GREAT LAKES CHAPTER

North American Rock Garden Society

FALL NEWSLETTER, SEPTEMBER 2006

CALENDAR OF CHAPTER MEETINGS ** meeting details below**

**SATURDAY, September 16: Fall Meeting and Plant Sale

MEETING:	**11:00 AM – ca. 3:00 PM**
	12:00 noon – bag lunch
PLACE:	**Don and Mary LaFond's**
	11836 McGregor Road, Pinckney (see map enclosed)
PLANT SALE:	**1:00 PM**

Mark Your Calendars:

**Our annual winter meeting and pot luck will be Saturday, January 20, 2007

Reserve the date on your Calendar! We'll send out details with our usual timely postcard.

UPCOMING NATIONAL MEETINGS – see below and your Quarterly for details.

Eastern Winter Study Weekend: January 19 - 21, 2007. Host: Genesee Valley Chapter, Hyatt Regency Hotel, Rochester, New York.
"THE EVOLUTION OF A ROCK GARDEN"

Western Winter Study Weekend: Hosted by the Western Chapter, Details to be announced.

NARGS Annual Meeting 2007: June 14 - 17. Canaan Valley Resort, Davis, West Virginia
"APPALACHIAN MOUNTAIN REFUGE"

The meeting will feature field trips to Dolly Sods Wilderness Area, Blackwater Falls State Park. The Dolly Sods, at 4200 feet, is an Alpine boreal ecosystem with amazing displays of Kalmia and Rhododendron as well as acid bog flora. Blackwater Falls is a lower altitude and has an Appalachian woodland flora. Speakers will include Bill Cullina of Garden in The Woods, Bill Grafton of West Virginia University, and Bonnie Isaac of The Carnegie Museum. They will discuss the plants we see on the field trips and why they are there.

March 18 2006 meeting report by Laura Serowicz

The March 18, 2006 meeting featured Alan McMurtrie from Toronto, Canada with two talks on Irises. The morning talk was on breeding and hybridizing Reticulata Irises and then after a catered lunch he gave a talk on Juno Irises.

Reticulata Iris

Alan has been hybridizing Reticulata Irises for twenty years. He has many photos and articles about his breeding program on his website at www.reticulatas.com. Reticulata Irises are found naturally in mountainous areas of Turkey, Syria, Iran and the Caucasus mountains where it's very dry in the summer. In the garden they grow in typical well-drained garden soil that is moist in spring but drier in summer, with at least a half day of sun. Their flowers start in early spring right as the snow disappears; they will flop over when hit by very cold temperatures and perk back up when it warms up during the day, but rain or wet snow does shorten the life of the flower. The bloom time generally last for three weeks, with individual flowers lasting 3-7 days, depending on the temperatures. For Alan, in the Toronto area, they usually bloom the beginning of April until about April 23rd; this year the blooms started March 9th, but with cooler temperatures it just extends the length of bloom, so they will still last until about the 23rd of April. If you plant some of the same clone in different microclimates in your garden, such as an area that is more shaded or where the snow is last to leave, you can extend the bloom time. Also some clones bloom early and some are later. The blooms are 2½-4½" tall and range from 1½-4" in diameter; typically they are around 3" wide. From the Dutch perspective the best for commercializing are the larger ones, but rock gardeners don't mind them being smaller, as long as they stand out. The leaves can be square, six-sided or octagonal in cross section. They appear mostly after the flowers start to decline and grow from 18-24" in length before they die down in early summer. Alan finds some varieties do better than others; often they do well for the first year or two, but after that there are virtually no flowers just leaves. The bulbs do what is referred to as "shatter", which means they produced lots of little rice-grain sized bulblets along with one or two small bulbs that are too small to bloom the following year. If left alone, many of the bulblets will die because they can't get their leaf above the soil surface so it's best to replant the bulblets close to the soil surface and in four years they should bloom.

Each year Alan plants about 10,000 seeds which take up a 70 ft^2 area (7' × 10') and only about 20-25% of the seed germinate. He is going for the hardiest of them, so he doesn't mind the low germination. Seeds are planted about ½" deep, then covered with netting to protect from squirrels, then straw or leaves to help protect them from freeze/thaw cold snaps at the soil surface. It takes five years to go from a seed to a flowering plant, so it wasn't until 1994 that he saw the results of a cross he did in 1989. The cross he did between *I. sophenensis* and *I. danfordiae* turned out to be really important and took him to where he is today with his hybrids in terms of new color possibilities. When he does get results which are more than just blues and purples, he tries to understand why he gets them so that he can decide which direction to go in to take them even further. It's a bit of a guessing game because you never know what is going to happen when you cross the yellow with the blue, and often the second generation is when things open up with really new forms. Most Reticulata seed pods sit at ground level; *I. histrio* seed pods are below the ground.

After 5 or 6 years he digs up everything from that seed bed and replants them in the same space but spreads things out more evenly (since there are empty spots where seed did not germinate). Then after another year or two he has to decide what to do with them since he needs the space to sow more seeds. If there are a couple clones in there that did well, he will give them more room elsewhere, but he finds that after the first few years many of them begin to peter out too. In about 1% of the clones the bulbs will be larger, the number of bulbs is higher and flower size is bigger, so there are a few which are better than the average hybrids. Alan feels hybridizing is the way to go to get plants that are hardier and have new colors forms.

Alan does the replanting in September when the fall rains start. To make work easier he throws plastic over the areas that need replanting to try to keep the conditions dry underneath. There will still be some root growth happening because of the moisture content still in the soil. By using different size screens Alan separates out the bulbs and bulblets from the soil and then replants them in layers, with the rice grain bulblets planted near the surface, and further down the larger bulblets which, if they are larger than 1 cm, will bloom the next year. He separates the various clones in the beds with strips of aluminum, as well as marking them with name tags and mapping out the beds on paper.

Reticulata Irises fall into three groups based on their chromosome count (which is important to

know for hybridizing). The largest group, 2n=20, include: *I. bakeriana* (black ink-colored velvety tip on falls), *I. hyrcana* (small, early bloomer), *I. histrio* (spots on falls – hasn't done well for Alan – but finally has some blooming from seed), *I. reticulata* (which covers a wide range – if it doesn't fall in one of the other species, it is *I. reticulata), I. pamphylica* (interesting narrow brown falls & blue standards – not showy, blooms late in the season when the leaves are grown), *I. vartanii* (very rare, comes from Israel, so it is tender), *I. kolpakowskiana* (dark purple tip on falls), *I. winkleri* (Janis Ruksans found it in the wild). Two species are 2n=16, *I. histrioides* (nice large blue, wide standard) and *I. winogradowii* (pale yellow, does need additional moisture in summer); they are the parents of *I. 'Katherine Hodgkin'*, *I. 'Frank Elder'* and *I. 'Sheila Anne Germaney'* (which are all sterile). There was always a question with *I. danfordiae* (lemon-yellow with short standards); it was assumed it was a diploid, so its

Iris winogradowii

chromosome count should come out to be an even number. But it turns out the commercial stock was a larger form selected out by the Dutch that is a triploid; so it is 3n=27 and is sterile. Alan was able to collect some fertile, diploid *I. danfordiae* in Turkey in 1985. He sent some to Kew, and they did a chromosome count that confirmed that it is 2n=18.There was another blue Reticulata that had been collected years ago which was referred to as *I. histrioides var. sophenensis* (now its own species, *I. sophenensis*); it had the narrow typical *I. reticulata* flower parts, the reason they called it "*histrioides*" was because it was blue and came up about the same time, but it produces a lot of little bulblets like *I. danfordiae*, and Alan believes it is actually 2n=18. He also collected an unnamed species (small, wine-red) near Çat, Turkey [pronounced "chat"], which also has the little bulblets. Kew has done a chromosome count on it, but has not published the results, but Alan thinks it is also 2n=18. It is with this last group (of 2n=18) that Alan has done a lot of important hybridizing.

One of the reasons Alan has gone into the wild to collect Reticulata Irises is to get some genetics beyond what is commercially available and to get different color patterns. There are a few hybrids available commercially, some are sterile, and some are fertile. If plants with different chromosome count are crossed the resulting plants are sterile. With his hybrids, Alan has opened up a whole range of colors from the typical blues and yellows to greens, browns and near oranges. Alan's hybridizing goals include: hardy hybrids, disease and weather-resistance, consistent blooming year-after-year, good increase, new colors and patterns, long-lasting flowers, strong stems, more than one flower per bulb, scented, new characteristics like ruffled standards or different spotting. Janis Ruksans has several of Alan's hybrids*: Dance On, Evening Twilight, Summers Day, Velvet Smile, Bold N Beautiful, Dark Desire, Early Morning, Glow, Snow White,* and *Vivacious Beginnings*. Alan also sells some bulbs; you can contact him through his website, www.reticulatas.com, to get his current listings.

Juno Irises

There is debate over whether Juno Irises are even Irises. One of the leading authorities on Juno's, Dr. Rodionenko from Russia, considers them their own genus – *Juno*, but from the English point-of-view they are *Iris* subgenus *Scorpiris*. Most gardeners ignore the debate and just use the term "Juno" to refer to them.

Most Junos bloom in May, a week after the Reticulata Irises are finished. There are a few that bloom earlier: *I. rosenbachiana*, *I. Nicolai,* and *I. stenophylla*. In fact, this year Alan had a seedling *I. rosenbachiana* that he discovered had already finished blooming in early March when he looked in his garden to see if the Reticulatas had started

yet. Individual flowers last 3-7 days, with bloom time lasting 3 weeks. Different species bloom at different times but the bulk of them bloom in May, and a few bloom in April. Mature bulbs can have from 3-13 flowers, depending on variety, with *I. magnifica* at 13 flowers. The flowers are a little bigger than Reticulatas and range in height from very short to 2½ feet (e.g. *I. magnifica*). The taller species look like corn stalks, with the flowers in the leaf axils. The stalks die down about early July. Generally the hybrids are easier to grow than the species. There are a number of species that Alan would recommend for the beginner. The problem is to find them: Janis Ruksans has a number of them, [also Odyssey Bulbs] and from England – Paul Christian, Potterton & Martin, and Avon Bulbs are all sources Alan has used in the past, but he is not sure if they still sell them. In Europe, the Dutch sell a large number of them in pots, especially *I. bucharica*.

Slugs can be a bit of a pest for Junos, in that they may eat the tender leaves when they are just coming through the soil surface. White grubs are more of a problem because they will eat away at the stalk of the plant under the soil and you don't know it until it turns brown. The other thing that can cause problems is a deep frost in the spring, some of the stalks will be hit by the cold and will flop over and rot will start in the leaves where it flopped, so you will lose that years bloom. If this happens, Alan recommends throwing some gypsum on the rot to dry it up, so it doesn't get down into the bulb.

The typical bulbs of Juno's have thick swollen roots referred to as the primary root, some have more narrow roots. The primary roots are brittle and if they are broken off when you get them from a nursery the plant will still flower if the bulb is large enough.

Junos can be divided in August when they are dormant but before the fall rains; make sure there is some basal plate on all pieces. If you take a bulb that is broken off from the basal plate and store it in a paper bag to dry off, it will start to form little root nubs at the end of the scales, and once the root nubs are properly formed, you can plant it back in the ground. (If you put the bulb straight in the ground after it has been broken off it will just rot.) Junos should only be disturbed when they are dormant (August-September). By October, it's too late because the roots will be starting to grow. Alan grows most of his Junos in 8" high raised beds of sandy loamy topsoil on top of clay. They don't need to be protected from rain in summer; as long as they have good drainage they should be fine. The exceptions are *I. persica, galactica* and *stenophylla* which need covering and are grown in very coarse sand.

Some species of Junos are from Afghanistan and other hard to reach areas in Central Asia, so those species you are not going to be able to get, even as a collector. So he didn't touch too much on those but covered more the ones that he has grown. Juno's are genetically very diverse, so there is no agreement on how many species there really are. Their diversity may mean that they are in a state of evolution where they haven't differentiated themselves yet. With Reticulata there are a lot of plants covering just three chromosome groups, whereas Juno's chromosomes are all over the place.

A lot has been written about Juno species individually, but there is no collective work done on them yet, there is talk that Janis Ruksans perhaps in combination with Arnis Seisums along with Kew have done some analysis and will be coming out with a book shortly. Alan tried to put something together back in the 90's but never got that work finished off, but he found it interesting doing all that research. What he did find out that he had not seen written anywhere is that there are certain characteristics with the seed [round, nubbed, edged, or cubical] and characteristics of the haft (at base of the falls) [winged, semi-winged or not], that help to distinguish the species. The problem with looking at physical characteristics of a plant and trying to describe a plant on that basis is where do you separate what is all-encompassing about the species. When you see one plant you can write up a description about that one, but then when you go off to some other population and you may find that has some variation, so you have to be careful how you separate things out. It's nice if you can go into an area and research a population and cover a wide range and then you can see what the whole population looks like and can write up a proper description noting the full range of variation. It can be easy to get species confused when you read the descriptions; many have similar descriptions with only very slight variations and not all the variations within a species are known yet. More work is needed with the original wild source populations in Central Asia to better understand the differences. The taxonomy of Junos is still in a state of flux. Currently Junos are divided into five Sections, mainly based on seed shape or other plant physiology and there are thought to be over 50 species. Within the sections they are grouped by series. In some series there is a lot of overlap between species and we don't really know the full extent of the population. Some look like they are actually hybrids between species, which would have some characteristics of other species but clearly weren't the other species. Alan feels some probably shouldn't be separated out, and a couple should probably be considered one species; we will have to wait for genetic testing to find out.

Here are a few of the species Alan has had experience with, with some of his comments about them:

I. rosenbachiana – rose in color. Not one that Alan would recommend because it doesn't last in the garden. Some suggest that it may be monocarpic, but they do live for him after producing seed; it may be one of these issues where if you have it growing – don't disturb it. Janis Ruksans does have it for sale, very lovely plant. Not for the beginner.

I. nicolai – beautiful but difficult. Give it good drainage. It doesn't last – his are grown from seed but low germination rate from seed. Should be able to intercross two clones of it and get good seed; those plants should do better.

I. willmottiana – true one is an exquisite pale blue, fairly easy in sandy loam, he has lots of them, might have been through Janis he got his first bulb.

I. albomarginata – (Janis Ruksans considers Alan's are actually *I. zenaidae*) – winged haft and beautiful blue flower. Clones from Kew had produced a number of flowers, slow to increase, he tried to give it some space to get it to increase but now they are not blooming. When it was blooming he did intercross two clones from Kew, and got seed. The seedlings are no problem whatsoever, has lots of those. 12-18" tall, at least 3 flowers on it, white margin on leaves. Various blues. What Janis Ruksans considers true *I. albomarginata*, has similar look to the other plants, perhaps a little more dwarfed, not sure of any other real distinguishing marks. Not as easy as the other ones he knows.

I. graeberiana – described in catalogs as "methyl blue" in color, winged haft, white in fall tip, haven't been able to find it in the wild where original collection lists it, so not sure where it's come from, it will intercross with *I. albomarginata*, and the result is similar blue, second generation look the same, still fertile, so they have same chromosome count and are closely related. Fairly easy in an open garden.

I. capnoides – purchased from Janis Ruksans and flowered, not quite as showy, does not do as well in his garden as *I. albomarginata or I. graeberiana* (all three in same species section).

I. parvula – another interesting Juno, range of variation, not one of the first Junos he would recommend to try. Small, grey/yellow flower. Do not grow in pure sand and do not let it get too dry.

I. aucheri – lovely species, many forms available – needs a dry summer to form the flowers for next year. Seed pod is distinct but he hasn't had any luck with the seed. The horticultural form is 18-24" tall with 3-4 flowers on upper part of stalk. Dwarf form (6-12" tall) from a Turkish source who is no longer selling them – similar to *I. nusairiensis*. Also form from Leylek train station when he was in Turkey, flowers were long past so didn't know what colors he was getting, so got a mix of whites, blues and dark blue/purples. In the fall the leaf stalk on the Leylek form starts growing out of the ground – not hurt by winter cold, but more problems from rot in the leaf axils in April after a hard frost.

I. bucharica – very easy, most commonly available Juno, typical form is white and yellow, but can also be all yellow. Never know what clone of *I. bucharica* you're going to get since there is such variety, so he gets from many sources. The seed from *I. bucharica* is good. Bulb, also increasing fast enough on its own, and within 2-3 years you will have 3 good bulbs with side shoots, so don't have to do much with them to get increase.

I. magnifica – tallest of the Junos, referred to as being white, but does have blue in it, and has a wide-winged haft. (A clone known as 'Alba' has no blue, so it is very white). *Iris. magnifica* starts flowering at the top and works its way down the stalk. Each flower is in an axil, with up to 12 flowers per stalk. Good from seed. Easy to grow – does well in most situations.

I. vicaria – in its different color forms it can be easily confused, normally has blue tone with yellow, but there are ones that have more white on them. One of the distinctions is it is not nearly as tall (as *I. magnifica*) but Alan has seen more robust plants that have a characteristic of *I. magnifica*. A key signal that it is *I. vicarica* is no winged haft. Easy but tends not to increase.

I. warleyensis – very beautiful, but a bit difficult – try it in coarse sand. Thinks there may be some clones available that aren't as difficult. He has one from Janis Ruksans that he is tentatively thinking is a good one that will hang on in his garden. Try to hybridize it with *I. magnifica* or *I. bucharica;* the hybrid will be easier to grow, but should have the look of *I. warleyensis*.

I. orchioides – many plants are grouped under this species, probably a couple separate species once the chromosome analysis is completed. Have big winged haft, normally 3 flowers on stalk, low growing, and hairs on ridge of falls makes it almost looks like it is bearded. Janis Ruksans has a number of them listed. They do not do well for Alan; he has a couple hanging on but they are not thriving. Yellow form of *I. bucharica* often confused with it.

I. willmottiana – easy to grow in sandy loam, the true species is new to cultivation, gorgeous shade of blue, slight variation in color from seed, often find hybrids with *I. magnifica* and *I. graeberiana*.

I. persica, I. galactica and ***I. stenophylla*** – these three are very similar, not easy to grow – try in coarse sand and protect from summer moisture, low growing leaves, lovely colors especially in *I. persica* – get a range from red to grey to brown tones.

***Iris bucharica* (yellow form)**

Featured plant: *Conandron ramondioides* by Tony Reznicek

One of the most unusual late summer flowering plants for the shady rock garden is a little known plant in the African violet family, the Gesneriaceae. This is *Conandron ramondioides*, known by the ugly common name of "rock tobacco" (a translation of the Japanese "イワタバコ or Iwa-tabako.")

Conandron is a member of the African violet family (Gesneriaceae), with only the single species *C. ramondioides* that ranges from Taiwan and south China well into central Japan (although plants from Taiwan and south China are recognized as var. *taiwanense*). It is more unassuming than the large-flowered hardy Gesneriads more familiar to rock gardeners, *Ramonda* and *Haberlea*. The flowers are small, but interesting; nodding, rather potato-like, and pale lavender (white and darker purple forms are known). However, they are borne in clusters of several flowers on shiny, reddish pedicels, so a plant in full bloom is conspicuous. The leaves and growth form are quite unusual when compared with all other hardy Gesneriads. Leaves are not borne in rosettes, but rather singly along a short-creeping,

cinnamon brown-furred horizontal rhizome. Even more unusual is the leaves are deciduous, and only the rhizome overwinters, with a fleshy, wrinkled greenish bud that becomes the first new leaf in the spring. But while the plant is in leaf, the leaves do provide some attraction. They are somewhat fleshy, glossy, wavy textured, and relatively large, and lie more or less flat on the ground.

This is a true mountain plant growing on wet rocks and cliffs in Japan where it is noted as common. Despite hardiness ratings sometimes as extreme as zone 9, my plant has been hardy in the open garden in southern Michigan for many years (at least 10-12). I purchased it long ago from Siskiyou Rare Plant Nursery, if my recollection is correct (I've lost the original label), and my original plant is still alive. So it is clearly long-lived, like the common hardy Gesneriads, *Ramonda* and *Haberlea*. Since it apparently ranges widely in its native Japan, we might assume this is a hardier, higher elevation form, though I have no evidence for this other than hardiness and size. Certainly,

mine is a smaller plant than many descriptions suggest. The leaves are at most 12-15 cm long and flowering stems up to 15 cm tall (descriptions in books suggest that the leaves can be quite large, up to 30 cm long and 15 cm wide and the flowering stems to 30 cm tall or more!)

The plant is relatively easy to grow once you meet its specific needs – shade and an elevated, well-drained, moist but not wet site. Crevices in a shady, raised tufa or limestone bed or wall work well. However, the plant is clearly not as drought tolerant as *Ramonda* and *Haberlea* and will die if planted in a setting where it even occasionally dries out. *Ramonda* and *Haberlea* can dry virtually to a crisp and still recover when re-moistened.

Unfortunately, the plant is now quite rare in cultivation and the nursery trade, and I have not seen it offered in a while. Seed is rare, at least from my plant – it flowers so late that most years the very slender capsules are still green and not quite ripe when the first frosts arrive. Perhaps because the leaves are deciduous, they die when removed from the plant, and I have been unable to grow this from leaf cuttings, as you can with *Ramonda* and *Haberlea*. The furry, short-creeping rhizomes do branch sparsely, and offsets can be taken, but this is slow and does not produce many plants. However, after doing poorly last year, I moved my plant, and it is flowering better than ever now. So maybe I will get some seed this fall.

Seed Exchange

The Great Lakes Chapter will again be handling the 2nd Round Fulfillment of the NARGS Seed Exchange in the spring of 2007. It will be taking place in Ann Arbor in early March – a postcard reminder with more details will be sent out to all members in February. We will need volunteers-so mark it on your calendar. This is a great way to spend a few hours getting to know your fellow GLC members and talk about plants, seeds and gardening! Volunteers who are also NARGS members also get 10 extra picks in the first round of the NARGS Seed Exchange.

THANK YOU to the volunteers from this year: **Many of the volunteers worked more than one session, they enjoyed it so much!

Vivienne Armentrout, Joan Bolt, Jim Briggs
Andy & Carol Duvall, Bob & Peg Guilford
Jim Heilig, Don & David LaFond, Dwight Lewis
Rosalie Meiland, Cliff & Jan Moore,
Tony Reznicek, John & Laura Serowicz and
Jacques & Andrea Thompson

And an especially BIG THANKS to Gary & Jennifer Boes, along with their two daughters, Kelsey & Taylor for not only allowing us to hold the 2nd round in their garage, but for being such gracious hosts, and helping out with the orders, too.

Ann Arbor Garden Club Flower Show

Celebrate Michigan!

The Ann Arbor Garden Club is having a small standard Flower Show at the Matthaei Botanical Gardens 16 September. Unfortunately, this is the same day as our fall sale, but since our sale should be over by 3:00 PM and we will be only 20 minutes from the Gardens, please try to stop by before it closes at 4:30.

The show is free and open to the public.

Contact Bonnie Ion for Information:
(734-769-2015

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Please feel free to contact your officers if you have any questions or comments

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or pay in person at the next GLC meeting

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Send $30.00 dues (check payable to NARGS) to:
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We strongly encourage people to join both the Great Lakes Chapter and the National Organization.

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