

The Bulb Garden

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~ Gardening with Bulbs ~
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Gone But Not Forgotten

Jane McGary is the Membership Coordinator of PBS, and one of its first members. She edited and contributed to *Bulbs of North America*, and edited the *NARGS* journal for ten years. She has a garden of about one-half acre in a suburb of Portland, Oregon, including an 800-square-foot unheated bulb house.

“A real plantsman is someone who has a lot of labels without the plants,” an old friend told me. He had a lot of labels, and now I do too. I began collecting and growing plant species, especially bulbs and alpiners, in the late 1980s. The 1990s were a wonderful time to build collections: seed flowed freely from continent to continent, and collectors ranged through much of the Northern Hemisphere. As eastern Europe shook free of the Soviet yoke, gardeners and botanists from the Czech Republic and other nations sought dollars by venturing into the Caucasus and Central Asia. Jim and Jenny Archibald and their associates went almost everywhere. Ron Ratko lived half the year in his pickup truck, harvesting seed around the American west. I began to travel more and brought home seeds.

Treasures germinated, grew, and flowered — and eventually disappeared. Some could be replaced, and some never appeared in a seed list again. In 2011 I moved to my present home, and quite a few bulbs failed to survive the transition, either from being out of the ground too long waiting for the bulb house to be completed, or from unsuspected groundwater accumulation under a corner of its planting beds.

Fortunately, I had shared many plants through a small annual surplus sale and by splitting the collection with Mark Akimoff of Illahe Rare Bulbs at the time I moved. Some good ones have come back to me from fellow growers, yet I still feel a pang when I scroll through my bulb database and notice some special names.

My first home in Oregon was in the Cascade foothills at about 1600 feet/500 m elevation. Summers were cooler than in the Portland area where I now live, and winters wetter and colder. Most of my bulbs grew in plunged pots in an extensive range of cold frames, protected with microfoam row cover during the severe cold snaps that occur about every four years. They were

growing “hard” by many gardeners’ standards, and it was good for many of them, especially the sub-alpine and alpine species discussed below. Their embossed aluminum labels were hard to read, but utterly permanent, and I have a file of them waiting for their next assignment.

Coming to the Pacific Northwest after 12 years in interior Alaska, I wanted flowers every day of the year, and the

genus *Crocus* was my first enthusiasm. In the frames they had to be protected from field mice, but I lost very few otherwise. The gem of the collection was *Crocus moabiticus* from Israel, a relative of saffron. It set seed a few times and I shared it with two specialists, who I hope still



Crocus moabiticus. All photos by Jane McGary.

Gone cont'd

have it. *Crocus kerndorffianum* flowered lavishly once, then disappeared, but I think I have a seedling. High-elevation species are difficult for me, and I miss *Crocus aerioides* particularly. I've never managed to keep *Crocus pelistericus*, even by keeping it out of the summer-dry conditions of the collection, cool and slightly moist.

Not all the late lamented are visually spectacular. *Acis rosea* is a small plant with pretty pink flowers. *Brimeura fastigiata* is much smaller than the commonly grown *B. amethystina*; native to western Mediterranean islands, it may not be quite cold-hardy. Pale little *Sternbergia colchiciflora* has never survived a single flowering.

Two subspecies of beautiful, tiny, early-flowering *Iris stenophylla* reached the Portland bulb house but failed within a year or two; it is a Turkish snowmelt plant. Bulbs from snowmelt meadows are enigmatic: some, such as *Puschkinia*, or *Crocus sieberi*, are so adaptable that the Dutch sell them by the millions, while others (*Galanthus polyphyllus*, *Bellevalia fornicula-*



Top: *Iris stenophylla*. Middle: *Colchicum kesselringii*. Below: *Nomocharis aperta*.



ta) struggle in temperate lowlands. One that flourished in the foothills but disappeared here is *Colchicum kesselringii*, and its close relative *Colchicum luteum* has never germinated for me. They appear to do well in more northern gardens. *Calochortus subalpinus* is common on mountains an hour's drive from my home, but I can't grow it. We have similar problems with *Erythronium grandiflorum* and *E. montanum*, so common higher up. I don't know the range of *Erythronium helenae*, but its fragrant flowers no longer appear here. Another genus that did well at a higher elevation but failed near sea level was *Nomocharis*. The best performer was *N. aperta*, which is said to be the easiest to grow.

Bad management after the move deprived me of some favorites. A number of *Fritillaria* species rotted when groundwater pooled under their corner of the bulb house, including prized *Fritillaria affinis* 'Wayne Roderick'. I'm not sure *F. pluriflora* is still alive. *F. liliacea* succumbed, and I think *F. purdyi* too. Two lovely species in the Rhinopetalum section, *F. gibbosa* and *F. ariana*, may simply have

died of old age. Frits of that group mostly do not increase by offsets, but some show great longevity – *F. stanthera* individuals grown from seed in 1990 are still vigorous. Then there are frits whose cause of death is mysterious, and of course they were favorites, such as two forms of *F. tubiformis*.

Growing *Calochortus* in the Pacific North-

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Globba cont'dAbove: *Fritillaria Ariana*. Below: *Calochortus tiburonensis*.

west is regarded by some as a quixotic pursuit, but I started at it in the early 1990s with seed collections of Jim and Georgie Robinett. The Archibalds and Ron Ratko contributed many species. I lost Ron's *C. umpquaensis*, but five plants of *C. coxii* are still flowering every year. A grower in the Bay Area gave me seed of *C. tiburonensis*, but after two flowerings it disappeared. For no obvious reason, *C. longebarbatus*, native just across the Columbia River, has vanished, but I think it was overwhelmed by a nearby clump of irises. The simple but lovely *C. invenustus* hasn't appeared for two years now, but it may be one of the dozens of dormant bulbs I lifted and replanted this past summer. After one spectacular year I bade farewell to *C. kennedyi*, but much later a friend gave me seed he had kept frozen for a decade or more, it germinated and grew, and has now flowered for two years — this spring with a tall stem of half a dozen blossoms.

You can lose plants in many ways. The beautiful *Asphodelus acaulis* almost died in the direct-planted sand bed. When I lifted the sick-looking clump, thousands of tiny ants boiled out. They had removed the soil around its roots. I salvaged half a dozen crowns, planting three back and potting the other three. Only the crown planted at the moist end of the sand bed did well, but the potted ones, given regular water, thrived and were shared. A few *Corydalis* species, planted before we had Henrik Zetterlund's useful book, were misunderstood and given a

Above: *Asphodelus acaulis*. Below: *Lilium kelloggii*.

summer-dry site.

At one time I tried a number of the Pacific Coast lilies, such as *Lilium kelloggii*. They succumbed to the same pest that damages their populations in the wild: deer. I hope to try some of them again in my present urban setting, even though deer from a nearby watershed preserve raid our gardens occasionally.

Gone cont'd

Not many gardeners can keep every plant they acquire. Some helpful strategies I've learned through experience are these:

Grow as many individual clones as possible from seed; some will be more adaptable than others.

Live with your site, outdoors or sheltered, for a while to understand its microclimate and moisture regime, before entrusting delicate subjects to it.

Visit as many natural habitats as possible; you need not imitate the soil, but understand the moisture and temperature patterns.

Preserve surplus seed in sealed glass containers in the freezer.

Share your plants, especially with people you consider to be better growers than you are. You may need them back someday.

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Above: *Fritillaria tubiformis*. Below: *Fritillaria kotschyana*.



PBS BOARD ANNOUNCEMENT

BOARD MEMBERS WANTED: SECRETARY and VICE PRESIDENT positions available. Qualifications: An indecent interest in plants and good spelling, ability to take notes and read them later, an interest in supporting a non-profit bulb-crazy organization and in helping it grow. You need to be a PBS member but don't need to be a citizen of any particular country to apply. If you're in a time zone light years from Pacific Time in the U.S., just be aware you may be joining us at midnight your time or who knows? We adjust our schedule to accommodate various time zones as best we can so don't let that minor detail stop you from applying!

The PBS board meets a minimum (but not much more) of four times a year on a quarterly basis. These positions are currently empty due to resignation, and appointment would be to fill out the length of the two-year term. Both positions are executive board positions that include voting on PBS actions and policies. Meetings are held on Zoom so an internet connection, a computer with microphone and speakers is needed. Zoom meetings are usually on Sunday at a time convenient for both USA and European board members, but can be adjusted for other countries if needed. A summary of the minutes appears in the *Bulb Garden* newsletter when space allows.

REQUIREMENTS: Secretary. You will need to record the proceedings of each board meeting, although to assist you we can and sometimes do have Zoom record the meeting. But sitting through a boring (mostly) meeting on rerun can be tedious so good written minutes are best... The minutes are sent to board members before each board meeting and your attendance is required at each meeting, but only if you're awake. **Vice-president.** Learn on the job. Lead meetings when president is not available.

CONTACT: Any board member for details. See email addresses on page 2.

WAIT! Wait...if you're about to move, don't —

until you send us your new mailing address and your new email address, if changed. **AND DON'T FORGET** to change your PayPal address. Without new addresses, your *Bulb Garden* won't arrive and worst of all, **NEITHER** will your seed and bulb orders. **Plus your account may show you owe money for an exchange when you don't!**

Hand Pollination of *Costus spectabilis* - a Success Story and a Mystery Solved

Bern Mlynczak took early retirement from NASA and currently resides in Williamsburg, Virginia. He lives in USDA Zone 7b, in a humid subtropical climate and grows most plants in containers, among them a number of geophytic species such as *Euphorbia*, *Griffinia*, *Amorphophallus*, *Psuedohydrosme*, *Drimia*, etc. He has recently become enthused about tuberous species *Begonias*, and adds that most winter-growing plants don't do well there, although he manages to keep a few growing on a south-facing windowsill while most others are dormant. He hopes to relocate to a more auspicious climate!

Costus spectabilis (*Costaceae*) is a rhizomatous geophyte native to much of tropical Africa where it grows on the forest floors. This plant thrives during the hot, humid summers on the coastal plain of Virginia, where I live. My USDA growing zone is 7b, and the climate zone is humid subtropical. This *costus* does best in bright shade or dappled sunlight. Attempts to acclimate it to direct sunlight have been futile; the plant quickly exhibits distress and scorch. It is winter-dormant here for six months, when it stays inside the house above 60° F (16° C). I monitor the soil in the pots during this time with a moisture meter to make sure that it does not thoroughly

Photo 1 below: Note many flower buds forming below flower. Photo 2 right: Note labellum and red leaf margins.



dry out. In general, my plants receive little or no water during dormancy.

Costus spectabilis produces beautiful yellow flowers and large paddle-shaped leaves (photos 1, 2, & 3). The corolla is closed by a long, narrow labellum (photos 1, 2 & 3). According to Maas et al., (2016:284) only one of the c. 80 species of African *Costus* can self-pollinate, this being *Costus dubius*. Although *C. spectabilis* apparently cannot self-pollinate, I have found that it can be successfully hand-pollinated. I have never observed any pollinators on, inside, or near the flowers of my plants. In the late spring 2021, I decided to hand-pollinate the

flowers when they began to open. I again followed the procedure described below for the 2022 flowering season. The rest of this article details my adventures and results.

I posted a request for information about obtaining this plant to the PBS list in February 2019. PBS member Robert Brockson offered me three rhizomes ranging from 1 ½ to 2 ¼ inches (3.8 to 5.7 cm) long, which I gratefully accepted. Importantly, these three rhizomes were offsets from one rhizome of a single clone; all the plants described below are either these three original plants or further offsets from them. The plants grew well in 2019 and 2020, but did not flower. My plants currently reside in 1-gallon nursery pots.

Beginning in late spring 2021, the plants began to flower (photos 1, 2, & 3); flowering began at approximately the same time in late spring 2022. This clone is synanthous; that is, flowers and leaves are present at the same time.¹ I used the same procedure to hand-pollinate the plants in both years. Trying to describe the procedure and choosing the correct botanical nomenclature is a bit of a challenge, but here's my best effort.²

First, I moved the labellum out of the way to have a look at the reproductive parts. I had no prior knowledge of their anatomy, so I was surprised to see what Maas (2016:283) calls a petaloid fertile stamen. Think of this structure as a single pollen



mass, without visible anthers or filaments, that is located high-up on the inside of a petal near where the labellum closes off the corolla. Firmly anchored to the top of this structure is a small, lobed stigma on a long, delicate style. I did not discern a distinct ovary. It appears to be situated such that all the

***Costus* cont'd**

pollen is located below it, and none can contact the surface of the stigma without the aid of a pollinator, thus preventing self-pollination.

First, using a #6 round blender paintbrush, I collected pollen from the base of the corolla



Photo 3 above: Growing in shade of shrubs. Photo 4 right: Fruits and seeds harvested in 2022. All photos by author.

whorl if it was present. I then gently removed the firmly attached stigma from the petaloid stamen with the paintbrush and hand-pollinated it. I then collected as much pollen as possible from the petaloid stamen and also applied it to the stigma. The pollen was moist and tacky. If two or more flowers were open, either on the same plant or on other plants, I liberally applied pollen from flowers on the same plant and then pollen from flowers on other plants to the stigmas. Thus, I hand-pollinated each open flower with its own pollen and also exchanged pollen between all of the flowers that were blooming. I tried to cover all of the bases. The paint brush was never cleaned between flowers. Rarely were more than two or three flowers blooming at once among all the plants. These flowers are very short-lived, usually not open for more than two days. All of the plants finished flowering within two to three weeks.

In 2021 approximately six to eight weeks

after hand-pollination, I noticed one plant with quite a few ants in the funnel-shaped whorl where the leaves originate from the rhizome. When I looked closer, I surmised that they were feeding on a fruit after it had dehisced its seeds. There were obviously a lot of black seeds scattered in the whorl as well, and happily these were not ants! I was very surprised that my hand-pollination technique had set seeds, and quite abundantly. Over about a week or two, I used a small metal measuring spoon to extract the remaining fruits on the plants when I deemed that they were ripe. Fruits that had not yet dehisced were very firmly attached at the base of the leaf whorl. The fruits were deep in the whorl, at soil level. Fruits contained between 10 and 47 seeds, with a mean seed count of 23 (photo 4). Everything was repeated



in 2022, including the presence of the ants at the time of dehiscence. I observed some of the ants feeding on the pulp of the fruit that was still attached to the seeds. The ants here were too small to carry the seeds away; in the plant's natural habitat, larger ants may help disperse the seeds. Maas et al. (2016:284) confirms my theory, stating that African *Costus* seeds contain an aril that

may attract ants and "thus distribute the seeds." Perhaps a more likely scenario for seed dispersal is that they are simply washed out of the depression of the leaf whorl by rain. I have never observed other types of insects or any kind of animals trying to feed on my *C. spectabilis*, whether leaves, flowers, fruits, or seeds, so perhaps in-

Costus cont'd

sects and animals do not play an important role in seed dispersal in the plant's native habitat.

In September 2021, I traded my crop of *C. spectabilis* seeds with PBS member Dylan Hannon for seeds of a different plant species. In July 2022, Dylan emailed me that the *C. spectabilis* seeds “germinated well and look just like the adult version. Wonderful!” This is positive proof that *C. spectabilis* can produce viable seeds from successful hand-pollination.

The origin of this particular *C. spectabilis* clone is a bit mysterious. In 2021, Dylan wrote that he suspected that the clone I had was the same as his and that it was brought into the country “originally from Gabon apparently, collected many years ago.” Recently in 2022, I was in contact with Robert, who sent me the original rhizomes. He had checked his paperwork and determined that his rhizome came from Dylan's collection in 2018. So the mystery of why the seedlings look so much like the adult version has been solved: they are the same clone.

All the *C. spectabilis* I have seen offered for sale to date in the USA from various sources on the internet have been rhizomes that appear to have been off-sets rather than having been grown from seed. Maas et al. state that typically *Costus* species are propagated by vegetative reproduction. In fact, I supplied a few *C. spectabilis* rhizomes to the PBS BX/SX 478 in October 2021.⁴ I hope that in future years this showy species will become more readily available now that it is known that viable seed can be obtained by hand-pollination.

In conclusion, *C. spectabilis* apparently cannot self-pollinate and set seeds without the aid of pollinators or manipulation by hand-pollination. I am grateful to Robert for my original rhizomes, and many thanks to Dylan for offering this plant to hobbyists and for reading and commenting on this article prior to publication. This was quite a pleasant learning experience, and as a result I am ready to repeat the process in the coming years.

Bibliography

Monograph of African Costaceae, Maas et al., *Blumea* vol. 61, no. 3, 2016, pp. 280-318(39).

¹I have one rhizome of a *hysteranthous* variety of *Costus spectabilis* that I purchased in 2019 from a commercial source in Europe. This plant flowers before the leaves are present. Overall it is a much smaller plant and the flower is much less showy than the clone discussed in this article. It was never in bloom at the same time as the plants described in this article and I have never attempted to hand-pollinate it or to cross-pollinate it with my synanthous clones. I have three rhizomes of *Costus macranthus* that I acquired in the autumn of 2021

that have never flowered.

²Maas et al. (2016:283) describe the flower structure as follows: “The flowers comprise a 3-lobed calyx, a corolla with three petals, a single petaloid labellum (formed from the fusion of five staminodes), one petaloid fertile stamen and a gynoeceium that contains an inferior 3-locular ovary. The style is thin and threadlike.”

³Dylan received his original rhizome in 2001 from a well-known plantsman, the late John Banta. Banta indicated then that this clone had been in cultivation for some time and had been shared by a number of growers in USA and UK after it was collected, probably in Gabon.

⁴Please refer to the PBS wiki on *Costus spectabilis* for a photograph posted by the Exchange Manager of the *Costus spectabilis* rhizomes I contributed to PBS BX/SX 478. <https://www.pacificbulbsociety.org/pbswiki/index.php/costus>

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Above: *Calochortus tolmei*. Below: *Tecophilea* sp., both grown from seed exchange. Photos: Jan Jeddelloh



Arisaema—A Beginner's Guide

Bridget Wosczyzna-Briddes is the Pacific Bulb Society Bulb Exchange Coordinator and is seriously hooked on Arisaemas of many species, not to mention bulbs in general! By day she is a paralegal but still has time to plant her new garden and play with her treasures. She is also a former small business owner. All photos by author.

Your intrepid BX Director here, who feels guilty she hasn't donated any of her *Arisaema* collection to the BX yet, except some seed. There's a reason: I moved a couple years ago and I have been building a garden from scratch (full sun), going over to my last garden (high, bright wonderful shade), and moving things over to my new, burgeoning garden. Therefore labels have been misplaced or lost. I worry I'd send out things misidentified. I planted most of my things



Arisaema sikokianum with distinctive pure white marshmallow spadix.

in the ground or pots, and have been trying to suss out who is who and do hope that in October next year I'll have some things to tempt each of you who has an interest, once I have things more organized.

In the meantime, PBS member Charles Hunter has donated an amazing array of seed to the SX. He's growing all sorts of species in the southern United States, where summers are long and humid and hot. He's making crosses and generally doing all the things I dream of doing and never get around to. I'm really happy he joined PBS so we all get to benefit from his experience. I garden in the mid-Atlantic and we, too, are hot and humid, but have a shorter growing season.

When you're thinking *Arisaema*, I'd caution you to really home in on your zone and growing

conditions. There are species that are native to high altitudes and really, REALLY dislike our warm and humid summers here in the eastern part of the U.S. They enjoy snow melt in spring and chilly temps at night in their native regions. They literally melt here for me. I have killed so many of them. I try and I try and ... they refuse to last more than a season for me. I'm referring to the highly desirable Indo/Himalayan species such as *A. griffithii* and such. Just as with bulbs from the southern hemisphere, it's important to research who will be amenable to growing where. There are some species, though, that I highly encourage everyone to try. Temperate zones can grow so many of the wonders from India, Japan and China.

If you're just starting an *Arisaema* collection my blanket statement here is: no water in winter. Except for a very few species (one being the American native *A. triphyllum*) *Arisaema* will likely rot in a moist winter spot. Siting correctly is key. If you garden somewhere with freeze and thaw and winter moisture, you will be best served by situating your plants on a slope or under conifer trees. This will help keep those corms dry through the winter and will nearly guarantee you'll see them return the following year. Many *Arisaema* are found growing right up through smaller shrubs as well – perhaps these shrubs offer a little protection and moisture deflection. Or it may simply be a matter of that's where the seed ended up germinating. I have placed many of my corms right up against larger shrubs to afford them a little protection from the worst afternoon sun in July and August.

Fallacy: All *Arisaema* require shade. Sure, lots of them will grow and flower in the shade, but I have been conducting (very unscientific) research and have found several of them thrive in my full sun garden. I had been playing around with this idea for a few years and I'm really pleased with the results so far. This will likely not work for our members in the southern part of the country as your sun is a bit more intense in summer, but for folks in the north and the northwest, please consider placing *A. consanguineum*, *fargesii*, *triphyllum*, *candidissimum* and *ovale* in a full sun situation after you've grown them in shade and have some with which to experiment. I don't grow anything in deep shade save *A. triphyllum* (as they are usually found in decidu-

Arisaema cont'd

ous forests, begin appearing in late winter and are in bright light until the tree canopy leafs out) and *A. ringens*, which really do need full shade to reach their true magnificence.

I have mentioned I'm testing things out with regard to sun tolerance, and I have found my plants will grow and thrive and produce seed, but they will

look a bit tatty in a full-sun situation by September. Plants are still healthy, etc., but are a bit beat up. I have also found the inflorescence goes over much more quickly than those in a shadier situation; but I am getting fertile seed from these plants.

Generally, the best growing conditions for *Arisaema* are in a morning sun situation. They absolutely love being planted where they get the sun from 7 or 8 a.m. until 11:30 a.m., then cool off in the shade for the balance of the day. This is prime real estate for me but I can't give all of my collection over to this area as I have a thousand other things that want the same conditions; that was what sparked my testing them out in more and more sun.

Easy species: there are so many nearly care-free species to add drama and mystery to your garden. My recommendations for beginners are *Arisaema candidissimum*, *fargesii*, *triphillum* (so many variations – they are like candy, and I want them all), *ringens*, *ovale*, *heterophyllum*, *amurense*, *saxatile*, *consanguineum* and *urashima*. Ah, I haven't mentioned the best, right? *Sikokianum* - THE one everyone covets. It's considered a choice species and retailers charge a lot for each corm. But they are super easy from seed. You only need two flowering plants to achieve pollination and then you are off to the races. They will produce prodigious amounts of seed; I have a friend in Virginia who has them by the dozen flowing from his woodland edge into his garden. He does nothing to cultivate them. They do

their own thing and he has little flags with marshmallow centers popping up everywhere. They are not a long-lived species but what they lack in longevity, they make up in vigor. This species does not offset so seed is the way to go for more plants. They come in a couple varieties: the variegated leaf form is most desirable.



Arisaema consanguineum 'Silver Center'

You'll only need a decent, well-draining garden soil for success. I don't find *Arisaemas* overly fussy about sweet or acidic soil. Soil should be amended to enrich it for nutrients when planting and they respond well to light summer fertilization as well. Depending on where you garden, you'll want to plant your corms between three and seven inches deep.

For colder areas, do go down to at least six inches. This will help prevent those early species from getting frosted when spring arrives. They will come up later and chances are better for survival.

As mentioned above, winter wet is the enemy for most species of *Arisaema*. To that end, I began lifting my corms many years ago. I have an entire process that I go through, but for the most part, they can be dug and allowed to dry. Be very careful not to slice through your corms when digging; always go out a little further than where you think is safe. Then remove any soil on the corm and store cool and dry for the winter. Cool is 50° F or less but not freezing. The species listed above can be stored in a refrigerator until spring after allowing them to cool for a few weeks. You can store them in paper bags with vermiculite to preserve humidity, in boxes (again I suggest vermiculite) but I don't recommend storing in closed plastic bags unless your corms are spotless and have been dipped in an anti-fungal solution and an additional dose of very diluted bleach (yes, bleach).* If you grow your *Arisaema* in pots, simply turn the pot on its side and store somewhere cool and

***Arisaema* cont'd**

dark. You can then begin watering when growth begins in spring. I plant my hardy stored arisaema out in early April as soon I can work the soil. They don't mind the temperature fluctuation but be cognizant of sudden freezes



overnight.

The earliest species are *Arisaema ringens* and *A. sikokianum*. You may have to throw some protection over them to protect them from frosts.

A cloche, a cardboard box, a blanket – anything in a pinch. My preferred method is usually a cloche or box with a towel or blanket atop for the night. *Arisaema* spp. *ovale*, *amurense* and *serratum*, follow behind. *Arisaema* spp. *urashima*, *heterophyllum*, *candidissimum*, *fargesii* and *saxatile* then come along. Be advised that if you grow *A. consanguineum*, it arrives late. I used to write on my labels “Do not disturb until mid-June.” It is extremely late to the party. Interestingly, in my experience, *A. sikokianum*



Upper left: *Arisaema ringens* ‘Black Mamba’. Lower left: *A. fargesii*. Above: fall color of *A. fargesii*.

is one of the first to arrive and the last to ripen its seed. I have harvested *A. sikokianum* seed in early December. That's a very long growing season.

Arisaema triphyllum seed is usually ready to harvest in late July or August, *A. saxatile* and *consanguineum* in October, along with the others in the Franchetiana group - *A. candidissimum*,

fargesii, and *franchetianum*.

For your ease of reference, I'm going to list my favorite attributes of these more readily-available species. Garden cultivated *Arisaema triphyllum* can reach towering heights compared to their counterparts in the wild. I have 20-year-old corms that reach over three feet in height each summer. *Arisaema heterophyllum* is a tall species with one leaf. It is colloquially known in Japan as the “dancing crane” as it does have the feel of a crane with its wings spread and is an imposing presence in the garden. *Arisaema* spp. *amurense* and *ovale* are nearly indistinguishable but differ in their leaf number and arrangement; the flowers are very similar and bloom around the same time. They are what I consider

***Arisaema* cont'd**

on the smaller side of the *Arisaema* family, topping out at about 12 to 16 inches and form colonies quickly. I'm always happy to see them flourish.

The Franchetiana group are impressive in their leaf size and spread, not to mention the hooded spathe and spadix for something really strange and wonderful in your garden. *Arisaema fargesii* has a trifoliate leaf which reaches impressive proportions as does *A. ringens*. They will offset really well and you'll have a colony in no time. As a bonus, *A. fargesii* has a lovely dun-colored leaf as it senesces.

Arisaema consanguineum have been hopelessly jumbled in my collection. They vary so greatly and are so promiscuous it's almost impossible for me to determine who is who while young. Mature plants are a little easier and show their tell-tale characteristics so identification is a little easier. I have plants that are 15 inches tall and specimens with corms that weight four pounds and are 5 to 6 feet in height. They are prolific increasers as well. Tough as nails, too.

Smell an *Arisaema* flower - they are so interesting. Many aroids are pollinated by flies and gnats. They will emit a foul odor to attract these insects. However, there are a couple *Arisaema* that merit a second sniff. *A. candidissimum* smells light, sweet and powdery, while *A. saxatile* smells like pineapple. I am forever enamored by sticking my nose to

see if it's trash-bin or fruit tree. So, I highly recommend everyone give them a try. There's an *Arisaema* for every garden.

*Ed.: The usual solution is 1:10, bleach to water

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Calochortus albus v. *rubellus*. Photo: Jan Jeddeloh.
Example of bulbs grown from seed donated to PBS
Exchange.

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