behind the tilted plane, discovering ribbons of text imbedded in the rising wall. The designer, Brian Tolle, has used the sides of the construction to display selections of writing from the time of the Irish Famine (which resulted from a potato blight and government mismanagement during 1845–1852) and modern statements about famine worldwide. The ribbons of words from both outer sides fold in like the nectary lines of an orchid and lead us into a tunnel that opens into the roofless shell of an actual famine-era stone hut from Ireland. You have been transported to an aged human dwelling, now overgrown with *Rosa spinosissima*, that leads you up out to the fallow field. It is a moment in time caught before trees moved in, when the invading wildflowers, weeds, and grasses of the Irish countryside are represented by *Arctostaphylos uva-ursi*, *Prunus spinosa*, *Erica tetralix*, *Digitalis purpurea*, *Ulex europaeus*, *Calluna vulgaris*, *Juncus effusus*, and *Iris pseudacorus* on a framework of fescue. As you walk through the field, you may lose sight of your wider surroundings: the World Financial Center, the Hudson River widening into New York harbor, the Statue of Liberty, Ellis Island, and New Jersey. The beauty and strength of this half-acre memorial are its ability to seize us and tell us a story with rocks and plants alone.

I highly recommend these two places in any season, but as gardeners we know that the bones of our gardens are most visible in winter. For that reason, winter is my choice.

Lola Lloyd Horwitz is an active member of the Manhattan Chapter of NARGS and has volunteered at New York public gardens.

Corrections to the Summer 2005 Issue

On p. 189, Jay Lunn's photograph of *Eritrichium nanum* was taken in Idaho, not in Wyoming as stated in the caption.

In the Books section, p. 224, the name of the publisher of Rex Murfitt's *Creating and Planting Alpine Gardens* was misspelled. It is B. B. Mackey Books.

Growing Cortusoid Primulas

Gerald Taaffe

I've been surprised and gratified over the years at the spectacular show that *Primula* species of the *Cortusoides* section have consistently put on in my Zone 4 Ottawa garden, in a climate with temperatures that range annually from -30°C (-22°F) to 33°C (92°F). From what I've seen, they do as well or even better here than similar plantings in the mild, cool maritime climates favored by most of the genus. Given a shady, reasonably moist spot, these Asian natives flaunt a dazzling array of subtly different shades of purple, crimson, or pink, along with an occasional white. The mainstays of the group in my garden—*P. cortusoides*, *P. saxatilis*, *P. sieboldii*, *P. kisoana*, and *P. polyneura*—have also proven easy to propagate from the sometimes sparsely produced seed and, more often than not, they bloom the second year from sowing. On one occasion, as an experiment, I even got a few flowers in October from a pinch of *P. cortusoides* seed taken in June.

I've also had some brief experience with the related *P. geraniifolia* and *P. heucheraefolia*, which are less floriferous for me than the other species. Their names describe the petioled, scalloped, more or less hairy leaves of any of the more than twenty species that Josef J. Halda (in *The Genus Primula*) assigns to the section. Also similar are the leaves of *Cortusa matthioli*, of the closely related genus from which the *Primula* section takes its name. The puny flowers of *Cortusa*, however, have been known to put a disappointed first-time grower in mind of the disproportionately small heads on massive Henry Moore sculptures.

Primula cortusoides is remarkable for its floral exuberance, with umbels of as many as 20 deeply lobed flowers on each of the many 20- to 30-cm (9- to 12-inch) scapes that rise from a tuft of typically scalloped leaves. Its flowers can be as wide as 4 cm (1.75 inches) and can range in color from cotton-candy pink to near-magenta, giving large plantings an interplay of colors that is not unlike the play of light and shadow in classical Chinese and Japanese landscape painting (photo, p. 263). Since I garden in a climate that is often considered a twin to parts of Hokkaido, Japan's northernmost major island, I was especially encouraged to read that *P. cortusoides* hails from northern Japan, as well as from similarly cold places in Siberia and Central Asia.

Primula saxatilis (p. 263) is similar to *P. cortusoides* and has even been considered the northern Chinese form of that species. Both are short-lived, blooming a little the first year from an early sowing, peaking in the next year or two, and then vanishing. Either can be divided during its brief adulthood, and they come easily and quickly from seed. It should be said, however, that for me *P. saxatilis* has been weaker in growth and paler and less interesting in flower.

Primula polyneura, another Chinese species, has bigger, rounder, yellow-centered flowers of lively colors ranging into the purples and crimsons, held over tufts of larger, more substantial leaves. It is much less prolific in bloom. There are rarely more than a few scapes per plant, topped by relatively few umbels of from 2 to 10 flowers. But it's a handsome plant that looks very fine tucked between mossy rocks and in other choice places. It survives winters here but has been short-lived and slow to increase from seed.

Primula kisoana, from Japan, is especially notable for its stoloniferous growth habit and very large, fleshy, hairy leaves that keep their good looks until frost. It has umbels of up to 6 large, rich rose or mauve flowers on stocky, hairy scapes. There is also a very attractive white form. Flowering stems are relatively few in number, but they appear very early, while the leaves are just beginning to emerge from winter resting buds, to dramatic effect. Better still is the way that the soft, silvery tufts of leaves can gradually encircle a rock. I've found this to be a long-lived species. It's easy to propagate from division or the rather stingily produced seed.

Primula sieboldii (p. 264) has large (up to 5 cm/2 inches in diameter) flowers of varied shape and intense color, always centered with a white eye. Colors range from pinks to crimsons to purples and near-blues, often with a paler reverse, and there is a dazzling notched and frilled white. They appear in umbels of as many as a dozen in late spring on stalks 25–30 cm (10–12 inches) tall. Thanks to seed distributed by Paul Held and the Sakurasoh Society that he founded, I've been among the growers in North America and elsewhere who have been able to enrich their gardens with genetic material from *P. sieboldii*'s native Japan, where it has been cultivated and developed for centuries under the common name *sakurasoh* (from *sakura* "cherry blossom" and *sob* "herb"); for more information, see Held's article in the winter 1997, issue of the *Rock Garden Quarterly*.

For me *Primula sieboldii* has only one minor fault. It's very long-lived, shrugs off extreme heat and cold, and comes easily from seed. In hot summers, though, it can die back to a resting bud as early as late July or early August, putting it at risk of accidental damage during the rest of the season. Growing it beside stepping stones or other paths in the shady rock garden makes accidents less likely and a late-season fading away less noticeable. There it shares its late spring glory with a big patch of *P. cortusoides* and accent plants among the rocks of *P. kisoana*, *P. polyneura* and, with any luck, a stray specimen or two of elusive *P. geraniifolia* and *P. heucheraefolia*.

Gerald Taaffe gardens in Ottawa, Ontario, and is a frequent contributor to this journal.

The Chinese Grab Bag

Jim McClements

As many NARGS members know, for the past few years one or more Chinese dealers in nursery stock have made available via the Internet a huge variety of native Chinese plant species, shipping them around the globe, not only wholesale to other dealers but also at retail, directly to gardeners. Setting aside for the moment the question of whether some, most, or all of these plants are collected in the wild, there is no question that this commerce has resulted in the appearance in the Western world of many rare species, some previously described and named by plant explorers, but many more unknown, at least outside China.

Unfortunately, there has been a great lack of consistency regarding the identification of these plants. While this can be frustrating, it can also result in considerable pleasure if one takes the position that regardless of what the plants are, our first task is to get them growing, and after that to try to sort out what we have.

Many different genera are represented in the plant lists, some known to most gardeners but many others unfamiliar. My main interest is in woodland plants, so when I began using the "China Connection," genera such as *Arisaema*, *Epimedium*, *Podophyllum*, *Paris*, *Polygonatum*, *Thalictrum*, and *Asarum* were all well known to me. I admit, though, to never having heard of *Disporopsis*, *Asteropyrum*, *Ypsilandra*, and *Tupistra*, to mention a few exotic names (photos, p. 267).

As for species of the above genera, confusion reigned and still does, particularly after it became apparent that an entity that was called one species in a given year was likely to be something else the next, and that even in a single year the same plant was turning up under two or three different names! However, the reasonable prices and the obvious treasures that are being received easily make up for the shortcomings of the system. *Helleborus thibetanus* flowering in late February, the spectacular foliage of some of the *Podophyllum* species (a.k.a. *Dyosma*), or the group of unfamiliar Chinese ferns that became available last year all suffice to make one look on the bright side.

In most instances, at least the genus name has been correct, but not always. I have received at least three different species or forms of *Panax* sent as *Disporopsis*, an *Impatiens* sent as *Cardamine*, and a dwarf *Disporopsis* as *Polygonatum*, to mention a few.

Even if the genus is correctly named, valid species identification is hampered by the fact that only a few of the genera have been extensively catalogued until very recently, at least in Western works. Excellent treatments of *Arisaema*, *Epimedium*, and *Podophyllum* are now available in English, but the only book on *Paris* (a *Trillium* relative) is in Chinese, yet to be translated. The other large genera are dealt with to some degree in various Chinese floras, which, even when understandable, tend to suffer from the Chinese penchant for "splitting" (naming minimally variant forms as separate species or subspecies). Also, we should expect that there are previously undescribed species turning up in the larger genera.

However, there can be surprises even in some smaller genera that have previously received a fair amount of attention and taxonomic organization, and thus might be thought unlikely candidates to yield anything new. As an example, several years ago I ordered plants of a *Tricyrtis* "sp." and a year later ordered three additional "sp."s, all with different code numbers (photos, p. 266). The first one (sp. A) flowered in late June 2002 and has continued to do so each year since. Its smallish flowers, yellow with maroon spotting, have reflexed tepals, looking much like *T. macropoda*, but differing from the latter, which has a white background color and flowers about two months later. The new plant is quite tall, with upright flowering stems of 4 feet (120 cm) or more. While flowering starts in late June, some flowers continue to be produced in the leaf axils into August.

The three newer plants (sp. B) differ from sp. A but appear to be similar to each other and probably represent a common species or form. Although the ground color is yellow and the flowering stems are also erect and about 4 feet (120 cm) tall, the tepals are densely marked with brownish-red splotches and are *not* reflexed. Like sp. A, it flowers in late June, suggesting a possible affinity with *T. latifolia*. The initial foliage, before the flowering stalks arise, has striking black markings.

Last year I sent photos of both these plants to Brian Mathew, the author of what is regarded as the most up-to-date treatment of the genus. His initial impression was that sp. A suggested a form of *T. macropoda*, but after seeing photos of sp. B, he wondered if there might possibly exist hybrids between *T. macropoda* and *T. latifolia*, even though their flowering times are usually quite different. He promised to do a bit of research on the plants, but had several other more pressing projects. Stay tuned!

Whether these *Tricyrtis* are new species, new forms of species previously documented, or hybrids, they are undoubtedly very good garden plants, as are most of the other surprises in the "grab bag." There will be a certain satisfaction when they are all put into their proper taxonomic pigeonholes, but that will take time. Until then, I'm just happy to have made their acquaintance: "A rose by any other name would smell as sweet."

Jim McClements, a retired physician, gardens in Dover, Delaware. His articles and fine photography have appeared frequently in this journal.

Some Scented Mints from the Southwest

Sally Walker

In addition to the beauty of their flowers, many plants in the mint family (Lamiaceae) have pleasantly scented leaves. Among those are the plants mentioned in this article, which come from southern Arizona, New Mexico, California, and Mexico. Their various scents have been described as resembling root beer, licorice, bubble gum, or peppermint, but because there is nothing exactly like them, I'm not going to try to describe them. Most of these plants have a fabulous fragrance, each one different, but you just need to smell the plants themselves (photos, p. 268).

Agastache. This genus bears its flowers in spikes. *Agastache rupestris* has a long flowering season, continuing into the autumn. The flower spikes are 12–15 inches (30–40 cm) long. The tubular reddish-orange flowers are about an inch long and have exerted stamens.

Agastache cana from New Mexico has broader leaves, some of which are wedge-shaped; unlike the previous species, the foliage is not cinereous (“ashy,” or gray). The large flowers are purple. *Agastache wrightii* has a shorter spike with very small blue flowers, and toothed leaves. Populations in some localities are very strongly scented, and those in other places not at all. *Agastache aurantiaca* has golden-orange flowers and comes from the pine forests of Durango, Mexico.

Monarda. The species in this genus all have rather similar fragrances. *Monarda menthaefolia* is probably the best known; it bears flowers in terminal heads. *Monarda pectinata* has pink flowers in axillary and terminal heads. It comes primarily from eastern Arizona but is also found from California to Texas.

Monardella. Closely related to the previous genus (its name means “little *Monarda*”), this one features extremely aromatic foliage. *Monardella odoratissima*, named for that very feature, is a dense subshrub. Each shoot bears a terminal flower head. It is widely distributed in the western United States from 5500 to 11,000 feet (1700–3385 m) and is well known to rock gardeners, though often short-lived outside its native range. A different scent occurs in *Monardella arizonica*, which bears a series of flowering shoots. It has a very limited distribution from 2000 to 4000 feet (615–1230 m), growing on rock ledges and in canyons. It forms larger clumps than *M. odoratissima*, and its native habitat suggests it should prove more suitable for gardeners in hot, dry climates.

Monardella lanceolata is an uncommon annual up to 2 feet (60 cm) tall, with terminal heads an inch (2.5 cm) across which have a thistle-like appearance from a distance. It flowers at lower elevations in isolated colonies in the Santa Ana Mountains of southern California. Its foliage is very fragrant and distinct from that of other plants in the genus. It is a powerful attractor of butterflies and has also been popular as a tea herb since the Spanish explorations of the sixteenth century.

Monardella macrantha fits into the category of true rock garden plants better than any other plant in this article. It is a creeping mat-former and thus is a good ground cover. The flowering stems are 6–8 inches (15–20 cm) long, and each terminal head bears 10 to 20 red flowers about an inch long. It grows from 2000 to 6000 feet (615–1845 m) in San Diego County, California.

Salvia. This huge, cosmopolitan genus is well represented in the American West. In the mountains of southern Arizona, at 6000–8000 feet (1845–2460 m), *Salvia lemmonii* grows in large patches. It has carmine to purplish flowers. All the following species are from southern California. *Salvia apiana* is a shrub about 3 feet (1 m) tall. It has grayish leaves and white flowers tinged with purple, much moved by bees—hence the specific name *apiana*. It is also known as a medicinal herb. *Salvia vaseyi*, the wand sage, is a larger plant from the desert, also with gray leaves and white flowers, and more spectacular in bloom. It has long spikes with the flowers on peduncles, supported by a stoutly bristled bract.

Salvia munzii grows just north of the Mexican border. It is a clump-former up to 6 feet (183 cm) tall. The crenate leaves are “ashy” on both surfaces. The clear blue flowers are about half an inch long, and the stamens do not exceed the upper lip. *Salvia sonomensis* has a spike of violet flowers on 6-inch (15-cm) stems. Though not as spectacular as *S. munzii* and *S. clelandii*, it forms mats and is a good ground cover. *Salvia clelandii* is a distinctive shrub growing below 3000 feet elevation (923 m). It is about 4 feet (1.3 m) tall and has large blue flowers in “interrupted” heads. The leaves are white-tomentose below and green above.

Trichostema. Plants of this genus have the common name “blue curls,” referring to their long, arching, exserted stamens. The two following species are low shrubs, and both have purplish “wool” in the calyx. *Trichostema lanatum* grows below 3000 feet and has leaves that are hairy on the undersurface. *Trichostema parishii* is a slightly smaller species ranging from 2000 to 6000 feet.

This is just a sample of the scented mints one can grow in the rock garden. Most of them are easy to grow from seed, and some have recently become available from nurseries, especially in the Southwest. Their aromatic foliage adds another dimension to the experience of gardening.

Sally Walker has for many years collected wild seeds in the desert Southwest, distributing them through her Southwestern Native Seeds list (see below).

Sources

Southwestern Native Seeds, P.O. Box 50503, Tucson, AZ 85703 (seeds)
High Country Gardens, 2902 Rufina St., Santa Fe, NM 87507-2929; 800-925-9387;
www.highcountrygardens.com (plants)

A Horticultural Prague Spring

Bobby J. Ward

The Czech playwright Karel Čapek is celebrated for introducing the word “robot” to the world vocabulary. It was coined by his artist brother, Josef, and appeared in *R.U.R.*, a science fiction play that Čapek wrote in 1921. To gardeners, however, Čapek (pronounced CHOP-ek) is known for *The Gardener's Year* (1929), in which he wrote, “Let no one think that real gardening is a bucolic and meditative occupation. It is an insatiable passion, like everything else to which a man gives his heart.” From that you can infer that the book is not an idyllic meditation on the joys of gardening; rather, it is a psychological comedy in which Čapek fights the “tyranny” of watering hoses, scorching sun, the “animosity and callousness” of soil, and the “dense embroidery” of plant lice. And, oh yes, there are visitors to his garden who think that a prized campanula is a radish.

My introduction to Karel Čapek was through Norman Singer of Massachusetts, a NARGS past president, who sent me a copy of the book in the early 1990s, inscribing it “One of my favorite books.” Subsequently, at NARGS meetings I learned of modern Czech gardeners through Andrew Osyany of Ontario, whose Karmic Exotix list was for a number of years the North American distributor of seeds collected by several Czech plantsmen. At the time, the high alpine locales of seed listed in the catalog were truly “exotix” to me, a neophyte rock gardener: the Caucasus, the Altai, Macedonia, Serbia, Slovenia. Through NARGS lecture programs and study weekends I soon met Josef Halda and Vojtěch Holubec, two renowned Czech plant hunters and seed collectors who are frequent speakers at rock gardening groups in North America.

In January 1997 Vojtěch visited North Carolina on a NARGS speaker's tour. A friend and I took him to several local areas to see native plants in the Wake County Piedmont. We kept up correspondence off and on through the years, and I relied on him for information when I became interested in modern-day plant hunters and seed collectors, including the Czechs. From that interest, Vojtěch introduced me to a fellow alpine garden enthusiast, Josef Jurášek; both of them now operate alpine and rock garden seed businesses in Prague.

This past spring, Vojtěch invited me to speak at a meeting of the Rock Garden Club of Prague (RGCP) and to attend its alpine plant show. I jumped at the

opportunity. My visit coincided with Prague Spring, a citywide international music festival celebrating the season, and commemorating in its name the first, suppressed attempt of the Czechs to overthrow the former communist regime. On the trip I met three Czech NARGS members whose gardens I visited, along with Vojtěch's.

Rock Garden Club of Prague

The Rock Garden Club of Prague (Klub Skalničkáru Praha, Česká Republika) was founded in 1970. It has a membership of some 800 locals and about 60 foreign members. The club manages an annual seed exchange and publishes a quarterly bulletin, *Skalničky (Rock Garden Plants)*. Its members organize short weekend trips to local gardens and longer trips to the Caucasus and other alpine areas in Asia and Europe. Several of the members operate seed businesses and nurseries, often exhibiting and selling plants at three alpine plant shows that the club annually organizes, two in the spring and one in the fall. The best is the Main Spring Show, held in May and lasting for three weeks. I attended the 36th annual show, held this year from 4 to 21 May, and saw an exhibition of at least a thousand alpines. Judging by the members I met, they are passionate growers who are experienced and skilled in cultivating alpine plants.

The spring show is held on the parish grounds of a Roman Catholic church, St. John on the Rock. The churchyard is rented by the RGCP for its plant sales and is the site of a large permanent collection of rock and alpine plantings maintained by club members (photos, p. 269). The church, a Bohemian Baroque building dating from 1730, is on a busy corner on Karlovo Náměstí (Charles Square) next door to Faust House, a part of the Faculty of Medicine of the sprawling Medical Center of Charles University (founded in 1348). The sixteenth-century alchemist and astrologer Dr. Johann Faustus lived there for a while, and legend has it that he was carried off to hell by the Devil through a hole in the roof of Faust House. With that juxtaposition of the profane and sacred in mind, I walked very carefully under the heavy stone archway into the churchyard, where I immediately noticed the quietness; the enclosure muffled the sound of streetcars and hospital ambulances a few yards away.

At the club's sales and display area, I was met by Alena Linzmajer, who was overseeing the sales, greeting visitors, and assisting in vendor stock replacement. The flyer for the show listed 49 vendors this year. In the sales area you can find a wide assortment of alpine plants as well as dwarf trees and shrubs. Some of the best plants were gentians, rhododendrons, irises, daphnes, fritillaries, and numerous species of saxifrages and androsaces. There were at least a dozen forms of *Lewisia* and an equal number of *Phlox*, *Penstemon*, and *Trillium*. Alphabetically, you could view and purchase anything from *Abies koreana* 'Blauer Eskimo' to *Wulfeniana amherstiana*. If your pocketbook and U.S. customs were not such a barrier, you could completely stock a new rock garden from purchases at the show.

Alena directed me to the display garden area of Saint John on the Rock, which is about an acre (0.4 hectare). The plantings are generally arranged by geographic region (Europe, the Americas, the Mediterranean, Asia, and South Africa). RGCP members have spread plants among crevices and around small and large boulders, with the rock types varying by region. During my visit I saw several species of *Phlox*, *Cytisus decumbens*, *Rhodohypoxis*, *Lewisia*, and *Campanula*. A natural-looking pond and a small bridge have been built in one area. Rhododendrons, daphnes, and small maples spread nearby under a large oak. Scattered among the rocks are *Bergenia*, *Epimedium*, *Leontopodium*, *Aquilegia*, *Clematis*, and various genera of orchids. There were also plantings of *Genista*, *Trollius*, *Tiarella*, *Dicentra*, *Alyssum*, and *Fothergilla*. In a sunny area the RGCP has planted large troughs with *Echinocactus* and other cacti.

The display area of the church is open to the public only during the three plant shows, but it is maintained year round by club members. Because the churchyard is in a busy part of Prague, the RGCP recruits new members at each of its shows. Employees at the nearby medical center wander into the grounds during their lunch breaks.

Vojtěch Holubec's Garden

Vojtěch Holubec is an agronomist with the Czech Gene Bank, testing plantings of varieties of wheat and other cereal crops. He was one of the youngest members of the Rock Garden Club of Prague, joining at age 16. Vojtěch also began corresponding with Norman Singer and NARGS at that time.

He gardens on 800 square meters (0.2 acre) in the Suchdol section of Prague, across the river from downtown. His walled garden is filled with large boulders that had to be lifted by crane (the neighbors wondered what was happening). The limestone from the Czech Karst (sea sediments from the Devonian Period) is advantageously arrayed to display plants from various geographic regions: North America, Caucasus, Europe (Alps, the Balkan Peninsula, Slovakia, Pyrenees), Turkey, and Central Asia (Tien Shan, Altai, Far East, and the Himalaya).

There are mounds of scree, tufa, and flat stones standing upright, all with alpine and rock garden "jewels" tucked among them, most of the plants grown from seed (photos, p. 270). Vojtěch estimates he has about 4,500 plants. Behind the house he has a large collection of rhododendrons and azaleas, various clematis, aroids poking through the ground, asarums, and several dwarf *Pinus mugo*. One of the knockouts is a handsome, vigorous white form of *Gentiana clusii*. On the south side of the house, he has a greenhouse with a plunge sand bed crammed with plants, some rooting and others waiting to be potted or transplanted. The walkway to his house is lined with large troughs, many containing dwarf conifers and witches' brooms, a vast collection totaling 800 or more plants amassed by his son David, now 20. David, a member of the Czech Conifer Society, has traveled outside the Czech Republic looking for fine conifer specimens and brooms, which he trades with other society members or plants in the fam-

ily garden. In the front of the house old, bleached-out tree stumps have been placed, enhancing the feeling of a high-altitude landscape.

On my visit to his garden, Vojtěch pointed out damage from a late frost two weeks earlier. Still, many plants had begun leafing out without injury. There was a very dwarf *Tilia cordata* (linden tree), two forms of horse chestnut (*Aesculus hippocastanum* 'Cristata' and 'Laciniata'), *Beesia calthifolia*, and beautiful red-flowering *Magnolia* 'Susan' and a pink *Magnolia* 'Koern'. I was particularly pleased to be shown *Erythronium umbilicatum*, obtained in Raleigh during Vojtěch's trip to speak to our chapter in 1997, and *Trillium pusillum* subsp. *alabamiense*, a species Vojtěch obtained from a NARGS member in Delaware. Vojtěch raises many plants from seeds collected by himself and other members of the club or obtained by mail. Among his favorite plants tucked about the garden are *Convolvulus*, *Callianthemum* (Ranunculaceae), *Saxifraga*, *Daphne*, and *Gentiana*. He finds that seeds collected in Turkey and the Caucasus grow best for him.

Vojtěch's current writing project is a book with Pavel Krivka titled *The Caucasus and Its Flowers* (2005), a large-format, hardcover book in English. It will be available from the NARGS Book Service, or directly from Vojtěch (see address below) for 83 euros or equivalent in U.S. dollars. NARGS recently granted funds supporting its publication.

Charles University Botanical Garden

The current Charles University Botanical Garden was founded in 1898 (some references say 1845) and consists of 3.5 hectares (8.6 acres) There was an older university garden begun in 1775 in Prague, but it was repeatedly damaged by floods over the years and was ultimately relocated to its present site at Na Slupi Street near Charles Square. The botanical garden has the feel of a public park (admission is free) with numerous benches, quiet shady places, and several levels of winding paths, a few of which unexpectedly dead-end. Lilacs, rhododendrons, and azaleas were at their peak of spring bloom when I visited. There are several greenhouses for the protection and display of tender tropical plants, including an extensive collection of cacti, succulents, and aquatic plants, and large old cycads. The bulk of the outdoor collection focuses on trees and flora of central Europe; there is also a small limestone rock garden on a hillside. In addition, there are several mature tree species from North America and large rhododendrons from Asia situated about the garden.

Lining a sidewalk in large wooden barrels were five *Phoenix canariensis*, the Canary Islands date palm, recently removed from greenhouses to spend the summer out of doors. A herbarium, adjacent to the botanical garden, was founded in 1775 at the Department of Botany; it houses 2.2 million specimens (access by permission).

My main purpose in visiting the garden was to see *Ginkgo biloba* 'Praga' (also called 'Prague' and 'Pragensé'), a male weeping form that is somewhat dwarf (12 feet/3.6 meters high). It did not disappoint me; Vojtěch and Josef Jurášek had

taken me to see it three years earlier during a cold December afternoon, when its stocky trunk and pendulous limbs, devoid of leaves, looked like metal sculpture in the waning light. It maintains a sentinel position at the entrance to the Botany Department.

Alena and Zdeněk Linzmajer's Garden

Alena and Zdeněk Linzmajer garden on a somewhat dry, clay hillside that faces south with an open, sunny aspect. Their plot was originally rented some 50 years ago by Zdeněk's father and a local gardening club. There are other gardens in this collective on adjacent neighboring plots separated by wire fences, where people grow fruits, vegetables, and cut flowers. Originally in an isolated, wooded part of Prague, the collective is now bordered by the busy D-1 highway leading to Brno and by apartments and office buildings. Still, it is a surprisingly peaceful oasis. The site gives the Linzmajers additional space away from their home to grow and test new rock garden plants, one of their passions. They have a well and a shed in which they store fruit from their fruit trees, gardening equipment, and fertilizers.

Alena and Zdeněk told me the area of the garden is 580 square meters (0.14 acre), but it seems much larger than that. It is clear they have spent many hours here setting up and maintaining a very fine rock garden. Except for the paths, there was hardly a square inch of space not covered with plants, the majority of which were in bloom. They have placed *Daphne cneorum*, *D. cneorum* 'Pygmaea', and *Daphne arbuscula* among the rocks along with several species of *Campanula* and *Gentiana*. Here and there I saw delospermas, phloxes, *Paeonia tenuifolia*, *Alyssum*, and *Helianthemum* hybrids. They pointed out *Aster coloradoensis*, *Acantholimon armenum* (from Turkey), *Fibigia triquetra* (Brassicaceae), *Leontopodium nivale*, the blue-flowered *Polygala calcarea* and the purple-and-yellow *P. vayredae*, the latter from the Pyrenees.

RGCP Meeting and Lecture

Vojtěch had invited me to speak at a meeting of the RGCP. The club meets on Novotneho Lavce Street in the building of the Czech Technological and Scientific Society, adjacent to the historic Charles Bridge. My talk on modern-day plant hunters was translated into Czech by Antonin (Tony) Svehla, a NARGS member from McLean, Virginia, who by coincidence was visiting Prague with his wife, Jana Svehlova.

After my lecture, we adjourned downstairs to a restaurant with RGCP members, and Josef Jurášek, famous for his love of beer, led a toast with a round of Platan (named for a plane tree located near the brewery in the town of Protivin) and then Pilsner Urquell (from the town of Pilsen). Over dinner, I was introduced to Milan Halada, another NARGS and RGCP member. He told me about

his garden and invited me to visit, even though the sun was already low in the sky.

Milan Halada's Garden

The last-minute invitation to Milan's garden was an unexpected pleasure. Milan sped across town, taking Josef Jurášek, Tony Svehla, and me over the Palackého Bridge to a rural sector outside Prague called Hlubočepy. Here he guided us around a special garden built inside a former quarry. The house and garden created by Milan's father are surrounded on three sides with limestone walls at least 25 feet (7.6 meters) high. The quarry appears to be an exposed uplift of limestone, as the driveway entrance to the garden is uphill for a short distance. Some of the largest rocks are lichen-encrusted and others show beautiful striations, a result of geological compression, folding, and slanting.

Milan has found interesting ways to display plants around this uniquely situated garden. Walking about, it's hard to tell which rock Milan put there or rearranged himself, and which ones were the result of quarrying operations before Milan's father took over the space.

He has gentians, pulsatillas, phloxes, maples, daphnes, and saxifrages. One plant demanding attention in the fading light was the striking violet-colored *Iris ruthenica*, a species that ranges from eastern Europe to the Korean peninsula. There were numerous conifers around the garden, including cultivars of *Pinus mugo* and *Juniperus communis*.

Milan's enthusiasm for alpine plants has created a sand bed nursery or "grow-ing-up" area, with hundreds of pots of germinating seedlings and first-year plants crammed against the north wall of the quarry. The only drawback to this delightful visit was the interruption from noisy airplanes (Milan's house is in the flight pattern of the Prague airport), reminding me that I would be returning to North Carolina the next morning.

As it was getting dark, Josef Jurášek urged me to abandon Milan and Tony, who were now looking at plants with a flashlight, and walk a quarter-mile with him to a rural roadside pub for one last round of Czech beer. Presently we were joined by Milan and Tony; the local clientele became amused at these strangers talking animatedly and enthusiastically about rock garden plants.

Back Home to North Carolina

As I was being driven to Prague's Ruzyne Airport by Vojtěch, I saw Vysehrad Cemetery in the distance. Karel Čapek and his wife, the actress Olga Scheinpflugova, are buried there on a hill overlooking the Vltava River (widely known by its German name, the Moldau), which flows through Prague. The cemetery contains the remains of many other people famous in Czech arts and sciences. Unlike other gravecaps in Vyšehrad that are of stone or cement, the Čapeks' is

made of soil, with a flower vase and a watering saucer for birds.

Vojtěch told me about a pink-flowering saxifrage that honors the writer: *Saxifraga × megaseaeflora* 'Karel Čapek'. When I returned home, I searched the Internet and found that Arrowhead Alpines in Fowlerville, Michigan lists it. The catalog says it is an early bloomer, starting in January in the alpine house.

On the flight back to North Carolina, I read what Vojtěch had written in 1992 in his book *Skalyky a Jejich Stavba (Rock Gardens and Their Construction)*: "Tired of the pace of today's civilization, we are turning to Nature in all its forms, often without realizing it. The cultivation of alpine plants is one of these returns."

Čapek expands on Vojtěch's theme with a wink, I believe, by writing that "the cultivator of a rock garden is not only a gardener, but a collector as well, and that puts him among the serious maniacs."

Bobby J. Ward lives and gardens in Raleigh, North Carolina. He is the immediate past president of NARGS and the author of *The Plant Hunter's Garden: The New Explorers and Their Discoveries* (Timber Press, 2004) and *A Contemplation Upon Flowers: Garden Plants in Myth and Literature* (Timber Press, 1999 and 2005).

Further Information

Membership address: Rock Garden Club of Prague, Marikova 5, 162 00 Prague 6, Petriny, Czech Republic. Annual dues 25 euros or equivalent in U.S. dollars.
Rock Garden Club of Prague: www.backyardgardener.com/cz.html [English];
www.skalnicky.cz/ [Czech]

Sources of Seed

Josef J. Halda, Box 110, 501 01 Hradec Kralove 2, Czech Republic.
Vojtěch Holubec, Wild Collected Seeds, Sidlistni 210, 165 00 Prague 6, Czech Republic.
Josef Jurášek, Wild Seeds of Exquisite Alpines, P.O. Box 251, 152 00 Prague 5, Czech Republic. www.jurasekalpines.com.
Vladislav Piatek, Zahumenni 2129, 708 00 Ostrava Poruba, Czech Republic,
www.worldseeds.cz
Euroseeds, Mojmír Pavelka, Box 95, 741 01 Nový Jičín, Czech Republic
Arrowhead Alpines, P.O. Box 857, Fowlerville, MI 48836. www.arrowheadalpines.com

The Lure of a Garden

Robin Magowan

It is easy to understand why, at the first signs of spring, even before the ground has thawed enough to admit a trowel, I am in the garden. There is so much to be gotten ready before the plants I have ordered in the darkness of January begin to arrive. Cuttings must be taken, and rootings moved, best accomplished when plant life is still semi-comatose. For much of the next six weeks this whirlwind doesn't let up. Every available moment finds me racing about, coping with the flowering velocity of early spring. Something oddly energizing in this seething thousand-mile-an-hour plant combustion pulls me along in spite of advanced years. Thus occupied, I can hardly complain. A garden, after all, needs attending.

Then one day, after a warm southerly breeze, new presences arrive: black flies, midges, mosquitoes, and I have to outfit myself against them with long sleeves, insect spray, sun block. Even so, the constant whine of invisible violins surrounds me. The temptation to pack up and retreat to my study, or to a wind-swept mountaintop half the globe away, is certainly worth contemplating, especially when nature's rock garden offers a spectacle of vast abundance, with no call for human beings to prune, doctor, or revise. But unlike a mountaintop, a garden requires choices. I am constantly fiddling, inserting this or removing that. Only by changing the composition can a garden be kept from looking mature, or overgrown.

I want each plant to stand out and be seen for the extraordinary gem it is. If this means rearranging everything in its vicinity, so be it. This is where a crevice garden makes sense. The rocks not only give roots a toehold to tuck into, cooling or adding reflective light and heat; they also provide backdrops that allow smallness to be seen. Better yet is a 70°-angled irregular wall in which plants no longer have to be so self-contained. They can spill over rocks and form mats through which various bulbs and meadow plants will burst forth. The mats may also bloom a month or two later than the snowmelt cushions and hummocks of the scree garden. And I can tuck plants whose collars need to be kept dry under an overhanging rock, creating more surprise.

The accessibility is what I like most in a steeply angled bed. My new acquaintances are peering right at me; each crack and cranny invites me into an intimate

domain. The visual amazement turns its face upward as I lean forward, hand gripping something stonelike for support. A few seedlings installed weeks ago may be actually thriving, poised at the tiny chasm edge, glistening, beckoning.

Once the garden looks as it should, you may find yourself wondering what is keeping you so microscopically preoccupied when there are other claims on your time. Are you utterly obsessed? What explains this reluctance to quit and call it a day?

It may be that a garden has a will of its own. No matter what lengths I go to in order to keep each gem visually intact, my screens inevitably turn into minuscule meadows; in other words, a potential scrum. I remember when I first came to gardening how I disliked the alpine lawn: immovable, deeply pegged thugs standing root system to root, fighting it out. After a visit to the Dolomites, I saw how the boxing ring could be turned into something more like a carpet, with varying threads, colors, notes, patterns.

The question then becomes how tall, how intensely knotted do I want it? An essential question, as it determines how much of my day I'm going to be spending there. Do I want twenty shades of penstemon and iris blue I can admire in the last twilight, or do I want twenty different eruptions in a three-foot radius? The finer the stitching, the more closely I have to weed.

There may be gardeners who don't drop to their knees at the first sight of a weed. Perhaps they don't regard each and every one as a personal affront. But something as small in scale as a rock garden only works by containing what it should. Any intrusion can throw it out of kilter. A mess, of course, can be tolerated, if the gardener is the only one seeing it. But messes distract, and for scale to be triumphant, the components of the mosaic have to be visible.

It's one thing to be unable to stroll past a weed without falling to one's knees; it's another to go crawling after them. Where are they lurking this time? Is there such a thing as too small? The minutiae get fairly complex, but isn't that what alpine gardeners aspire to be, connoisseurs of minutiae?

In a way it's like God and Satan: the weeds and I are part of the same swinging pendulum. Without such a menace, what would keep me gripping with one hand and with the other plucking, combing in a circle, even reaching out to make the radius wider before rising to search for new antagonists?

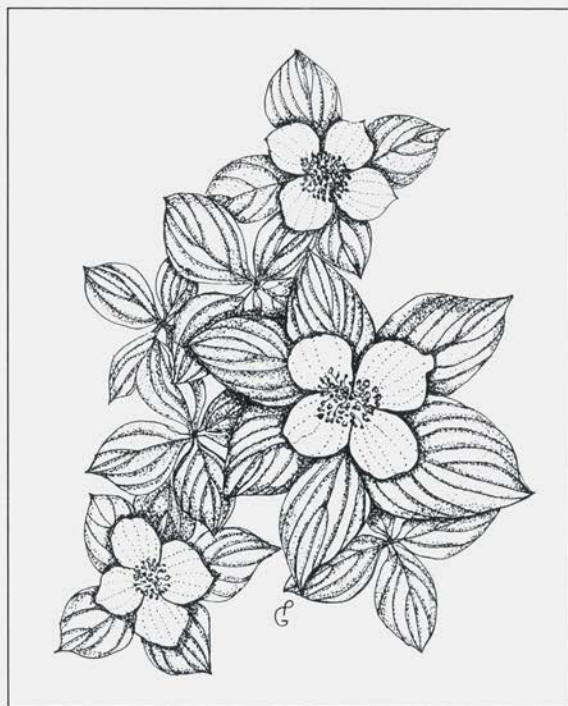
Weeds are, by definition, a distraction. But their efforts to confuse and dilute keep me concentrated. Perfection, after all, is momentary; a blink, a turn of the head, and it's no more. Yet how not admire their resourcefulness, the way they deck themselves out in novel camouflage and insert themselves in unexpected terrain? One thinks of guerrillas on their bellies, infiltrating. Fortresses deemed inviolable, a clump of iris, a squat daphne, a carpet of globularia, can turn out to be riddled with infiltrators. Even were I to accomplish the impossible, there would still be the lawnmower and, worse yet, the weed whacker, spewing a wave of seeds ready to settle and take root.

But in keeping me out there, the weeds give me a chance to think about the kind of order I am creating. Clearly a partial one, given the state of my botanical ignorance. But then, how does anyone tell nasty clover from gorgeous *Trifolium*?

Yet the order, such as it is, takes second place to the joy I feel in entering a non-human world. This world can be disarmingly beautiful. The flowers offer their various bounties. The gardener, a surgeon, arrives in their midst. And they render him numb, speechless, there is so much to take in and attend to, a whole waiting plurality. And breathing it in, on my knees, stalk by flower stalk, somehow consoles. The window in the sky has opened a little wider. Slanting light covers me in its warm hands. I bury my head in so much singing air. Whom can I aid? I look for my friends, the weeds. Any around, visiting? Is there something in the trays of seedlings I can remove and plant?

In a miniature creation, of very small plants and potentially large weeds, any survival may seem problematic. But that's why I garden, because I can tip the scale. In the process I get to choose what goes here and what goes there. Gradually, over the course of a season, the choices form a composition—my garden. Only the my part is pretty provisional, given the forces at play. Then again, it's the very unlikeliness of growing high-altitude plants in lowland conditions that provides the challenge. And, of course, of making a composition that honors my alpine visitors.

Robin Magowan, a travel writer and poet, gardens in Salisbury, Connecticut, where he is active in his regional NARGS chapter. His essays on rock gardening and mountain plants of Greece appeared in earlier issues.



Cornus canadensis, drawing by Phyllis Gustafson

PLANT PORTRAITS

Trillium pusillum

GENE BUSH, Depauw, Indiana

There are forty-odd species of *Trillium*, depending on your position as a lumper or splitter. Add various forms, hybrids, and named cultivars to your wish-list, and the possibilities stretch into a lifetime of collecting. There is a *T. grandiflorum* that opens pink and remains pink, as well as forms that open white and age to a wonderful deep brick-red. Double and semidouble forms of *T. grandiflorum* exist, with prices as breathtaking as their beauty. Try to locate a good form of yellow-blooming *T. recurvatum*. Perhaps Fred Case, author of the current masterwork on the genus, would share a piece of his yellow-blooming *T. sulcatum*. You may be satisfied with a clone of *T. undulatum* that would not only live for you but bloom reliably. Like most other collectors, I want them all—preferably planted in drifts. But if I could grow only one trillium in my garden it would be the species *T. pusillum* (photo, p. 265).

I have been growing this species, whose name means “small” or “dwarf” trillium, for about five years. Though it may be only 6 inches or so in height, it makes up for its lack of stature in exquisite detail. The newly emerging foliage has very dark, almost black-green leaves overlaid with wine to purple, with a fresh, waxy surface texture. Eventually the leaves will lose the luster and shift to bright green. Individual leaves are about 1.25 inches (3 cm) wide by 3 inches (7.5 cm) long.

I am enjoying fully opened blooms by the first week of March. Each has three white petals with undulate (wavy) margins. Each bloom has its own display stand formed by a pedicel that adds an inch or so in overall height. Two weeks later, the white petals have aged to rose or lavender-purple. They persist for about two more weeks, so each bloom lasts for well over a month.

Quite a few species of trillium have been growing in my garden for over 10 years. Some of the species still produce only one stem and bloom each season. *Trillium pusillum*, however, is a powerhouse at producing offsets. After only five years in the garden, a single rhizome has increased to a tight colony of 15 stems. I did not count the number of blooming stems versus nonblooming ones, but

the show was grand enough that I took no note of the slackers. I keep promising myself that I'll dig up the rhizome and break it into individual starts, replanting for a really great drift in another four or five years, but I can't bring myself to make those divisions.

When transplanting my start of *T. pusillum* to my garden, I gave it a site with more light than I give my other species of *Trillium* because all wild locations of *T. pusillum* are well south of my area, enjoying more heat in summer. It is in a raised bed of heavy clay improved with composted hardwood bark. The soil pH is neutral. Maintenance and care consists of a mulch of chopped leaves applied each November.

Being the apple of my eye, *Trillium pusillum* gets a special spot, just after one enters the garden gate. In a raised bed to bring it closer to the eye, it is where one pauses just before taking another step upward. The clump is framed by an old cedar stump that is now all gray and silver. Its companions are hellebores and primulas. Each year you can find me in the garden taking photos of my favorite trillium, for each year it has added beauty.

Petrophytum

REX MURFITT, Victoria, British Columbia

My first introduction to the genus *Petrophytum* (Rosaceae; spelled *Petrophyton* in some literature) was at the Royal Horticultural Society in London, back in the gray English winter of 1952, during a lecture given by the late Brian O. Mulligan, director of the University of Washington Arboretum in Seattle. Brian's talk was on the flowers of the Olympic Mountains of Washington state. I still can visualize the clear, bright colors of his slides: the brilliant, wide-open blue skies, snow-capped mountain peaks, and bright alpine flowers. I never imagined that one day I would explore those places myself. Each time I drive up the Hurricane Ridge Road into the Olympics and see the snow on the mountaintops, I get that same feeling of elation. It is an amazing coincidence that I retired to a house in Victoria, British Columbia, where first thing every morning I see the Olympic Mountains some 18 miles across the Strait of Juan de Fuca.

Among the many lovely endemic plants shown in Brian's talk was *Petrophytum hendersonii*, which caught my attention. A typical alpine plant in behavior, it runs through the cracks and crevices of the rock, filling every available space with its woody stems in such profusion that it appears to be one huge plant plastered on the vertical rock face. Only an inch or so tall, it is clothed with dark green-bronzy leaves. Its creamy white racemes on very short stems arch out, strongly reminiscent of the closely related genus *Spiraea*.

Over the intervening years I have grown the three species in this small genus and hoped to see all of them in their natural habitats. I managed two of the three but was unable to see *Petrophytum cinerascens*, which is endemic on the cliffs of the Columbia River in Chelan and Douglas counties in Washington (photo,

p. 271). This summer, thanks to my longtime friend Steve Doonan, I finally saw *P. cinerascens* on its native cliffs. Once you have seen it in its relatively inaccessible native habitat (so fortunate for its survival), you realize what a limited range it has.

Petrophytum cinerascens is nearly impossible to acquire from nurseries on this continent, although it appears in a few seedlists. I was given a packet of seed by a kind friend this spring, and Steve Doonan with his usual generosity dug up some rooted cuttings for me a while back. Unfortunately, they resented the move, and I am down to one struggling cutting that I dare not even touch. I have high hopes that the seed may germinate this fall.

Petrophytums are attractive, but should we bother to try to grow them? Can anyone grow them? I think so: all three species look like classic alpine plants with their prostrate or mounding habit, tiny leaves of tufted gray-green forming tiny dense shrubs, growing, with age, into iron-hard mats. All are crevice plants but will grow well in a well-drained scree mixture, preferably in close association with rocks for a cool root run. In the wild some grow in the most inhospitably barren and dry places, but obviously they manage to find the moisture they require. In a well-drained rock garden soil, they grow in the flat or level areas and are quite sun-tolerant. My plants are watered along with the other plants in the rock garden and the troughs. Europeans often use them as pot-grown specimens, but they are prepared to supply constant attention to keep them from dying of drought. In North America they make good trough candidates, as the gray-green mounds have that time-honored alpine look.

A well-established plant is capable of taking over a trough—not that I would object if it did. I have two young cuttings of *Petrophytum hendersonii* in a trough along with a tiny dwarf birch from Norway and *Salix calcicola*, a willow from Newfoundland. At the moment the willow may be the greedy challenger, so some careful management decisions will soon have to be made.

If and when you are rewarded with a successful batch of seedlings, it is a fun project to introduce a few of them into a choice piece of tufa. Remember to drill small holes and save the tufa dust to backfill around the roots. Do not use a potting compost for this purpose. Water them in well using an eyedropper and keep the whole piece of tufa moist.

Petrophytum caespitosum (photo, p. 271) with its very wide distribution is likely to be the easiest species to obtain. It occurs from Washington to California and eastward into Idaho, Montana, and Wyoming, and south through the Rocky Mountains to New Mexico and Texas. It must be very tough, for I have seen it growing in the sun-drenched canyons of the Anasazi in Arizona. In cultivation I have noticed that this species is inclined to remain quite dwarf and compact, with little tufts of gray-green leaves about one inch (2.5 cm) long. The cream-colored bottlebrush flower spikes are 2 inches tall.

Petrophytum hendersonii appears quite often in nursery lists and is grown in many rock gardens, despite the fact that it is an endemic from the cool mountains of the Olympic Peninsula. In cultivation it grows into neat, tight, rounded mounds rather than the rambling colonies it forms in the mountains. Perhaps this can be explained by the absence of crevices in many rock gardens.

P. cinerascens, as I mentioned, occurs in the crevices and on the cliffs and ledges along the Columbia River, where it is commonly called the Chelan rockmat (photo, p. 271). Perhaps the name is silly, but it is certainly descriptive of this low, mat-forming shrub. The foliage is narrow, grayish in color and sparsely hairy. One of the identifying features of this species is that it has three veins on the undersides of the leaves, distinguishing it from *P. caespitosum*, which has only one such vein. Why not give it a try the next time you're looking for a hardy low mat-former for your trough or alpine garden?

Saxifraga catalaunica

ADRIAN YOUNG, Edgware, Middlesex, U.K.

Saxifraga catalaunica ("from Catalonia"; photos, p. 272) is an interesting saxifrage; it has a very limited distribution in nature and is difficult to find in cultivation. The name *S. catalaunica* was originally published by Boissier and Reuter in 1856. In 1963 Webb relegated this species to subspecific rank as *S. callosa* subsp. *catalaunica*. If you examine herbarium sheets, it is possible to see similarities between *S. callosa* and *S. catalaunica*, but when you study these species in the field, what is obvious is the differences.

In June 2003 I visited the best-known site for this species, the conglomerate cliffs above the monastery at Montserrat in northeastern Spain. The monastery is a popular tourist attraction, but very few tourists take the near-vertical ride to the cliffs that lead to the summit. If you follow the path that leads to Sant Jeroni, *S. catalaunica* soon appears on the steep cliffs that tower over the footpath. After I had spent a few moments studying the tight cushions, it was obvious that this plant was very different from *S. callosa*. I have seen *S. callosa* subsp. *callosa* and subsp. *australis* many times in the wild, and there is no confusing them with this beautiful Catalanian saxifrage.

The defining work on this species was carried out in the 1990s by Dr. Pablo Vargas, an eminent botanist based at the Botanic Garden of Madrid. He concluded that its accepted status, as a subspecies of *S. callosa*, needed revising, and he resurrected the species name chosen for it in 1856. I asked Dr. Vargas for an explanation and received the following reply: "These populations show minor but independent morphological characters that are difficult to include under any of the species of Subsection *Aizoonia*." The main distinguishing characters cited are glandular cilia on the flowering stem (*S. callosa* has glabrous stems), shorter and broader leaves with a tapering pointed apex, and a distinctive silver band all around the leaf margin. Another diagnostic characteristic is the form of the inflorescences; *S. callosa* always has a one-sided panicle with a distinctive arch, and the flower pedicels are missing from half the stem—that is, they go only halfway around the stem. In *S. catalaunica* the flower pedicels can be found all the way around the stem. Those wishing to learn more should consult *Flora Iberica* (New Version), though most will need the further assistance of a Spanish dictionary.

S. catalaunica is geographically separate from *S. callosa*, which is widespread through the Italian Apennines and jumps across to Sardinia; it is also found throughout the Franco-Italian Maritime Alps. Mysteriously, *S. callosa* is absent from the Pyrenees, which appear to offer very similar ecological conditions. *Saxifraga catalaunica* can be found at Montserrat, a small conglomerate outcrop (1200 meters elevation) a few miles northwest of Barcelona, and some plants have been recorded from a few places a little farther north in the Pre-Pyrenees, particularly Pallars and a cliff just south of the Montsec ridge. *Saxifraga longifolia* can also be seen in this area. (The nearest town is Tremp.) It is accurate to say that this plant is endemic to Catalonia, hence its name, although a word of warning may be timely. It used to be thought that *S. longifolia* in Spain was restricted to the Pyrenees, but it is now known that this species also survives farther south at the Sierra Aitana near Alicante. So maybe *S. catalaunica* is living peacefully in some remote sierra; I hope so.

Cultivation is not too difficult; for those skilled in the ways of high-alpine saxifrages, it's a walk in the park. Place it in a rock crevice that gets some good light—it's averse to deep shade—and it will form a tight green-and-silver cushion regularly giving you beautiful white spires of bloom on 12-inch (30-cm) stems.

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BOOKS

Native Plants of the Northeast: A Guide for Gardening and Conservation,

by Donald J. Leopold. Portland: Timber Press, 2005. 308 pages, color photos throughout. Hardback \$39.95; available at a discount from NARGS Book Service.

Reviewed by LIS ALLISON, Woodlawn, Ontario

Probably the only thing more difficult than writing a book on a large and complex subject is writing the second book on a large and complex subject. Donald Leopold's *Native Plants of the Northeast* is seriously overshadowed by the New England Wildflower Society's relatively recent publications *Growing and Propagating Wildflowers* and *Native Trees, Shrubs and Vines*, both by William Cullina. The comparison is inevitable, and unfortunately the book under review here does not come off well.

Leopold's Introduction first tries to define what he means by a "wildflower," then gets confused with the concept of "native plant." Next he tries to justify his choice of which species to include; while most of his criteria make perfect sense, such as choosing those with "ornamental attributes," he adds that he restricted his choices to those that "do not require routine incantations to grow." I immediately had a mental image of Northeast gardeners rushing out in their pajamas to mutter before-breakfast spells over the prima donnas in the native plant garden. Whatever he means, this phrase is only the first of many strange remarks in the book.

Leopold offers a list of plant communities, complete with a map (which labels U.S. states but not Canadian provinces). Unfortunately, this discussion is unfocused, confused, repetitive, and replete with errors of style and usage and geological jargon. I found his plant communities questionable and of little help for "gardening and conservation"; in addition, there is some confusion between conservation and "restoration." Leopold never clearly explains how climate and terrain define growing conditions leading to habitats and plant communities. The novice reader will be left confused, while the more knowledgeable one will feel that there is nothing new here. All in all, the Introduction, which should have been the foundation for the book, is a muddle.

The sections that make up the bulk of the book give detailed information about the species Leopold considers garden-worthy, sorted into Ferns, Grasses, Wildflowers, Vines, Shrubs, and Trees. Most of the illustrations are excellent; in fact, overall this is an attractive book, beautifully designed and produced like all Timber Press's efforts. The cultural information gives the gardener a starting point; and the "notes" are interesting. Unfortunately, the hardiness data are often over-optimistic, and some desirable facts are missing. Many of the "natural range" indications are shaky, if you can even figure them out ("Maine to Quebec south"?). Telling us the natural habitat for each species, such as "mixed forest" or "marsh edge," might have been more useful. Information on what type of root system a plant has and whether it goes dormant early in the season would have been handy as well. Various lists in the Appendix might be useful to people embarking on large or commercial projects, but I'm not sure they would appeal to the backyard gardener.

The section on ferns is quite informative, with many fine pictures and cultural data for each species. I found I couldn't always use the information in the text and pictures to identify the ferns growing in my area, but the book wasn't intended as a field guide. Still, some clues as to each species' identifying characters would have helped. Some of the hardiness and average size information may not be quite accurate, but since these are not in general well known for ferns, we can accept them as best guesses. The grasses section is interesting but necessarily selective, and again I question the confident statements about hardiness. For example, Leopold describes *Carex muskingumensis* as hardy from zone 5 to 8, but it flourishes in my zone 4 garden.

In the section on wildflowers I was more at home. The information is useful and interesting, but again the reader needs to take indications of zone and size with a grain of salt. The author's inability to express himself clearly sometimes causes either irritation or amusement, as when I read that *Caltha palustris* has "bold, dark green, heart-shaped leaves during first half of growing season," and think, "Lovely, and what do its leaves look like in the second half of the growing season?"

How useful is this book to a rock gardener? If you have an interest in northeastern native plants and want to buy only one book on them, you could consider this one, but you would do better to save up and buy William Cullina's books, Rick Darke's *Encyclopedia of Grasses*, and a good field guide to the ferns. Or if you aren't wild about wildflowers, use the money to buy another treasure for your rock garden.

The Art of Garden Photography, by Ian Adams. Portland: Timber Press, 2005. OSBN 0-88192-680-9. 200 pp., 147 color photos. Paperback, \$24.95. Available from NARGS Book Service.

Reviewed by DIANNE HULING, East Greenwich, Rhode Island

The Art of Garden Photography by Ian Adams is an excellent guide for the novice to moderately experienced photographer. The book covers digital and film-based garden photography; however, Adams states, "Since digital photography is a complex, rapidly evolving technology, a detailed, in-depth treatment is well beyond the scope of this book." He does cite his favorite digital guides.

The author confesses that he is by no means an equipment minimalist, so he is encumbered with gear that would not be friendly to our needs as rock and alpine plant enthusiasts, especially when we are climbing for the perfect shot. Therefore, we can choose from his arsenal of photo equipment to arm ourselves for the needs at hand. He is informative about what equipment you will not need as well as what you will need for good garden photography, and about the limitations of the equipment.

Adams's tips include information on cameras, film, filters, lenses, metering systems, depth of field, lighting, and corrections thereof. His traveling tips are useful, as are his hints on how to photograph in mist, fog, and rain. He presents gardens throughout the seasons and teaches us (who would have thought?) how to make snow appear whiter! Instruction is provided for close-up photography. Of interest is garden preparation, which many of us fail to think of. Storing and submitting photographs both digital and slide are included.

Several paragraphs are devoted to the ethics of altering or manipulating the digital photograph, and where and when this would be permissible. This is a subjective point of view, and we will long be arguing about it, just as we do about extreme close-up photos vs. capturing more of the plant morphology.

Making color prints utilizing personal computers, scanners, image editors, and color inkjet printers is discussed, along with how to develop an international color consortium profile for the aforementioned equipment. Presentation for an array of purposes is taken into consideration.

A bibliography is included, as well as resources such as gardening magazines, organizations, websites, and equipment outlets. An omission is the magazine *Outdoor Photography*, which I recommend. It is an excellent publication which includes a forum for photographers' questions and articles and photographs by the most noted outdoor photographers.

It is my belief that a well-written photography guide includes design principles, how to compose a picture, and how to incorporate mood in the photograph. Although Ian Adams does include this material in his book, a criticism I have is that some of his photographs need compositional correction. I was annoyed by a stray yellow leaf, a piece of debris, or the inclusion or omission of material within the borders of the photograph. Sometimes the eye is led to an unintended focal point. Some of Adams's photographs are cluttered and busy. Many of them are beautiful; few are close-ups. Some of the differences that should have been apparent because of the use of different film are virtually impossible to discern. Because composition is so critical in garden photography, it is wise to purchase the book as a useful guide or tool, but also to take an art class or two on the principles of design, or a photography class taught in an art forum. I think that while most of Adams's photographs are technically accu-

rate, he tends to rely too heavily on his mass of equipment rather than on artful composition.

If the price is right, by all means pick up a copy of this book. The eager technician at the photography store or the imaging center may not always be available to answer your questions!

Heucheras and Heucherellas: Coral Bells and Foamy Bells, by Dan Heims and Grahame Ware. Portland: Timber Press, 2005. ISBN 0-88192-702-3. 208 pp., 116 color photos. Hardback, \$27.95. Available from NARGS Book Service.

Reviewed by WALLY WAGNER, Salem, Oregon

If you're looking for the definitive book on *Heuchera* and \times *Heucherella* (hybrids between *Heuchera* and *Tiarella*), this is it. The 56 pages of color photos are a great help in identifying a heuchera in the garden, especially considering the plethora of new hybrids entering the market in recent years.

The material on history, discovery, and descriptions of the species are very informative. I devour reading on discovering plants in the wild—it makes me appreciate so much the material my nursery sells.

The section on hybridizing is required reading for the would-be hybridizer. The lengthy section on heuchera breeders is enjoyable, too. When I get a new hybrid, I like to know something about the person who had the joy of looking at a batch of seedlings and saying, "Wow, look at this one! It's a winner!" As a fellow hybridizer, I appreciate their excitement.

Almost 100 pages of cultivar descriptions will surely lead you to search out some new ones for your partly shady rock garden. These plants do have a few enemies, though—bugs that like to eat them. This book tells how to get rid of them all. And if you need a source of plants or seeds, there's a list of suggestions in the back of the book.

The Jade Garden: New and Notable Plants from Asia, by Peter Wharton, Brent Hine, and Douglas Justice. Portland: Timber Press, 2005. ISBN 0-88192-705-8. 228 pp., 149 color photos. Hardback, \$34.95. Available from NARGS Book Service.

Reviewed by JANE MCGARY, Estacada, Oregon

The gardens of North America and Europe are now welcoming the third great wave of plant introductions from East Asia. Despite the ravages that human activities have inflicted on some regions there, it seems that any plant-hunter who enters the mountains of China (to say nothing of Central Asia, Bhutan, or Myanmar) finds new ornamental species. *The Jade Garden* is most welcome at

this time, for it not only sorts out some of the new introductions that are circulating under tentative identifications, but also provides solid information on their habitats.

This collaborative volume begins with Peter Wharton's chapter, "The Natural Landscapes of China and Bordering Regions—A Botanist's View." Wharton relates the specifics of East Asian plant geography to many important ecological principles, giving information on how the landscape is endangered and what steps are being taken to preserve important biomes.

Interestingly, the second chapter, by Douglas Justice, is "The Issue of Invasiveness." Few books on new plant introductions square up to the issue so directly, yet the continuing ability of gardeners to acquire new material depends on doing just that. Justice remarks, "As authors of this book, we have tempered considerably our selection of the plants discussed here, to avoid recommending plants that are generally and obviously prone to invasiveness." He admits, however, that a plant dangerous in one region of North America may be relatively benign in another, less hospitable climate.

The remainder of the book is divided into lists of perennials (by Brent Hine), shrubs (by Wharton), and trees (by Justice). Reports of the plants' behavior in cultivation reflects the authors' experiences at the University of British Columbia Botanical Garden in Vancouver, a marvelous group of specialized gardens in a nearly perfect growing climate (though rather wet in winter); it is adjacent to a sheltered inlet of the Pacific Ocean and is probably USDA Zone 8.

The plants suitable for a rock garden have been trialed in the UBCBG's E. H. Lohbrunner Alpine Garden, which occupies a large, sunny slope with some areas shaded by trees and shrubs. Some I noted: *Artemisia rutifolia*, from cold sagebrush steppe but rain-tolerant; *Dendranthema mongolicum*, a low pink daisy that looks much like the plant long grown under the name *Chrysanthemum weyrichii* (the genus *Chrysanthemum* has recently been much revised); *Ellisiophyllum pinnatum* (Scrophulariaceae), a "refined ground cover" for the woodland edge to full sun; several new *Epimedium* species; *Incarvillea compacta*, which has circulated among rock gardeners for a decade or more; and *Potentilla cuneata*, a high-alpine species that adapts well to lowland life.

The shrubs listed are mostly large in scale, but some of them are tremendously appealing. I added to my wish list *Cotoneaster splendens* with rounded, silver-edged leaves; *Lonicera crassifolia* with even more charming foliage and yellow flowers; *Rostrinucula dependens*, which somehow resembles a red-flowered *Garrya*; and *Stachyurus salicifolius*, which I hope might do better than the common *S. praecox* does here.

The plant descriptions are extensive and information-packed, including cultivation and propagation methods. Back matter includes biographical notes on earlier collectors of Asian plants such as Delavay and Fortune; metric conversion tables; a brief botanical glossary; and a useful bibliography.

This is a small but seriously useful addition to the plant-lover's library. It has been prepared carefully by authors who know both botany and practical gardening, and I recommend it highly.

NARGS National Awards 2005

Marcel Le Piniec Award: Ron Ratko



The Marcel Le Piniec Award is given to a person who as a nursery operator, propagator, or plant explorer is currently and actively engaged in extending and enriching the plant material available to American rock gardeners. This year the award was given, with resounding applause, to Ron Ratko of Prunedale, California.

Since the early 1990s, the catalog of Ron's solely operated company, Northwest Native Seeds, has been a premier source of wild-collected seeds from the American West. The range of species is tremendous, and the list is supplemented by superb field notes on the habitats of the plants.

This makes the catalogs valuable reference tools in themselves, and those who receive them keep them permanently.

Ron's seeds are carefully stored from year to year and offered (with clear age identification) over several years. The quantity of seeds per packet is greater than most suppliers provide, and the germination rates, according to many satisfied customers, are remarkably high for wild-collected material.

Ron travels tens of thousands of miles every year in the course of his work, often camping in his truck, and hiking constantly over the mountains and deserts of the West. From time to time he concentrates on new areas in order to expand the coverage of the list. Thus he has introduced to the rock gardening world hundreds of species not previously cultivated.

Ron Ratko is a treasure within the international rock gardening community, and there are few among us who so strongly deserve this award.

—JANE MCGARY

Carlton R. Worth Award: Robert Nold



Few people have contributed more valuable books to the Rock Garden library in recent decades than Bob Nold. His gardening monographs on both columbines and penstemons have become instant classics, gathering together a great deal of botanical research and practical hands on experience. Bob is a voracious and careful reader of literature, noting many obscure facts and fascinating asides that he gathers into his books and articles, combining these with his wonderful verbal style to make his reference works equally good as bedside reading. How many monographs can you say you honestly enjoyed reading from cover

to cover? Try Bob's: I think you'll be surprised.

Unlike many monographers (who limit their hunting to footnotes and libraries), Bob has sought out his subjects in the wild and has grown hundreds of them in his exquisite private garden that he shares with his artist wife, Cindy, who in turn provides luminous botanical drawings for his books. The Nold garden is in a suburban neighborhood but would be just as appropriate in a mythical landscape out of *The Lord of the Rings* or Pre-Raphaelite England. The front is a truly wild garden, never watered in Colorado's dry climate and filled with unusual native trees, shrubs, and other treasures. Behind the house glorious borders run wild among sculptured archways and structures built by indefatigable Cindy, often carved with artwork and memorable words. Here roses bloom all summer long, and giant perennials intermingle with great gusto and beauty. The rock gardens and numerous troughs, however, are the centerpieces of one of the most eclectic and diverse collections of plants in the Rocky Mountain region. Bob is relentless in seeking out obscure seedlists and obtaining obscure and wonderful wild plants.

Over the years, Bob has contributed a wealth of articles to chapter newsletters, the *Rock Garden Quarterly*, and many regional publications in the Rocky Mountain region and nationally. His writing is erudite, readable, and often extremely irreverent and funny.

Rock gardening is blessed to have a gardener-writer-connoisseur of Bob's accomplishments. He had originally intended to concentrate his considerable talents on classical musical criticism, another of his loves. We are so fortunate that the allure of our glorious alpiners has waylaid him and lured him into our garden. Long may he wander there!

—PANAYOTI KELAIDIS

Award of Merit: Iza Goroff



The Award of Merit is given primarily for service to the North American Rock Gardening Society on several levels, from local to national. This year it has been bestowed on Iza Goroff of Whitewater, Wisconsin.

Iza Goroff has been a stalwart member of the NARGS and the Wisconsin-Illinois chapter for nearly 35 years, joining the chapter soon after it was founded in 1969. He has been a leader and firm supporter of its functions ever since. As chairperson of the chapter in 1973–1975, 1982, 1998, and 2005, he organized a varied slate of high-quality programs and tours which left the

members yearning to learn more about rock gardening. He has also presented programs himself in a professional and engaging manner, talking on rock garden construction, plant propagation, alpinism in their habitats, and American gardens of note. He has also taken his enthusiasm for alpine gardening to general garden clubs and civic organizations.

Iza is a director of the Rotary Gardens in Janesville, Wisconsin, where he manages the rock garden as one of his many volunteer projects. For a number of years he presented rock garden training for the area's Master Gardeners program.

On the national level, Iza served on the NARGS Board of Directors during 1982–1986 and 2002–2005. He regularly attends Winter Study Weekends and Annual Meetings. Committees on which he has served include Finance, Awards, Nominating, and Internet. The Plant of the Month feature on the NARGS website was his innovation, and he has faithfully contributed his own fine photos and plant descriptions to it each month since February 1997. Iza was one of the contributors to the Brooklyn Botanic Garden's *Handbook on Rock Gardening* and has authored several articles for the *Rock Garden Quarterly*.

Several ambitious rock gardens Iza has planned and constructed in Illinois and Wisconsin showcase the artistry possible in this type of gardening. These gardens were filled with a vast collection of choice plants from bog-lovers to rhododendrons to high alpinism, all grown to perfection.

In a recent message in his chapter newsletter, Iza stated, "This organization has been the most important in my life." He is equally important to the organization. He is also an extraordinarily kind, thoughtful, energetic individual who has had a positive impact on the lives and gardens of many members.

—ED GLOVER



NARGS COMING EVENTS

Eastern Winter Study Weekend: New York, NY, January 27-29, 2006. Hosted by the Manhattan Chapter of NARGS. Information: Jacques Mommens, PO Box 67, Millwood, NY 10546 / 914-762-2948 / nargs@advinc.com

Western Winter Study Weekend: Mary Winspear Centre, Sidney (near Victoria), BC, March 3-5, 2006. Hosted by Vancouver Island Rock & Alpine Garden Society. Information: garynwhite@pacificcoast.net; Claire Hughes, 2901 Colquitz Ave., Victoria, BC Canada V9A 2M2, 1-250-388-6594

International Interim Rock Garden Plant Conference and NARGS Annual Meeting: Snowbird Resort, Snowbird (near Salt Lake City), Utah, July 21-26, 2006. Sponsored by NARGS and hosted by the Wasatch Chapter. Information: Joyce Fingerut, 537 Taugwonk Rd., Stonington, CT 06378-1805, tel. 860-535-3067, alpinegarden@comcast.net

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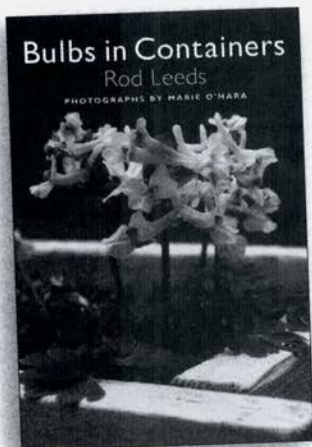
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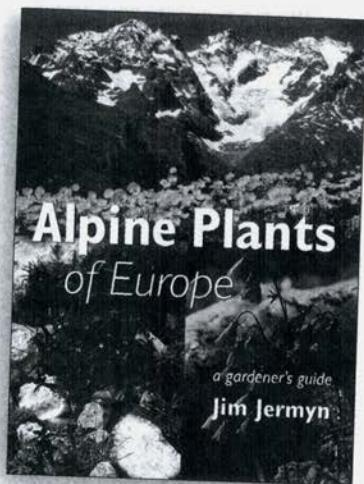
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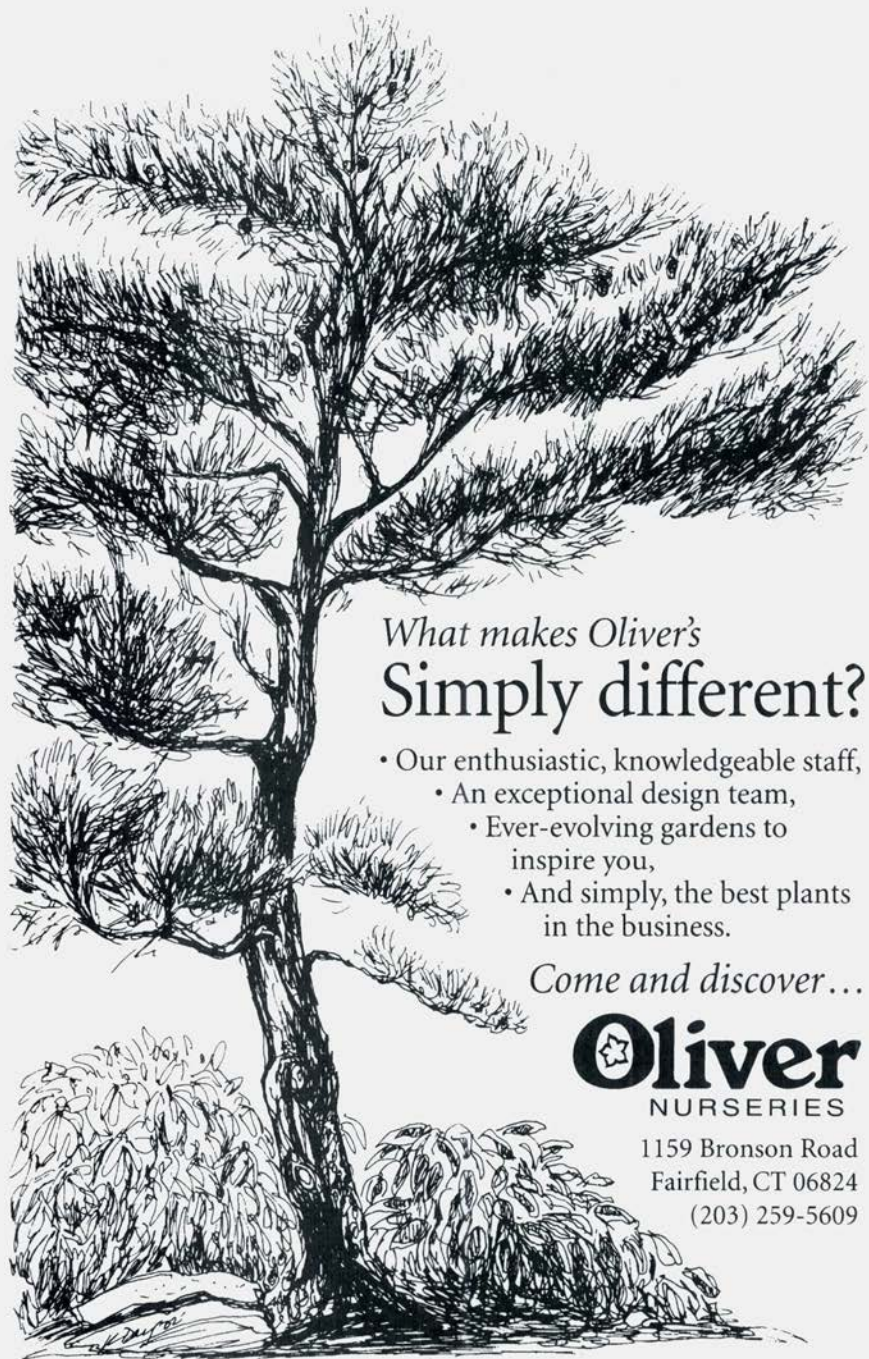
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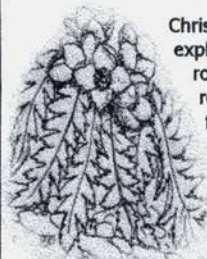
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Index

Volume 63 (2005), *Rock Garden Quarterly*

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pp. 1-80, Winter · pp. 81-160, Spring · pp. 161-240, Summer · pp. 241-320, Fall

Plants

- Achillea schurii*, 89
Acis longifolia, 244; *nicaeensis*, 244;
 tingitana, 244; *rosea*, 244;
 trichophylla, 244, **258**
Adonis vernalis, **29**
Agastache aurantiaca, 278; *cana*, 278;
 rupestris, 278; *wrightii*, 278
Allium aaseae, 248; *albidum*, 248;
 campanulatum, 248; *cratericola*, 248;
 crenulatum, 248; *falcifolium*, 248;
 flavum, 91, 248; *kurtzianum*, 248;
 membranaceum, 248; *moschatum*,
 248; *paniculatum*, 248; *perdulce*, 249;
 platycaule, 249; *robinsonii*, 249;
 scilloides, 249; *sibthorpiatum*, 249;
 simillimum, 248; *siskiyouense*, 248;
 sphaerocephalon, 36; *togasii*, 248;
 tolmiei, 248; *tuvinicum*, 248;
 zebdanense, 36
Andromeda polifolia, 4
Androsace albana, 116; *alpina*, **111**, 142;
 chaixii, 116; *chamaejasme*, 139;
 lactiflora, 116; *septentrionalis*, 116
Anemone altaica, 219; *amurensis*, 219;
 caerulea, 220; *jenisejensis*, 219;
 nemorosa, 219; *pseudo-altaica*, 219;
 quinquefolia, 219; *ranunculoides*, 219
Anthemis carpatica, 90
Aquilegia bertolonii, **186**, 218; *jonesii*,
 cover 63.3, 163, **178**; *transsilvanica*,
 90
Arctous alpina, 5, **17**
Artemisia petrosa, 90
Astragalus whitneyi, **cover 63.4**
Athrotaxis cupressoides, 11
Azorella trifurcata, 12, 87
Bellevalia forniculata, 245
Berberis empetrifolia, 12
Betula nana, 43
Brodiaea jolonensis, 248; *minor*, 248;
 terrestris, 248
Calandrinia, 13, 87
Calceolaria arachnoidea, 13; *biflora*, 87;
 cana, 13; *fothergillii*, 87; *lagunae-*
 blancae, 13, **22**; *polyrrhiza*, 13;
 uniflora, 87
Calluna vulgaris, 5
Calochortus amoenus, 248; *coxii*, 248;
 elegans, 248; *subalpinus*, 248
Calylophus hartwegii, 211; *serrulatus*,
 211
Campanula carpatica ssp. *bucegiensis*, 90;
 crasipes, 91; *piperi*, **32**; *serrata*, 89
Cardamine graeca, 91
Cassiope tetragona, 44
Castilleja coccinea, 122; *levisecta*, **111**,
 128; *propagation*, 128
Centaurea atropurpurea, 91
Centaureum chloodes, 117

- Chamaedaphne calyculata*, 4
Chionodoxa cretica, 245; *nana*, 245
 tmolii, 245
Claytonia caroliniana, 121
Clematis columbiana, 172, **180**;
 fremontii, 172, **181**; *hirsutissima*, 173,
 181
Colchicum alpinum, 249 *autumnale*, 16,
 24; *× agrippinum*, 16; *boissieri*, 249;
 byzantinum, 16; *cilicium*, 16;
 corsicum, 249; *cupanii*, 244;
 hungaricum, 244, **257**; *kesselringii*,
 244, **257**; *pusillum*, 249; *speciosum*, 16,
 24; *szovitsii*, **244**, **249**; 'Waterlily', 16
Convolvulus elegantissimus, 91
Corydalis henrikii, 245; *sempervirens*,
 120; *solida*, 36, **104**
Cremanthodium, 84; *reniforme*, **100**
Crocus banaticus, 34, 91, 250; *biflorus*,
 243; *boryi*, 250; *cancellatus*, 34;
 chrysanthus, 35, 243; *corsicus*, **25**, 35;
 etruscus, 35; *fleischeri*, 243;
 gargaricus, 243; *goulimy*, 34;
 hadriaticus, 34; *karduchorum*, 250;
 kotschyanus, 33, 249; *laevigatus*, 34,
 250; *leichtlinii*, 243, **257**; *longiflorus*,
 33, 250; *medius*, 33; *minimus*, **25**, 35,
 243; *niveus*, 34; *nudiflorus*, 33, 250;
 ochroleucus, 33, 250; *pestalozzae*,
 243; *pulchellus*, 33; *robertianus*, 243;
 sativus, 33; *sieberi*, 35; *speciosus*, 33;
 tommasinianus, 35; *tournefortii*, 34,
 250
Cyclamen cilicium, 16, 34; *coum*, 16, 34;
 hederifolium, 16, 34; *intaminatum*,
 250, **261**; *mirabile*, **24**, 34;
 purpurascens, 16, **25**, 56
Cystopteris fragilis, 44
Daphne laureola, 91
Delosperma floribunda, 212
Delphinium tricornis, 123
Dentaria glandulosa, 90
Dianthus callizonus, 90; *giganteus*, 91;
 glacialis ssp *gelidus*, 90, **106**;
 pinifolius, 91; *simonkaianus*, 91;
 spiculifolius, 90; *tenuifolius*, 90
Diapensia lapponica, 6, **18**, 138
Dicentra canadensis, 121
Disporopsis, **267**
Douglasia laevigata, 138; *montana*, 139
Draba dorneni, 91
Dysosma, 276
Empetrum eamesii, 6; *nigrum*, 5, **17**
Epilobium latifolium, 139; *siskiyouense*,
 188
Epimedium alpinum, **104**
Eranthis hyemalis, 34
Eriogonum jamesii, 211; *ovalifolium*,
 138; *umbellatum*, 211
Eritrichium nanum, **189**; ssp *jankae*, 90
Erythronium sibiricum, 85, **103**
Euphorbia myrsinites, 41
Fritillaria, 85; *albaryana*, 246; *ariana*,
 246, **259**; *armena*, 246; *aurea*, 246;
 biflora, 247; *carica*, 246; *collina*, 246;
 246, **259**; *falcata*, 247; *gibbosa*, 246;
 glauca, 246; *graeca*, 247; *kotschy*,
 246; *latifolia*, 246, **259**; *liliacea*, 247;
 minima, 246; *minuta*, 246; *pinardii*,
 246, **259**; *pudica*, 246; *purdyi*, 247;
 striata, 247; *tubiformis*, 246
Gagea fibrosa, 245, **258**
Galanthus reginae-olgae, 243
Gaultheria hispidula, 5
Gaylussacia dumosa, 5
Gentiana, 139; *divisa*, **189**
Goodyera pubescens, 121
Gypsophila repens, 209
Hebe epacridea, 12; *lycopodioides*, 12;
 pinguifolia, 12
Helichrysum milfordiae, 11, 138
Helleborus × ballardii, **109**, 113; *×*
 ericsmithii, **107**, 113; *× hybridus*, 92,
 108; *× nigercors*, 96, **109**; *× sternii*, 95,
 107; *thibetanus*, **109**, 113–114
Hepatica propagation, 175;
 transsilvanica, 91
Heuchera villosa, 121
Hieracium, 90
Hirpicium armerioides, 212
Hyacinthella acutiloba, 244; *atchleyi*,
 244; *dalmatica*, 244, **258**; *lazulina* 244;
 nervosa, 244
Hypericum densiflorum, 122
Hypopitys monotropa, 6
Iberis, 210
Impatiens pallida, 122
Iris histrioides, 85; *hyrcana*, 85;
 kuschakewiczii, 246; *latifolia*, **100**;
 reichenbachii, 91; *setosa* ssp
 canadensis, **27**, 58; *verna*, **110**, 120;

- stenophylla, 246, **258**; winogradowii, 85
Kalmia angustifolia, 4; *polifolia*, 4
Leontopodium alpinum, 91
Leucogenes grandiceps, **30**
Leucojum autumnale, 33
Lewisia, 85, 140
Lilium superbum, 123
Lithospermum carolinense, **186**, 221; *multiflorum*, **186**, 221
Loasa nana, 13, **21**
Loiseleuria procumbens, 5, **18**, 138
Lomatium minus, **185**, 222
Lupinus arboreus, 208
Lychnis alpina, **22**; *nivalis*, 89
Lycopodium obscurum, 121
Meconopsis integrifolia, 84, **100**; *pseudointegrifolia*, 84; *punicea*, 84, **100**
Mentzelia decapetala, 117; *nuda*, 118
Merendera, 249; *pyrenaica*, 249
Michauxia tchihatchewii, **112**, 118
Minuartia capillacea, 91; *frutescens*, 91
Monarda menthaefolia, 278; *pectinata*, 278
Monardella arizonica, 278; *lanceolata*, **268**, 278; *macrantha*, **268**, 279; *odoratissima*, 278
Moneses uniflora, 6
Monotropa uniflora, 6
Muscari pallens, 245
Myosotis alpestris ssp *pygmaea*, **106**
Narcissus bulbocodium, 247; *calicicola*, 247, **260**; *cantabricus*, 213, 247; *hedraeanthus*, 247, **260**; *humilis*, 250; *romieuxii*, 213, 247; *rupicola*, 247, **260**; *scaberulus*, 247; *serotinus*, 250; *watieri*, 247, **260**
Nassauvia argyrophylla, 12, **22**
Oenothera triloba, 117
Olsynium biflorum, 87
Opuntia cymochila, 41; *humifusa*, 41; *macrorhiza*, 41; *phaeacantha*, 41
Orchis spectabilis, **110**, 122
Oreopolus glacialis, 13
Ornithogalum fimbriatum, 245
Orobanche uniflora, **110**, 122
Orthilia secunda, 6
Ourisia, 13
Oxalis adenophylla, 13, 87, 249; *enneaphylla*, 87, 249; *erythrorhiza*, 13, **22**; *laciniata*, 87, **101**, 249; *magellanica*, 12; *obtusata*, 249; *montana*, 121
Oxytropis pyrenaica, 91
Papaver pyrenaicum, 89, 91
Parahebe decora, 212; *lyallii*, 12
Paraquilegia anemonoides, 139
Paris polyphylla, **267**
Paronychia cephalotes, 91
Pedicularis baumgartenii, 91; *verticillata*, 89
Penstemon acuminatus, 209
Petrophytum caespitosum, 291, **271**; *cinerascens*, 291, **271**; *hendersonii*, 291
Phacelia sericea, 139
Phuopsis stylosa, 117
Physaria alpina, **188**
Phyteuma vagneri, 89
Pinguicula vulgaris, 89
Plantago gentianoides, 90
Podocarpus nivalis, 11
Potentilla 'Rex Murfitt', 41; *tridentata*, 44
Primula auricula, 91; *Auriculastrum* sec., 86; *baumgarteniana*, 90; *bhutanica*, 84; *calderiana*, 84; *cortusoides*, **263**, 274; *Cortusoides* sec., 274; *Crystallophlomis* sec., 86; *denticulata*, **98**; *ioessa*, **98**; *kisoana*, **263**, 275; *luteola*, **97**; *polyneura*, 275; *rosea*, 139; *saxatilis*, **263**, 275; *sieboldii*, **264-5**, 275; *sonchifolia*, 84, **99**; *strumosa*, 84, **99**
Pulmonaria filarszkayana, 90; *rubra*, 90
Pulsatilla, 86; 'Papageno', **187**
Puschkinia, 245
Pyrola americana, 6; *chlorantha*, 6; *elliptica*, 6; *minor*, 6
Ramonda myconi, 86; *nathaliae*, **102**
Ranunculus adoneus, **187**; *carpaticus*, 90; *crenatus*, 90; *glacialis*, 90; *semiverticillatus*, 13
Rhododendron adenogynum, 84; *aureum*, 85; *calendulaceum*, 120; *canadense*, 3; *catawbiense*, 120; *caucasicum*, 85; *groenlandicum*, 4; *kotschyi*, 90, **106**; *lapponicum*, 85; *maximum*, 122; *minus*, 122; *palustre*, 44; *prunum*, 85; *proteoides*, 85; *repens*, 85; sec. *Taliensia*, 84; *vaseyi*, 122
Rhodohypoxis baurii, 12, 212, 249

- Romulea bulbocodium, 243; nivalis, 243
 Salix arctica, 9; calcicola, 9; candida, 9;
 glauca, **19**, 43; herbacea, **8**, **21**; jejuna,
 8, **20**; reticulata, **8**, **19**; uva-ursi, **9**, **20**;
 vestita, **8**, **19**
 Salvia apiana, 279; clevelandii, **268**, 279;
 munzii, 279; sonomensis, 279; vaseyi,
 268, 279
 Sambucus racemosa, 208
 Saxifraga, 86–87; aizoides, **23**, 37;
 bryoides, 89; caespitosa, 38, 44;
 carpatica, 89; catalaunica, **272**, 293;
 cernua, **23**, 38; corymbosa, 89, **105**;
 federici-augusti, **105**; foliolosa, 38;
 juniperifolia, **97**; michauxii, 122;
 mutata, 90; nivalis, 39, 44;
 oppositifolia, **19**, 37; paniculata, **23**,
 38; pedemontana, 90, **105**; rivularis,
 38; stellaris, 38; tricuspidata, 39, 44
 Scilla lingulata, 250, **261**; rosenii, 85
 Scutellaria suffrutescens, 210
 Sedum caeruleum, 117; pilosum, 117
 Sempervivum montanum, 90
 Silene dinarica, 90; stellata, 122
 Sisyrinchium bellum, 210; macounii, 210
 Soldanella hungarica, 89; pusilla, 90
 Sternbergia colchiciflora, 249;
 greuteriana, 249, **261**
 Streptopus roseus, 122
 Symphytum cordatum, 90
 Tecophilaea cyanocrocus, 214, 245
 Telesonix jamesii, 139
 Thelypteris novaeboracensis, 120
 Tipularia discolor, 121
 Townsendia condensata, 56, **cover 63.1**;
 parryi, 117; rothrockii, **101**
 Trichostema lanatum, 279; parishii, 279
 Tricyrtis, **266**, 277
 Trillium erectum, 120; pusillum, 290,
 265; rugelii, 122; undulatum, **110**
 Tristagma nivale, 87
 Tritoleia crocea, 248; dudleyi, 248;
 ixioides, 248; lemmoniae, 248
 Trollius europaeus, **30**
 Tropaeolum brachyceras, 249;
 hookerianum, 249; tricolor, 249
 Tulipa hungarica, 91; kolpakowskiana,
 36; tarda, 36
 Vaccinium vitis-idaea, 4, **18**;
 macrocarpon, 5; oxycoccus, 5, **17**;
 uliginosum, 5
 Veronica baumgartenii, 89; crassifolia, 91
 Viola biflora, 89; dacica, 90; declinata, 90;
 delphinantha, 205; fluehmannii, 13;
 hastata, 120; jooi, 91; pedata, 41
 Woodsia alpina, 44
 Wulfenia carinthiaca, 139
 Ypsilandra thibetica, **267**
 Zephyranthes candida, 211

General Subjects

- Aging and gardens, 203, 208
 Betty Ford Alpine Garden, **192**
 Blue Ridge Parkway, 119
 Boulders, splitting, **27**, 50
 Bulbs, 15, 242
 California coast, 208
 Canning, Scott, 46
 Charles University Botanical Garden, 283
 Chinese plant material, 276
 Construction, 136
 Cottrell garden, **29**
 Czech Republic, 280
 Ericaceous plants, 3
 Extinction, 214
 Eyzaguirre, M. Teresa, 214
 Garcia de la Huerta, Rosario, 214
 Goroff, Iza, 302
 Greenland, 43
 Grodan, 140
 Halada garden, 285
 Hale gardens, **182–184**
 History of rock gardening, 53
 Holubec, Vojtěch, 282
 Irish Hunger Memorial, 256
 Labrador, 7, 37
 Linzmajer garden, 284
 Mapping, 163
 Modeling, computer, 163
 Monocarpic plants, 116
 NARGS Awards, 300
 Nelson-Nold, Cindy, 202
 Newfoundland, 3, 7, 11, 15, 37
 New York City, 251, 255
 Nold, Robert, 301
 Nova Scotia, 40
 Peat soils, 135
 Pisgah National Forest, 122
 Raised beds, 197
 Ratko, Ron, 300
 Redfield, Dick, 68

Restoration of species, 128
Rock Garden Club of Prague, 281
Romania, 89
Seed sowing, 124, 175
Slug control, 216
Smoke and germination, 124, 215
Soilless media, 140
Stufano, Marco, 46
Teardrop Park, 255
Tromsø, Arctic-Alpine Botanic Garden, 83
Troughs, 242, 251
Truro Botanic Garden, 28, 40
Urban rock gardening, 251, 255
Wave Hill, 26, 46

Contributors

Agback, Hubert, 145
Allison, Lis, 295
Arakawa, Yoko, 31, 188
Balistrieri, Carlo, 144
Blackman, Hewett, 140
Blom, Walter, 213
Boland, Todd, 3, 37, 43, 58
Bush, Gene E., 290
Chapman, Diana, 63
Charlesworth, Geoffrey, 203
Chisu, Razvan, 89
Clark, Rhomas, 119
Clarkson, Melody, 224
Clase, Howard, 15
Firak, Gerald R., 56
Galletti, Maria, 7
Gourley, Irma M., 208
Grimshaw, John, 60
Hale, David, 197
Harvey, Tanya, 188
Haugli, Finn, 83
Horwitz, Lola Lloyd, 46, 255
Huling, Dianne, 192, 296, back covers
63.2, 63.3
Jackson, Bernard S., 40
Jones, James, 215, 221
Jouseau, Marcel, 163
Kaye, Thomas N., 128
Kindlund, Hannelotte, 219
King, William H., 227
Klise, Nicholas, 53
Langfeld, Joachim, 175
Larsen, Bodil, 11
Lawrence, Beth A., 128

Lunn, Jay, 189
Lupp, Rick, 56
Magowan, Robin, 287
McClements, Jim, 109, 276
McGary, Jane, 222, 242
Metcalf, Jim and Audrey, 92
Murfitt, Rex, 291
Nelson-Nold, Cindy, covers of vol. 63
Nicholls, Graham, 172
Nold, Bob, 216
Peden, Michael, 135
Redfield, Dick, 29, 32
Sellars, David, 30, 50, 142, 218
Stuart, Tom, 226
Taaffe, Gerald, 116, 274
Taggart, Doris, 30, 189
Tyler, Dick and Judith Knott, 113
Wagner, Wally, 298
Wajgert, Stefania, 187
Walker, Sally, 278
Ward, Bobby J., 119, 280
Weigel, Richard A., 62
Whittemore, Ev, 112
Young, Adrian, 293
Young, Michael K., 124
Zabar, Abbie, 251

Book Reviews

Adams, *Art of Garden Photography*, 296
Aeschimann et al., *Flora Alpina*, 145
Flanagan & Kirkham, *Plants from the Edge
of the World*, 147
Goldblatt, Manning & Dunlop, *Crocasmia
and Chasmanthe*, 147
Halda, *Genus Paeonia*, 60
Harlow & Jakob, *Wild Lilies, Irises and
Grasses*, 63
Heims & Ware, *Heucheras and Heucherellas*,
298
Leopold, *Native Plants of the Northeast*, 295
Moran, *Natural History of Ferns*, 226
Morrison, *Magic of Montana Native Plants*,
227
Murfitt, *Creating and Planting Alpine
Gardens*, 224
Schenk, *Gardening on Pavement*, 144
States, *Wildflowers of Wyoming*, 62
Turner, *Design in the Plant Collector's
Garden*, 228
Wharton, Hine & Justice, *Jade Garden*, 298

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