

Perennial Notes

The Newsletter of the Wisconsin Hardy Plant Society

September 10, 1997

What a lovely species is the gardener. Where in life do you meet people willing to share everything with you, to give away seeds, cuttings, or clumps of things in autumn? Mirabel Osler, *The Garden*, 1997.

COMING EVENTS

September 17, 1997, 7PM Olbrich Gardens, Upstairs Meeting Room. Gerry Kopf, Bald Eagle Nursery, Fulton, IL, will speak on "Hardy Ornamental Grasses for Midwestern Gardens". Gerry is a regional expert on this topic and maintains trial gardens for non-native grasses at his nursery and at 20 other sites as well. I recently received a copy of his handout--fabulous. 12 pages, his personal notes on 100 ornamental grasses tested in the Midwest, including 40 cultivars of *Miscanthus*, complete with an order blank for shipment next May. We will charge \$1 for this at the meeting.

September 20, 1997 Joint tour with the Hosta Society to the Dubuque Arboretum. This is a wonderful nearby regional arboretum with a good collection of garden conifers and the world's largest public collection of hosta species/cultivars. Choice of side trips will include Dennis Hermsen's fabulous conifer nursery and display garden in Farley, Iowa, another nearby nursery, Jim's Hostas with 350 newer and classic hosta varieties, and perhaps a stop at Timber Ridge Gardens (perennial nursery) in Elizabeth, Illinois (see November speaker, below) on the way home. We have also been invited to tour the garden of David and Barbara Leifker on a bluff high above the Mississippi River at Hazel Green. There will be something for everyone on this jaunt! To get everything in, we may need flashlights!

We will kickoff from Nakoma Plaza on Verona Road at 8:30 AM to car pool for the trek. Bring your lunch (arboretum has a nice place to picnic) or plan to eat at nearby Bishops Cafeteria. If you want to meet us at the arboretum at 10:30 AM on your own (i.e. you want to get home well before midnight):

Take Route 151 south to Dubuque
 Cross the Mississippi River on the new four lane bridge
 Take the first exit passing by the dog track
 Continue on 16th Street past the Packing Co. and cross the railroad tracks
 Turn right at 1st traffic light onto Elm St.
 Go 4 blocks to 20 St. Turn left and go 2 blocks
 Turn right onto Jackson St. Go to 32nd Street. Turn left and go 2-3 miles
 On top of a hill there will be a sign for the Arboretum which is on your right

October 22, 1997, 7PM, Olbrich Gardens, Upstairs Meeting Room. Annual business meeting and election of officers. Ed Hasselkus will present the basic details of our tour of the gardens of southern England in preparation for our June, 1998 tour. We'll also have a slide show on highlights of the gardener's year.

November 19, 1997, Olbrich Gardens, Upstairs Meeting Room. Mary Ann Leigh of Timber Ridge Gardens, Elizabeth, IL, (South of Shullsburg in SW Wisconsin) will speak on "New, Underused, and Unusual Perennials for the Garden in 1998". Some of you may have heard her wonderfully, exuberant talk at the Garden Expo this year.

February 1, 1998 11 AM, Atrium, Olbrich Gardens. Annual brunch with the hosta society. Our featured speaker will be Professor James Steakley, UW Professor of German. His topic will be "German Gardens--Their Reflection of German Culture".

February 18, 1998. Olbrich Gardens, Upstairs Meeting Room. To be announced.

March 18, 1998, Olbrich Gardens, Upstairs Meeting Room. "Gardening with Groundcovers", Cathy Freeland, Midwest Groundcovers, St. Charles, Illinois.

April 15, 1998. Olbrich Gardens, Upstairs Meeting Room. Members potpourri. A repeat of last year's popular format. Select members will be asked to present slides of exciting new plants in their gardens

Isn't it true that really innovative gardens are made by men? They push out frontiers. They are inspired and constructive as well as being more daring, outrageous, combative and pioneering than women who are often looking for something quite different; something far less confrontational. (Well, all right, A. Hort Hound admits this quote is taken a "little" out of context) Mirabel Osler, *The Garden*, 1997.

News from the Good Garden Gnomes

News Flash! The Gnomes report that after the appearance of Joan Sevrera's introductory chapter to her book in last month's issue of *Perennial Notes*, *Wisconsin Trails Magazine* wants to publish it! Hooray, Joan!! We wonder who the good garden fairy was? Nancy Mead, prairie gardener extraordinaire, and wife of the editor, doesn't yet belong to the WHPS.

An infamous Nakoma gardening threesome paid Greystone Perennials in Iowa County a visit on the afternoon of August 10th. Owners Bill and Linda Lehman were on hand to show them around the wonderful fields of day lilies, which is obviously Bill's first love in the plant world. He has an ongoing hybridization program and his precious beauties were awesome. After commenting on some wonderful rocks Bill had incorporated into some of his display gardens, Bill offered to show them the fabulous view from the southern boundary of his farm. After driving across several pastures, they arrived at the "edge", at which point Bill announced that the farm was famous locally for its rattlesnakes! He also cautioned them as they stepped out on a rocky ledge that the rattlesnakes returned to their dens on August 10th every year to molt and that they'd better watch where they place their feet. (Oh come on Bill, a

likely story!) The view from the ledge was indeed spectacular as a field of enormous boulders tumbled down to the valley floor below, reminiscent of the rock formations at Devil's Lake State Park. There was scarcely time to enjoy the view, however, as they discovered two 5 foot rattlesnakes, freshly molted and displaying skins of a brilliant patchwork of colors, literally coiled at their feet. Deciding against collecting any rocks that day, a hasty retreat was beat back to the car as Bill announced that the state's championship rattler was collected on that very spot several years ago, and released! Rattlesnake Bill also informed us that the snakes imprint on their dens for life and never stray more than 300 yards from them in any given season. But don't worry, the day lily fields are located more than 300 yards from the rocks!! And there is no extra charge for this excursion! Yes, Virginia, there are rattlesnakes in Wisconsin. (A more sinister snake is found in the nearby town of Highland-- the operator of the town's brand new police car. The monthly car payments must be pretty steep as 40 mph in a poorly marked 25 mph zone will set you back \$150--let the driver beware!).

The day long expedition by the WHPS to the Craig Bergman's Gardens, the Chiwaukee Prairie, and Mileager's was fun for everyone. The designer display gardens at Bergman's with their topnotch garden bones (read very expensive!) were gorgeous and everyone enjoyed the hundreds of monarch butterflies (reports say are at a 20 year high) flitting through the drifts of liatrus, helioptris and joe-pye weed on the prairie. A highlight was the lunch stop at Raddigan's on the Illinois-Wisconsin border near the entrance to the prairie. The GGG report that the gulasch soup was out of this world, and one table of WHPS diners had points deducted for indulging themselves with obscene desserts! A few wrong turns were made during the course of the day which added to the frivolity, unless of course, one, you were the driver, or two, the person who handed out the directions! Returning cars were observed to transport a collection of trendy heucheras, an unusually variegated euyonymous, a double rose of sharon (hardiness?), some unusual water plants, and a never seen before very compact and dwarf form of Kenilworth ivy (*Cymbalaria muralis* 'globosa'). The latter made the entire trip worth while for A. Hort Hound.

The GGG report that Walter and Jean Rideout received an unwelcomed present for their 50th wedding anniversary. No, no one registered *Hosta rideoutii* 'Aurea' (yet) with the registry maintained at the Minnesota Landscape Arboretum, but their treasured gigantic pair of coy were lifted from the decorative water feature in the garden that evening. Coons are the prime suspect, and many WHPS members had wondered how on earth they passed up these delectable fish (of the size all but one coon can only dream about) all these years. Please offer them your congratulations for their landmark anniversary, but your condolences for the loss of their aquatic friends.

The good garden gnomes recently contacted Darrell Probst, Hubbarston, MA about his reported interest in the genus *Tricyrtis*. His letter of response states that he is perhaps too interested. He grows every known species except *T. imeldae* and has sorted out much of the confusion of the species and cultivars. He states that he has stopped acquiring named Japanese cultivars because so many of them carry a floral virus causing dark blotching on the flowers--a disease easily transmitted and since "I have so many of my own superior hybrids, I don't want them to become contaminated!" He hopes to write a book on the genus after he returns from a trip to

Korea and Japan in October and November to collect seeds in the wild. Have any HPS members found the dreaded *Tricyrtis* virus amongst their plants?

The GGG report that the prairie garden at the Consolidated School near Milton is thriving thanks to the plants donated by the HPS. Teacher Jane Miller wishes to thank the HPS membership and provided color photographs of the kids in their beautiful garden!!

A recent visit to Viroqua by the GGG to visit the Jail House Perennial Border was a stellar horticultural experience. 400 feet long, 50 feet wide, on a southeastern facing 37° embankment, it is indeed of Jekyllian proportions. It has been created single handedly by Royce Jones over a three year period. For those of you not in the know, Royce was the creator of the Jones Arboretum and Garden Center on Highway 14 near Readstown, which has been passed on to new owners. Royce just needed something to do in his newly found spare time. Shelly Ryan--are you paying attention out there? This is the thing that episodes of the Wisconsin Gardener should be made of! Next time you pass through this charming town in the driftless area, you can find the jail behind the county court house on Court Street, of course.

WHPS Wish List

1. Needed--someone to help with graphics and lay-out for Perennial Notes. We know there are plenty of you out there in this computer crazy community!!
2. Wanted--someone with artistic talent to design a WHPS logo.
3. Wanted someone to store a 3 x 3 foot pile of assorted clay pots donated to the society for use in next year's plant sale. Someone with imagination could stack these to make a decorative winter garden feature, or use them as a unique garden path liner. They are in a warehouse at the moment and have to be moved!!

Call Frank Greer at 233-4686.

On entering a garden for the first time it's impossible not to mentally pigeonhole the type of gardener who owns it; a plantsperson, a groundskeeper, pedant, artist or an academic. Some gardens are sterile, they lack imagination; others are tentative, or visionary, while romance and profligacy spill about others so powerfully it takes your breath away.

Mirabel Osler, *The Garden*, 1997

The following is used with permission from the newsletter of the Shady Garden Special Interest Group of the HPS Mid Atlantic Group. Jim McClements is a retired obstetrician in Dover, Delaware, and a delightful plant nut to correspond with on the EMAIL--JimMcClem@aol.com. *Arisaema sikokianum* is hardy here in the Madison area and more of us should be growing it. And after reading about the tintillating sex life of *Arisaema triphyllum*, you'll never look at the jack-in-the-pulpit with same eye again. Jean Halverson of Dodgeville, the sister of WHPS member Lois Kinlen, is the local *Arisaema* guru. But you know, for some strange reason she does not belong to the WHPS??

ARISAEMAS--Jim McClements

A. General Description

The genus *Arisaema* belongs to the Aroid family, Araceae.

There are about 170 species in the world. Some of these are from tropical areas, and are of little interest to those of us who grow primarily hardy plants. Of those which are considered "hardy", the vast majority are from Asia, with only two or three species coming from North America.

The North American species consist of two found in the US and Canada. *A. triphyllum* (common Jack-in-the-Pulpit) and *A. dracontium* (sometimes called green dragon), although the former is split by some taxonomists into several species. There is also at least one species from Mexico, *A. macrospatum*, which is probably not hardy north of Zone 8.

The Asiatic species come from Japan, Taiwan, and mainland Asia including the Himalayan region, and tend to overlap in their distribution, particularly when it comes to those occurring in western China and the Himalayas.

Arisaemas grow from bulbous underground storage organs, derived from the stem, referred to as a bulb, corm or tuber, with the latter term being preferred. As in most members of Araceae, the form of the *Arisaema* "flower" is different from the average garden plant. The "flower", typified by the common "Jack-in-the-Pulpit", *A. triphyllum*, is more properly called an inflorescence. The actual flowers are tiny structures on the spadix, an extension of the stem which ends in the appendage, making up the "Jack". The spathe or "pulpit" is a modified leaf which encloses the spadix. Plants generally have one or two leaves, divided into up to twenty leaflets in several attractive patterns. Elongations, sometimes of considerable length, of the tip of either the appendage or the spathe, are frequent features, and in a few species the leaflets have an elongated tip as equally as attractive.

In the majority of *Arisaema* species the plants are dioecious, meaning that only the flowers of one sex exist on a given plant. The tiny male flowers, consisting only of stamens, or the female flowers, consisting of only an ovary and stigma, dot the base of the spadix, and are largely invisible in most species without peeking! The situation is further complicated by the fact that *Arisaemas* have the ability to change from one sex to another. All young plants start off as males, and only become females or bisexual when they are older and healthy enough to put out the energy to make seeds. This is probably related to the amount of starch stored in the tuber. A plant may also revert back to male if it is stressed in some way, to allow time for storing up of sufficient energy for "motherhood". The sex-changing ability of *Arisaemas* has been termed "sequential hermaphroditism", and the genus is often described as being "paradioecious".

B. Partial Listing of Species Likely to be Found in Gardens

1. North America

A. triphyllum (includes subspecies *triphyllum*, *pusillum stewardsonii*, *quinatum*)

A. draconium

2. Primarily Japanese (come up early in the)

A. heterophyllum

A. kiushianum

A. thunbergii ssp. *thunbergii*

A. thunbergii ssp. *urashima*

A. ringens

A. sikokianum

A. undulatifolium

A. limbatum

A. serratum

A. japonicum

4. Primarily Himalayan

A. costatum

A. concinnum

A. echinatum

A. galeatum

A. griffithii

A. intermedium

A. jacquemontii

A. nepenthoides

A. speciosum

A. tortuosum

A. verrucosum

3. Primarily Chinese

A. amurense

A. candidissimum

A. ciliatum

A. consanguineum

A. elephas

A. flavum

A. franchetianum

A. lobatum

5. Taiwanese species

A. taiwanense

A. formsanum

C. Taxonomy

What is desperately needed at this time is a comprehensive book on Arisaemas and the development of a taxonomic treatment that combines the species from different parts of the world into an intelligible key, eliminating the confusion, synonymy, and duplication that exists. Most of the species are native to Asia, and while the Japanese, Chinese, Nepalese and Taiwanese species have been written about and keyed out fairly extensively, the species overlap throughout Asia and the same plant may be found in two to three different countries, perhaps only one mountain range apart! A step in the right direction has been the almost universal acceptance of dividing the genus into 13 sections. We'll have to await further development along this line.

D. ARISAEMAS as Garden Plants

The evolution of Arisaemas into popular plants for woodland and shady rock gardens has occurred, at least in North America, largely in this decade. While many species of this genus were appreciated and cultivated by a select few here, as well as in Europe

and Japan, prior to the 90's, it has only been recently that large numbers of gardeners have become interested in them.

As one who has been perhaps slightly "ahead of the curve" in this regard, I can relate closely to this phenomenon. Prior to the late '80s, when I became a "serious" gardener, I considered "Jack-in-the-Pulpit" to be a somewhat weedy curiosity in the spectrum of native plants. It was when I first saw *Arisaema sikokianum* pictured in the "Fine Gardening" article by Judy Glattstein in 1989, and later in the "flesh" in Harold Epstein's garden, that I was thoroughly bitten by the bug and launched an effort to acquire and grow as many species of *Arisaema* as possible. I would bet that *A. sikokianum* has inspired many others to do the same.

Why all the new-found interest and popularity? While almost anyone will agree that *A. sikokianum* and *A. candidissimum* are spectacularly beautiful, most gardeners would consider the others to range from moderately attractive, through 'interesting', to downright ugly, although I would be hard-pressed to name one of the latter. Of course, I know people who consider some trillium not to be garden-worthy. There's no accounting for taste!

Perhaps the foremost reason for *Arisaemas* to suddenly one of the "in" genera is the upturn in woodland and shade gardening. More of us find ourselves living in shaded spots, particularly in areas with warm summers, and are looking for plants which will grow with little or no sun and still provide flowers and foliage of all different shapes and sizes, usually persisting into the fall months. Flowering occurs at different times in different species, with *A. sikokianum*, *A. ringens*, and other Japanese species coming on in early spring, followed by a sequence of bloom of the other species into early July. Woodland gardeners find this most helpful in keeping things interesting after the first flush of spring ephemerals has run its course.

A second factor is probably the increasing availability of these plants. Unlike the afore-mentioned trilliums, *Arisaemas* are easy to grow from seed, with the beauties *A. sikokianum* and *A. candidissimum* being among the easiest. Seeds need no cold period, and seed-to-flowering time can be compressed by using "artificial winters", thus getting two growing seasons into one calendar year. It was not long ago that *A. sikokianum* was being sold by a well-known nursery for upwards of \$50 per plant and seeds were about \$1 apiece. That has changed dramatically and is changing for *A. candidissimum* as we speak. While there is no question that many of the Asiatic *Arisaema* now being sold are being wild-collected, this should be a short lived problem as production from seed catches up with demand, unlike the continued collecting pressure on trilliums, and other natives that are difficult to grow commercially.

E. *Arisaema* Culture (not necessarily applicable to tropical species)

1. Growing conditions

a. Shade: While many species in the wild may grow in full or partial sun at high altitudes, in most gardening situations *Arisaemas* should be considered plants for at least partial shade. Bright light without leaf burning is ideal. The warmer the

climate in which one gardens, the more shade becomes a necessity, as it true of many other genera. If you live in a cool climate, full sun may work well.

b. Cold hardiness: This is still being worked out for the individual species. Suffice it to say that most of the non-tropical species are winter-hardy at least to USDA Zone 6 (minimum winter temp -10 °F, -23 °C). Species from Taiwan and other warmer parts of Asia seem to vary according to their provenance, those from higher altitudes having greater tolerance for cold. Survival in winter may well depend on depth of planting. Arisaemas are often found deep in the ground in nature, and planting in the garden below the expected frost line (perhaps down to 18") can certainly add to winter hardiness, as can snow cover or heavy mulching. However, the deeper the planting, the more one needs to be concerned about good drainage, since winter wet can cause rotting of the dormant tubers. Questionably hardy species can always be lifted and stored in the refrigerator during the winter (see paragraph 4 below).

c. Summer heat tolerance; This does not appear to be a problem with any species currently in cultivation. However, excessive drying during the summer heat may hasten dormancy, which makes Arisaemas slower to increase in size and to flower. "Winter heat intolerance" (winters too warm to allow for normal dormancy) may be the limiting factor in how far south most species may be grown.

d. Spring frost tolerance: Some of the Japanese species, such as *A. sikokianum* and *A. ringens*, which tend to appear very early in the season, are subject to damage by late frosts, particularly if flowers have emerged. Protection with a styrofoam box or other cover may be required if frost is imminent.

f. Soil requirements: neutral or slightly acid pH seems to work well. Drainage is very important to prevent rotting of tubers. Raised beds, added gravel, turfact (calcined clay) or other soil aerators seem to help.

g. Fertilizing: Arisaemas seem to respond well to feeding. It is probably best to feed small amounts frequently or to use a slow-release fertilizer.

2. Diseases, Pests

Plants are not eaten by most animals because of high oxalate content in tubers and stems. The biggest threat is probably "rust", a fungal disease manifested by yellowish-orange spots on the leaves and spathe, and extremely difficult to control once it appears. This is a common disease noticed on "Jack-in-the-Pulpit.

3. Propagation

a. Vegetative: some species produce offsets readily, which can be detached from the parent. In some (e.g. *A. candidissimum*) the small tubers are found already detached. Other species are moderately stoloniferous (e.g. *A. ciliatum*)

b. Seed: As mentioned earlier most species are dioecious (unisexual) and only the female produces seed. A few species (e.g. *A. flavum*, *A. tortuosum*) remain monoecious, although not usually self fertile. The berry containing the seed produces a germination-inhibitor which in nature is leached out over the winter, allowing spring germination. However, the seed of most species does Not require a cold period to germinate, and if the seed is cleansed of the inhibitor (30 minutes in a detergent solution works nicely), it will usually germinate promptly. However, it does appear that at least two species *Do* require a cold period to produce top growth, namely *A. elephas* and *A. thunbergii*, and there are probably others.

Since Arisaemas take 3 to 4 years to reach flowering size, many of us who grow them try to compress the seasons by "artificial winters". If fresh seed are cleansed and germinated, and allowed to grow on after their first dormancy, the small tubers can be collected and stored in a refrigerator at 25-40 F for one to three months (there is some disagreement about how long a period is necessary or advisable), keeping them slightly moist in any of several ways. Too much moisture will cause rot, but small tubers won't tolerate being dry as well as larger ones do. They are then replanted and emerge in a few weeks for their second growing season in one year's time. If the one month "winter" proves to be sufficient, it may be possible to get close to three seasons in one year.

4. Pot cultivation

If Arisaema are grown in pots, it is suggested that the pot diameter be at least four to five times the diameter of the tuber. Fertilization and watering need to be more carefully monitored than for garden grown plants. Winter storage must also be watched carefully. Tubers will not usually tolerate being frozen through. Since yearly repotting is advised, unpotting the tubers and storing them in a slightly damp peat mixture in a refrigerator bag, at 35-40 degrees F may be the best idea.

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