

**Number 64**

**Spring, 2000**

# Species Iris Group of North America

Spring, 2000 – Number 64

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## Presidents Message

Dear SIGNA Members,

In this issue of SIGNA you will find a report from Jan Sacks and Marty Schafer, the chairs of the seed exchange Committee. In 1997 we had 63 donors and 587 listings. In 1998 we again had 63 donors but 647 listings. This last year (1999) we had 68 donors, which is an increase of five, but only 543 types of seed listed. We can do better than that! We are known to have one of the best seed exchanges yet only 10% of our members donate seed. If every member donated only 2 types of seed we would double our listings. Jan and Marty have made a plea every year for more seed and I add my plea to theirs. We have a wonderful exchange but we could have a fantastic one if all of the members participated! I have already been out with my pollen brush selfing some of my *I. unguicularis* cultivars. Please join me in hand-pollinating as well as collecting seed this year so we can make the 2000 SIGNA seed exchange the best ever.

Bob Pries turned out a great issue for the Fall of 1999 but he had many problems with his computer during the production and as a result it arrived on your doorstep later than usual. Subsequently, this issue will get to you later than usual as well but fear not- we will soon catch up! I want to thank Bob for an excellent issue with great content that carried SIGNA into the modern era by adding color. Bob also contributed the color printing for that issue. If you liked the addition of color please remember it is expensive. Each page containing color costs up to \$350. You may want to consider directly contributing to a color page through our "color fund". (See the notice elsewhere in this issue) If you keep contributing we will continue to have color and, if not, SIGNA will again fade to black and white. For this issue, the Iris Society of Massachusetts, the Northeast Apogon Auction, and six individuals, Lynn Markham, Barbara Heim, Margy Mott, Jennifer Hewitt and Barbara and David Schmieder all contributed funds for the color page on *I. odaesanensis* *I. koreana* and *I. tenuis*. We can all heartily thank them. Also, my husband George and I contributed the color page for *I. timofejewii*.

Because Bob Pries had so many problems last year with his computer he was very reluctant to edit another issue. At the same time we received an offer from Graham Ware of Armstrong, BC to assist us with the editing of SIGNA. We have accepted Graham's offer but for this issue I am wearing a second hat, that is, I am trying to help Graham with the editing as he learns more about SIGNA. I am also rapidly learning how little I know about the editing process. Graham will do an excellent job for SIGNA. He is a horticulturist and a writer (currently working with Dan Heims on the book about *Heucheras*), so please give him all your support. Write something for publication, even if it is only a short note on how a certain species is doing in your area.

I have received a number of complaints from members that they have failed to receive their SIGNA **Checklists**. Due to a clerical mix-up, some of the orders have been lost. I would appreciate being notified immediately by phone, e-mail or regular mail if you failed to receive your copy as ordered. Also please notify me whether or not your check has been cashed. We are attempting to reconstruct our list of orders. Please accept my apology for this unfortunate boondoggle and for making those of you affected go through this added effort.

By the time you read this, the AIS National Convention in Dallas will be past history. There are still plenty of exciting iris meetings this year. The Siberian Convention in Iowa in June will guest many species as well as siberians. It will give us a chance to see which species will stand up to the harsh climate of the upper midwestern US. Finally I am looking forward to meeting many of you at the New Zealand Iris Symposium 2000 (see article on **page3293**). The climate is conducive to growing spectacular gardens and I can assure you that these friendly people will put on a great show. If you have ever thought of visiting New Zealand here is your excuse. See you 'down under' in November.

Carla Lankow

## Editor's Report- Graham Ware

**March 14, 2000:** It's my birthday today (52) but it is also the day appropriately enough when the SIGNA deluge has begun. Article after article comes flooding over the net to my e-mail from **Carla Lankow** and **Will Plotner**. My birth as editor is now official after responding to Carla's plea in the Fall 99 issue. I am a horticulturist and a writer and I've been growing SIGNA seed and collecting irises for quite some time. I am very partial to species and the Spurias in particular probably because the climate here in the south interior of BC is so optimal to their growth. We have hot, dry summers and relatively cold winters (Zone 5/6) with good snow cover. We also have the best climate in Canada for growing and keeping bulbs. That's another tie-in to the species and the Spurias of C. Asia. I should also state that I own a nursery, Round Lake Gardens, with Iris as one of its specialties along with *Heuchera*, *Penstemon*, *Salvia* and ornamental sedges and grasses. But enough about that, let's put the editor's visor back on for the rest of the report. Since March 14<sup>th</sup> I have worked on the copy and was most pleased at what we've put together for you in this issue. The next issue won't have a much deadline pressure as this one. The writers have been very cooperative in having their writing discussed and edited as we went along.

**Harald Mathes** was one such contributor. He seemed to relish the challenge, having just spent two weeks in the hospital for hip replacement surgery. I told him that I didn't know if he would find the process stimulating or frustrating. For him it turned out to be positive therapy and during the course of e-mail correspondence, little things kept falling into place. It was great. His article on *Iris pseudopumila* var. *gozoensis* is a good story in botanical sleuthing. He also has a great new arilbred with great branching that made its way around the web recently. SIGNA wants to develop a more comprehensive photo gallery on our website and we need a SIGNA webmaster. Contact me now if interested.

**Anne Blanco-White** has a piece on the Series Californicae that you might find interesting as well. It's a review of Dr. Nelson Young's article that appeared in the Journal of the Linnean Society. As in the Mathes article, we wander into the fascinating field of genetics. I'm sure you'll enjoy it.

**Jan Sacks** has provided a personal and informative piece on a couple of **Darrel Probst's** introductions from Korea- *I. odaesanensis* and *I. koreana*.

They sound like they have real garden merit. Partner **Marty Schafer** gives us the Seed Exchange Report and provides us with some details for thought. Seed really is the key to a good breeding program. Check out what he has to say.

**George Rodionenko** divulges much info on *Iris timofejewii* in our "Rare Iris of Russia" series. This could be a southwest special. Thanks to **James Waddick** for his work on it.

**Sam Norris** has given us a most interesting look at **Michael Gideon** and the work he is doing down in S. Florida. **Rodney Barton** has come up with a lovely story about a native Irid, *Alophia drummondii*. And, as if running the SIGNA show wasn't enough, **Carla Lankow** has contributed some vital info on *Iris tenuis*.

I want to thank all of the contributors and especially those that I don't have room to mention for their efforts. Hope to hear from all of you soon.

Finally, you'll notice at the back of this issue 2 color photos that didn't make into the Fall issue. We thank Bob Pries for these photos.

## New Zealand Iris Symposium 2000

In the fall 1999 issue of SIGNA we ran but a brief description of the New Zealand Iris Symposium 2000. We are pleased to provide the following additional information from the New Zealand Iris Society as things are obviously heating up. The five day long symposium at Taurance-Mt. Maunganui (North Island), officially runs from the evening of Thursday 2nd November 2000 to the afternoon of Monday 6th November 2000.

The itinerary runs like this- there will be a welcome and official opening on Day 1. On Days 2 and 3, there will be morning and afternoon sessions. On Day 4, after a morning session and a lunch, there will be a bus tour of local gardens. That's the warm-up because on Day 5 there will be an all-day tour of gardens as well as scenic spots in this area.

What a line-up of speakers are firming up for this stellar event including Tony Hall [Head propagator at Kew], Prof. Maria Antonietta Colasante (Italy), Prof. Zhao Yu-tang (China), Jean Witt (USA), Pat Toolin (Australia), Lesley Cox (New Zealand), Marie Fairburn (New Zealand) for Clarence Mahon (USA), Dr. Dan Blanchon (New Zealand), Terry Hatch (New Zealand), Eberhart Schuster (Germany), Robyn Rohrlach (Australia), Dr. Tomas Tamburg (Germany) and even more yet to be confirmed!

Full registration costs NZ\$280.00 ( Approximately \$ US)

The Registrar only accepts bank cheques, bank drafts, credit cards or cheques drawn on a New Zealand bank. For additional information or to register contact Peter Berry, Apt 8D, Tower 1, 1 Marine Parade, Mount Maunganui, New Zealand. (e-mail?)

For those of you who see being "down there" as a wonderful excuse to see and do more of natural and horticultural New Zealand, a couple of special post Symposium garden and sightseeing bus tours have been planned. The first one starts on the North Island and runs for the five days from Tuesday, 7th November to Saturday, 11th November. The cost of this North Island tour is NZ\$819(\$ US).

This is followed by a 9 day tour of the South Island from Monday, 13th November to Tuesday, 21st November. This one sells for NZ\$1280 (\$ US).

Bookings for these tours are exclusive to the tour company

**New Zealand Direct**, PO Box1282, Nelson, New Zealand. Tel: +64 3 5466338,

Fax: +64 35459227, e-mail: [birgit@nzdirect.co.nz](mailto:birgit@nzdirect.co.nz).

### ERRATA

We all make mistakes and three that need to be corrected in two past issues of SIGNA are as follows:

Please forgive our errors.

1. On page 3157 of the Spring 1998 issue in the title of Nigel Service's article on *I. cypriana*, the name of the iris was misspelled.

2. On page 3284 of Fall 1999 issue the Bug Store address was not fully de-

scribed. It should have read:

The Bug Store  
113 W. Argonne  
Kirkwood, MO 63122  
Orders: 1-800-455-2847  
email: [bugstore@bugstore.com](mailto:bugstore@bugstore.com)  
web site: [www.bugstore.com](http://www.bugstore.com)

3. On page 3288 of the Fall 1999 issue the price of back issues was listed at \$2 each and should have been \$4. This error is also noted below the Back Issues notice elsewhere in this issue.

# Waddick/Zhao

## Lead Iris Tour to China

Editor's Note: Ever since Jim Waddick and Professor Zhao Yu-tang first traveled together in China in 1989, our members have been kept abreast of their travels (and sometimes adventures) in search of wild iris in China. Now they are leading a two-week tour starting July 6<sup>th</sup> and returning July 21<sup>st</sup>. The port of departure and return is Seattle. It will cost \$3590 US (shared twin) and includes everything from hotels to meals to tips, entry fees and airport tax. A detailed itinerary is available through SIGNA member Paige Woodward; fax (604) 792-1891 or e-mail [pwoodwar@dowco.com](mailto:pwoodwar@dowco.com)

Highlight of the trip will be an excursion to view the flora of Changbai Mountain National Forest Park in Jilin Province near the North Korean border. Nearby, members of this tour will get to experience Heavenly Lake, China's deepest volcanic lake. This area is Prof. Zhao's specialty. Other stops include



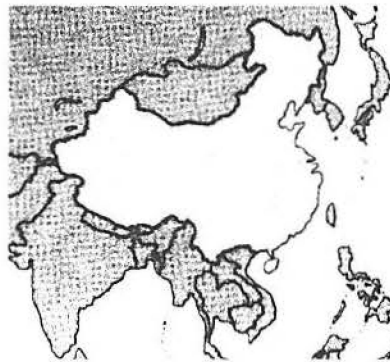
James W. Waddick

Zhao Yu-tang

Shenyang, Xian and Shanghai for botanical gardens and more before a trip to Suzhou, home of China's most famous classical gardens. Tour members will meet Chinese botanists, growers and other experts and have a chance to acquire desirable seeds and nursery-grown plants. Travel will be comfortable and will also include cultural sites such as the Great Wall in Beijing and the terra-cotta warriors in Xian.

The trip ties in nicely with an optional 4-day side trip (\$795 US, shared twin) to **Japan Flora 2000**, a 300-acre, international exhibition of horticulture and landscaping on Awaji Island near Kobe.

Jim Waddick also has indicated that he will be heading other tours in China this year. Maybe there is one that fits your schedule. He can be reached by e-mail at [jim-jim@swbell.net](mailto:jim-jim@swbell.net)



# Rare Iris of Russia

## *Iris timofejewii*

### Part 2 of the Series by George Rodionenko

This rare iris was found in 1924 in the foothills of Dagestan by the Russian botanist Yuri N. Woronow, the famous expert of the Caucasian flora. He is the author not only of *Iris timofejewii* but also of two species in the subgenus *Oncocyclus*, *I. lycotis* and *I. grossheimii* (Ed: The latter is now considered a natural hybrid between *I. lineolata* and *I. lycotis*.) as well as such rarities as *Iriodictyum hyrcanum*.

For iris growers, *I. timofejewii* is a species of special interest. At the International Iris Symposium in St. Louis, MO in May 1995, it was included in the group of very rare species that may be completely extinct in the wild.

A large population of *I. timofejewii* was found on the deep stony slopes around the Dagestan village of Tsudakhar and has been observed by me for a long time. For the last thirty to fifty years, the size of this population has decreased catastrophically. There were some thousand plants, but now there are only thirty to fifty of them. The main enemy of the irises has become flocks of goats and sheep. Animals slowly destroyed iris rhizomes by their sharp hooves.

Fortunately, two more population of *Iris timofejewii* have been found growing wild in Dagestan

by my helper A. Lepekhina. My student, R. Murtuzalijev, made some collection of iris plants in 1997 under very difficult conditions. I did an analysis of these specimens collected and confirmed the species to be true. Rhizomes of the true *Iris timofejewii* were sent to the American Iris Society in autumn of the current year.

I know of many cases when other species of dwarf beaded irises were collected and mistakenly given the name of this rare species. This super-rare iris has not been grown successfully because serious inaccuracies have been permitted in numerous reference books and "floras". For example, in the "Flora of the USSR" volume IV, 1935, p. 546, it is written that this species bears only one flower stalk; and in "The Caucasus Flora", Vol. I, 1928, p. 256, an absolutely wrong appearance of this species is given.

Taking into account my own experience, *Iris timofejewii* has been difficult to establish especially in cases where soil and climatic conditions of the new climate don't correlate with its native steppe conditions.

Thrice I brought rhizomes of this iris to the St. Petersburg Botanical Garden. After the summer planting, the result was the same: the rhizome

slowly adapt to our northern winters and plants flower in May of the following year. After blooming or as they go into summer dormancy of the second year, they began grow sickly and die by the autumn or into the second winter. In a rockery, plants covered with a glass, to increase moisture, retain vegetation one to two years longer. During this time period, the plants of the *Iris timofejewii* changes very much (See left side of color drawing); their leaves have lost the glaucous blue-gray thin coating and its sickle-like shape. Instead they appear straight and light green; flower stalks increase two to three times their height in comparison with a normal plant. (Check right side of color drawing).

The main reason of death of newly moved plants of *Iris timofejewii* appears to be surplus humidity and slightly higher temperatures during their growing period but still insufficient for their proper rhizome development. An analogous situation was observed by English Iris growers in the northern region of Germany in attempt to introduce this super-rare species. Introduction of *Iris timofejewii* into cultivation without any difficulty and hybridization may only be successful in the southern regions of Russia, France, Italy and certainly in parts of the United States of America, where those regions are of the suitable climate and soils. It seems to me that among the American botanical gardens, the Denver Botanical Garden may provide the conditions of heat and cold and soil that it has in its native Dagestan.

When working with *Iris timofejewii*, it is necessary to investigate more carefully its affinity for a rocky location and its love of limestone situations. In the wild, this species is always connected with stony sites and alkaline soils.

There are many unique attributes of this super-rare species. Among the groups of dwarf as well as intermediate bearded irises, *Iris timofejewii* is closest to the Section *Oncocyclus* species because of its ecological, biological and genetic peculiarities. When seen vegetatively, but not yet flowering in the wild, you might consider that you are actually seeing one of the *Oncocyclus* species. In hybridization, it reliably passes along its unique characters: blue-violet color, bi-colored arrow-shaped flower stalks and not large but very harmonious appearance of flowers. Their proportions and texture are advantageously different from the flowers of other related iris species.

To conclude, it is very hard to work with species such as *Iris timofejewii*. It is not only difficult to protect it but to make use its useful properties more well known. This work is even more difficult because, as a rule, these species appear to lack vigor and have a weak constitution. Fortunately the number of such species of this super rare group is not large. In considering the *Iris* species in the flora of Russia and neighboring countries, there are only seven to ten such species among the fifty to seventy irises occurring in this entire region. They must be considered very carefully. It is necessary to find a suitable refuge



(*refugium*, as botanists say) for them or places with conditions more favorable for their growth, reproduction and conservation.

At the same time, it is necessary to work on the wide distribution of their descendants among iris growers and enthusiasts because the job to save a vanishing species at the present time is very important and of the highest order. As evidenced from the activity of the International Iris Symposium in St. Louis, everybody can see that the leader in that noble work is the AIS through SIGNA.

This present article is the second in a series of articles, which are devoted to super-rare Iris species. Russia's *Rare Iris Study Center* has begun the work to study the populations of super-rare iris species in nature. At the same time, we have already collected plant material without any damage to the population naturally. Materials collected will be regularly distributed to iris collections as well as Iris study societies and primarily to their leaders in the AIS.

**(Ed. Note:** This article is the second in a series on 'Rare Iris of Russia'. The first installment on *Alatavia (Iris) winkleri* appeared in Fall 1999 issue of SIGNA. See page (?) for information on ordering back issues)

**SIGNA TREASURER'S REPORT**

1/1/99 - 12/31/99

As of 1/1/99:

Checking Account Balance	\$10077.20
CD	6172.62
Outstanding Officers' Advances	<u>257.47</u>
	\$16507.29

**REGULAR INCOME**

Memberships	\$2320.50
Past Publications	103.08
Seed Exchange	3414.05
Slide Rental Fees	20.00
Interest on CD	288.84
Interest on Checking	<u>76.80</u>
	\$6223.27

**SPECIAL INCOME**

Checklist	\$2535.00
NE Apogon Auction	<u>200.00</u>

**TOTAL INCOME** \$8958.27

**REGULAR EXPENSES**

Membership	179.89
Current Publications	2157.08
Past Publications	23.62
Seed Exchange	1062.55
Slide Library	64.99
Miscellaneous	<u>19.62</u>

**TOTAL REGULAR EXPENSES** 3507.75

**SPECIAL EXPENSES**

Research Grants	0.00
Seed Collecting Grants	0.00
Checklist Printing	<u>2000.00</u>

**TOTAL EXPENSES** \$5507.75

\$19957.81

As of 12/31/9

Checking Account Balance	12848.91
CD	6461.46
Outstanding Officers' Advances	<u>647.44</u>
	\$19957.81

# *I. pseudopumila* Tineo:

By Harald Mathes

Known for many years, although by the average iris lover only by name, this dwarf bearded species was never in culture in remarkable numbers. Its natural habitat lies in southern Italy, and on Sicily, Malta and the neighbouring small island Gozo. It became also known from the Adriatic coast of Croatia, these specimen seem to be the smallest of the group.

Together with the Grecian *I. attica* it has the lowest chromosome number of all bearded irises, namely  $2n=2 \times 8=16$ . This indicates that it is closely related to it, and indeed hybrids between these two are fully fertile, as was to be seen in a series of own seedlings. *I. pseudopumila* is one-flowered as is *I. attica* and *I. pumila*, but generally taller, and it differs from the two in having a flower stem plus a rather long perianth tube, while *I. attica* and the tetraploid ( $2n=4 \times 8=32$ ) *I. pumila* has as a rule no stem at all. Their flowers are held up only by an elongated perianth tube. This is the lowest part of an iris flower between the ovary and the claw (style?). The American botanists Randolph and Mitra believed *I. pumila* to be a doubled hybrid, a so called amphidiploid of *I. attica* and *I. pseudopumila*.

In the BIS Yearbook of 1994 Nigel Service reported in an article "Looking at *Iris pseudopumila*" about a visit to the islands of Malta, Gozo and Sicily. He found the Maltese colony to fall easily within the variation limits of *I. pseudopumila*. But the plants he saw were all more or less variegatas, that is, yellow flowers have a large dark-brown spot on the falls that almost entirely covers the blade. On Gozo, however, he found taller plants, the flowers to be of a pleasing bluish-violet on stems over 20 cm (8 in.) tall with

the tallest being 30 cm (12 in.). This and measurements of other flower parts induced him to suggest a new subspecies *Iris pseudopumila* Tineo subsp. *gozoensis* N. Service. The description was given in 'The New Plantsman', September 1999.



In 1997 I received two *Iris* rhizomes from Malta, collected on different places by an Maltese acquaintance of my Austrian *Iris* friend Robert Scheck. They bloomed the following spring and revealed themselves to be a smaller yellow variegata and a taller blue of almost 50 cm (20 inches). This excessive height might have been due to good feeding, but I was amazed at such a large plant with but 16 chromosomes, and I decided to pre-

pare a rhizome for a count later on. Well, this resulted in the unquestionable number of 40. My recent count of the yellow/brown variegata, by the way, revealed the expected number of 16.

These findings, however, raise some questions:

Nigel Service found no blues on Malta. Should the Maltese native, who is not to be found in the moment, have been on Gozo for another color?

I hope a blue colony does exist on Malta – are the blue flowering pseudopumilas on Malta and Gozo identical with  $2n=40$  chromosomes?

There are some more bearded species with 40 chromosomes, *Iris lutescens* Lam., *Iris*

*marsica* Ricci & Colasante, *Iris revoluta* Colasante, *Iris subbiflora* Brotero and others. All these are considered as ancient doubled natural hybrids of two species with sets of 8 and 12 chromosomes ( $2 \times 8 + 2 \times 12 = 40$ ). The Standard Dwarf Bearded species likewise have a chromosome complement as this. All these have inflorescences with at least two flowers, but some have many more. The bent to produce only one flower per stem lies unquestionably in the sets of 8, while the 12 chromosome species are all branched. So how can it be that a 40 chromosome species is one-flowered?

While I am writing this Nigel Service is making preparations for another trip to Malta and Gozo. It is to be hoped that he can throw some light upon this mystery.

## BACK ISSUES

All back issues of SIGNA are available at \$4.00 each.  
Make checks or money order payable to SIGNA and order from:

**Carla Lankow**  
11118 169th Avenue SE  
Renton, WA 98059

*NOTE: On page 3288 of the Fall 1999 issue, the price of back issues was listed at \$2:00 each. It should have been \$4.00 regardless of what issue is ordered.*

*The following has been reprinted from the  
British Iris Society Species Group Bulletin Autumn 1999*

## UNGUICULARES

Winter flowering irises

by Margaret Criddle

I have been growing these beautiful iris for 12 years and am absolutely bowled over by them. I have many varieties and am very lucky to have been given quite a lot straight from the wild by a BIS member in Portugal. My first acquisitions were 'Walter Butt' and 'Mary Barnard' from Beth Chatto and I have been adding to my collection even since although a pink and a white still elude me - has anyone a plant of either that I could buy, please?

Of course I grow them from seed too, and find them relatively easy this way. I put 1/3 good garden soil in the bottom of a pot, then 1/3 soil based John Innes compost with the seeds on top and finally 1/3 fine grit. Then they get left to the elements outside on a table which is sheltered by plants growing on pergola. They stay there for several months and then, if necessary, go under the foliage of plants growing against a south-facing wall, with added pea shingle. I have good results from feeding the seedlings as I plant out with fish, blood and bone. After that they seldom get fed directly although I believe they benefit from the seaweed meal from the other plants around which are fed yearly. I am very fortunate to have an apiary very close by so the bees do the pollinating for me.

Among the collected plants are several collected in Turkey, Greece and Crete. They include *I. unguicularis* ssp. *carica* var. *syriaca* and some smaller and dwarf forms. I have also had 'Marginata' and 'Marondera' from UK sources plus two still bearing the old name 'stylosa', and *I. lazica*. From BIS seed, originating from New Zealand, is a range of seedlings similar to 'Mary Barnard' with colours from quite pale to nearly as bright as Beth Chat's named one.

Unlike other cuttings I take, I have been very successful with those from the named plants. They are taken in April-May. The collected plants are too special to treat this way and are left alone. Most of them have fine foliage, about 6" (15cm) tall, and the flowers nestle in the foliage, about halfway up. They are delightful plants and grow very happily.

### DON'T GIVE UP TOO QUICKLY

-Anne Blanco White

With the Unguiculares, there is one aspect worth mentioning about their cultivation. Being evergreens they hate having their foliage wiped out as can happen with wet snow freezing around the leaf bases. The essential here is not to dash in and root out the apparently dead corpses because the plants can grow happily with their rhizomes layers as many as six deep. They should be left severely alone for the next 12 months and the odds are better than evens that long before then new leaves will come up from down among the dead men. These leaves should be given a clear year of kindly cultivation before replanting. I know this from experience and there was an alpinist man from the south coast of England who lost 90% of his stock to such a winter event. He was nearly in tears when he told me about it, but I gave him that advice in the early spring and he turned up beaming all over his face the following autumn and said I'd been quite right.

## In Praise of *Iris milesii*

by Jean Witt

Among the small group of irises useful for filling the gap here in the Pacific Northwest between the end of the Tall Bearded season and the beginning of the Japanese irises, is one of the Crested irises, *I. milesii*. Opinion seems to be divided on its garden merits. Dykes found the flowers disappointing, small and somewhat fleeting and, what's more, he did not care for the color. Recent authors have been more positive in their assessments and available photographs bear them out. While it is true that each flower lasts only a couple of days in my garden, there are three or four in each position producing quite a succession of blooms.

*I. milesii* is a Sino-Himalayan native occurring in the provinces of Yunnan and Sichuan in China as well as adjacent annexed Tibet. A fine bloom stalk is illustrated in color in Kohlein's book, "Iris". He says it grows in open woodlands around 5900 feet (1800 meters). Kohlein has found it fairly hardy which is not surprising since the leaves are deciduous. Bloom stalks are about 28-35 inches tall (70-90cm), with several branches, each subtended by a large leafy bract. The flowers might be described as smaller, more rosy versions of *I. tectorum* with open, upcurving standards; the pendant, tip-tilted falls are mottled in darker violet on a pinkish lavender ground; the crest is white and

yellow, lacy and delicate; the tips of the style arms are fimbriate, as in *I. japonica*.

Rhizomes are about the size and shape of MTB rhizomes but bright green rather than tan-brown and transversely ribbed with the scars of old leaf bases.

The leaves are thinner in texture than bearded iris leaves, and more prominently ribbed, an inch or more wide, the basal ones about a third to half the height of the stem. Large leafy bracts continue up the stem, decreasing in size toward the top. Kohlein says the flowers are 3 to 3½ inches wide; mine were more like 2 to 2½ inches.

My plant is growing in full sun in rather poor soil and it bloomed again this past June after several years' lapse. This lovely event was due perhaps to all the extra rain last spring. A large clump that I saw in another local garden, in a sunny spot in rather heavy woods, looked much more lush and had more flowers. This leads me to believe that this species—as its origin suggests—needs woodland conditions, open shade, rich humusy and somewhat acidic soil and plenty of summer water.

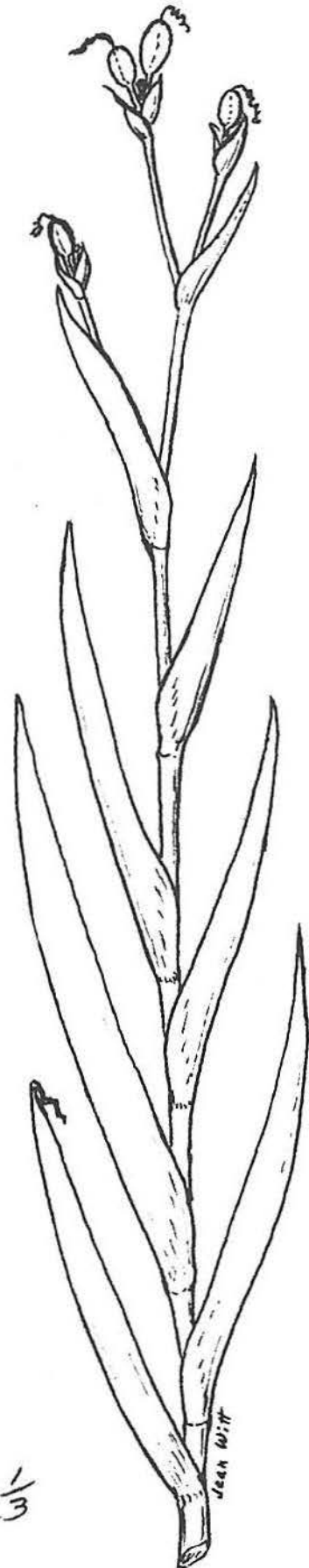
References shed no light on whether all the plants now in cultivation are descendants of the original circa 1880 seed collection by R. Foster. *Brian Mathew* implies that the species exhibits little variation in the wild. The flowers on my plant are much the same as

those illustrated in Kohlein and in the photo which accompanies *William Shear's* article on Crested Irises in the July 1999 AIS Bulletin. Shear says he has never been able to set pods on *I. milesii* with pollen saved from *I. tectorum*. There are no white flowered forms of record. One cannot help but wonder whether new collections from the wild would bring us more variation, and perhaps larger flowers. Does anyone have friends trekking to the Himalayas?

*[Editor's Addenda: Chris Chadwell made some new collections of seed of I. milesii from the Upper Indus regions in the early 1990's. However, I was never able to get them through Winter 1 here in the south interior of BC. Contact Chadwell at 81 Parlaunt Rd., SLOUGH, Berks England SL3 8BE. He has other species Iris seed for sale as well.]*

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$\times \frac{1}{3}$

# Two New South Korean Natives -- The First Time in Cultivation in North America

by Jan Sacks

What an honor to be part of such an exciting event. In November of 1997 Marty Schafer and I were putting our garden to bed for the year and our friend Darrell Probst was off to South Korea on a plant collecting trip. One day a package arrived from Darrell in the mail! Marty and I were breathless - Darrell had not expected to find irises other than *I. sanguinea* on his trip and we could tell immediately these were not *I. sanguinea*, the rhizomes were too small. In beautifully wrapped little packages were tiny plants - the first label read *I. odaesanensis*, the second simply said "sp. from Pyon-san Bando". We ran to the book shelf, having never heard of *I. odaesanensis* - and grabbed Mathew's The Iris. He had not seen a living specimen, but described it from herbarium collections and photos. It was small and white flowered- an "obvious beauty". We went on to the Iris of China by Waddick and Zhao Yu-tang and found out it grew on only one mountain in Korea and was not in cultivation. Though it was classified in *Chinenses* Mathew thought it would need further examination to see if it might be more correctly with the *Evansias*.

We could tell by the plants that *I. odaesanensis* was stoloniferous and wondered what we might be getting ourselves into and then there were the little nodules on the roots, rather like rootknot nematodes cause. We looked at each other doubtfully, but decided Darrell would never send us such a pest and carefully potted all the plants except one of each species which we planted directly outside. Every single plant lived.

But I'm getting ahead of myself - let me start at the beginning. Darrell went to Korea with two well-known American nurserymen - Dan Hinkley of Heronswood and Tony Avent of Plant Delights and the noted plant collecting couple from Wales of Crug Farm, Bleddyn and Sue Wynn-Jones. (For those of you who don't know of Darrell Probst, he is a long time member of SIGNA, was Seed Exchange Chairman for four years and has become a world-class expert on the genus *Epimedium*. Marty and I know Darrell as a good friend and the most observant and perceptive plantsperson we have ever met.) The group was joined by Ki-Hun, a guide from the Chollipo Botanical Garden.

I asked Darrell to tell me about collecting *I. odaesanensis*. He began, "These things are never where you expect them to be..." The group was in an area near the eastern end of the demilitarized zone. The maples were in gorgeous fall color. They went up a mountain - Mount Odae ("san" in Korean means mountain and so it is called Odae-san). When they got near the top Ki-hun mentioned there was an iris species that grew up there. The group went up the road and Darrell decided to go a different way. He looked everywhere for the iris. Walking along several streams in moist fertile situations he found all sorts of interesting plants, but no iris. In dry scrubby places it was the same. When he got back together with the group he thought, "I should have known better." THEY had found *I. odaesanensis* and he had not. Dan was very generous and gave Darrell pieces of his two collections.

The next day the group went to another mountain - Chuwang-san. Again Darrell explored on his own. He walked through young woods, dry and rocky, with humusy organic soil which must have been moist in the spring. From the bottom of a steep slope - Darrell caught sight of a thin mat of green leaves - rather like *I. verna* in the fall. He climbed to the top. Holding on to a small tree and hanging over the edge, with a 30 foot drop below, Darrell carefully collected small starts of three clones. They were growing in the pockets of rocks with 1/2 inch of organic soil covering the rhizomes. When he rejoined the group and told of his find, Ki-hun thought it could not possibly be *I. odaesanensis* because it had never been found on that mountain before. When he saw the plants, however, he confirmed that yes it did look like *I. odaesanensis*.

On his last day in Korea at Ki-hun's home, Darrell saw a picture of *I. odaesanensis* and was astounded how beautiful this little white flower was. Now he wanted to go back to Odae-san and collect more clones to have as much diversity as possible. I think he did quite well - he got three clones on Chuwang-san, two from Dan's collection on Odae-san and one which Ki-hun gave him from the Chollipo Botanical Garden.

As I mentioned earlier, every pot of *I. odaesanensis* lived. Though it was growing in the wild in dry shade we suspected that it might actually prefer other conditions. So, we planted them everywhere on our property - in all kinds of situations (except soggy) - sun to shade and dry to normal - and they have all grown well. It does not seem to be a delicate or finicky plant in spite of the beauty of the flower.

When Darrell came home from Korea he had with him a Flora of Korea and he showed us the fabulous picture of *odaesanensis*. We anxiously awaited the first bloom. Perhaps the plants would not be *odaesanensis*. In mid-May of 1999 one of the larger clumps bloomed - one stalk - two buds - just as promised

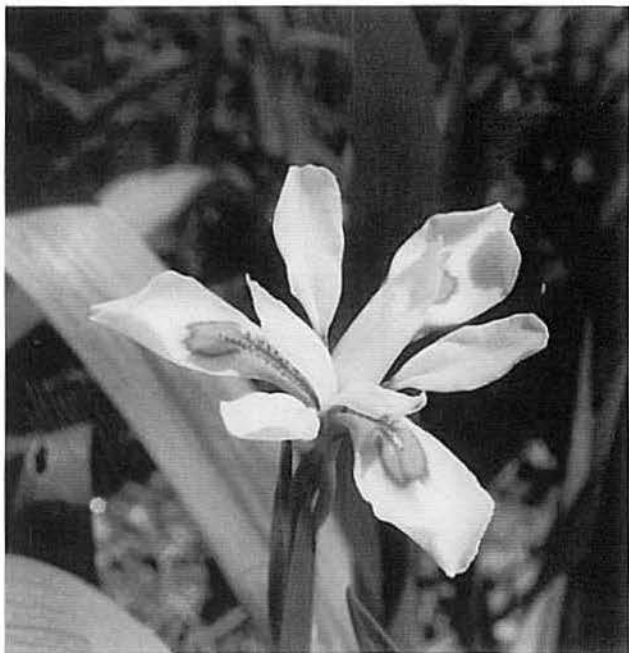
by Brian Mathew and we were not disappointed. What a tiny gem. The flower is a crisp clean white, 2 inches across on an 8 inch stem. The standards are held open at about 20 degrees above the falls which are horizontal with only a delicate smooth arch. The falls are decorated with golden yellow signals outlined in a warm medium brown. From the photos we've seen, the shape of this signal varies from clone to clone. Sometimes it is rounded, sometimes blunt and sometimes less distinct. Our flower has a very distinct halo which ends bluntly out on the fall with a small dip. The styles are held at about 30 degrees above the falls and show off the signal nicely. The most interesting feature of this little treasure is the haft area under the styles. There are two deep folds which form two ridges that are white with brown hatch marks. In the center, between and parallel to these ridges is a rope or cord-like structure which is not attached to the fall at its tip. This also is white with brown horizontal stripes and a brown tip. Having no background in botany, my impression is that this is not a crest. The crested irises I am most familiar with are *I. cristata*, *gracilipes*, and *tectorum* and their crests are quite frilly. I can imagine, however, that one could argue that the ridges on *I. odaesanensis* qualify as crests.

The growth habit of *I. odaesanensis* is nothing like the evansias I know. It spreads by underground rhizomes. Darrell says that in the wild it did not make a clump, but rather had a loose open habit. In the garden it makes a robust little clump. The foliage is a matte green, about 1/4 to 3/4 inches wide and slightly ribbed. We still have a lot to learn about how it grows, but we did observe new stolons surfacing in July about 3-4 inches from the clump. When we lifted a clump in August to divide it, there were many new growing points along these stolons and it appeared that this is how the clump fills in. It was not difficult to divide and the survival rate has been excellent.

The story of *I. odaesanensis* is quite exciting enough, but there is more - the matter of that other "sp." On the last day of his trip Darrell and the group went to Pyon-san-Bando along the west coast of South Korea where it was relatively flat. After driving around for a while the group stopped at a spot that looked interesting. There was scrub 8-12 feet tall which would have been field at one time, but was now totally shaded. Walking along a stream Darrell saw some very narrow and grassy looking leaves among sedges (*Carex*) on the bank above the stream. It was an iris, in very loose clumps with one fan every 3 or 4 inches. There were hundreds of them along the bank and a few on sand and gravel bars in the stream itself. Darrell knew it was not *I. odaesanensis* since the foliage was bright glossy green, quite flat, and less than 1/4 inches wide. The soil was gravelly and full of roots from the dense shrubs and was probably moist most of the year. He collected numerous clones. None of the Korean botanical garden representatives knew what it was and hence the label "sp."

In the spring of 1998 we got a call from Darrell - one of his plants of the "sp." was going to bloom. The watch was on and when the flowers opened, off we went to see it. It was a very small plant and produced a beautiful little yellow flower. Darrell had suspected that it might be *I. koreana* and it was. The following year one of our plants bloomed - a different clone, but also *koreana*. The flower is all yellow except for a brown halo surrounding a self yellow signal. In one clone the brown halo is pale and indistinct and comes to a loose point in the center of the fall (this clone is pictured). In the other clone the brown halo is distinct and the end is more bluntly shaped. As in *I. odaesanensis*, there are two outer ridges around two deep folds and each is marked with horizontal brown slashes. However, there is no central "rope", but rather a third ridge between the other two, smoother than the other two, and just yellow with no brown. The ridges on *I. koreana* come out onto the falls farther than in our *odaesanensis*. In fact, the central ridge protrudes slightly beyond the brown halo. The styles on both *I. koreana* have strongly split curls at the end which are slightly more upright than in the *I. odaesanensis*. In The Iris Mathew describes a brownish stain on the hafts of the standards and this is also clear in some of the photos, however, it is not apparent in our two clones which have bloomed. The growth habit of *I. koreana* has varied quite a bit depending on conditions, though it is clearly more robust in cultivation than in the wild. Its growth and increase habit is similar to *odaesanensis* though as we have more experience we might see more differences. We were particularly happy that all of these plants survived their move to cultivation, I think in large part due to Darrell's meticulous packing method. So I asked him to describe exactly how he does it. Using an automotive towel (paper, but tougher than a kitchen paper towel), he lays the plant's roots on the towel. Then he sprinkles a thin layer of peat over the roots, rolls up the towel, being very careful not to cover any of the foliage with the towelling. He moistens the towel, squeezes out the excess water (to avoid any rot) and wraps foil over the whole towel. Again, only the roots are enclosed and none of the fan. It's like a little pot. The roots can grow if they want. We expect these two new species which Darrell has brought us from Korea to become fine garden plants which many irisarians will be pleased to grow.





*I. odaesanensis*  
Photo by Jan Sacks



*I. koreana*  
Photo by Jan Sacks



*I. tenuis*  
Photo by Carla Lankow



*I. milesii*  
Photo by Carla Lankow



# *Iris tenuis* -Some Thoughts and Observations

By Carla Lankow

One of the first western American iris to be described was *I. tenuis* by Watson in 1881. This iris was originally placed in the series Californicae mostly, I believe, because of its geographical location. Later (in 1959), Lee Lenz placed it in the Section Lophiris with *I. cristata*. Despite its early discovery and description, it is one of the least well known probably because of its limited natural range. *I. tenuis* is known only from the upper parts of the Clackamas river drainage and parts of the nearby Molalla river drainage, all in Clackamas County in the state of Oregon. This small Pacific Northwest endemic is abundant in its range often forming gigantic carpets covering several acres. It makes one wonder why it isn't more widely used in horticulture. It may be that such luminaries as Davidson and Mathew have stated that it grows in cool, shady and moist areas. However, in my personal experience, the best stands I have seen were among *Rhododendron macrophyllum* and small shrubs in recently logged areas. These areas of partial sun would be moist in winter but quite dry in summer. This may be the main reason that *I. tenuis* is not more widely known or established in gardens because of faulty context and exposure information! Another possible reason that *I. tenuis* is not well known is because it isn't easily transplanted and seems to be difficult to cultivate outside of its limited range. I have had two different clones of this iris in the past and could keep it no more than two or three years. I am quite sure that my own failures with *I. tenuis* were due to giving it too much shade and moisture during the summer months. When I obtain *I. tenuis* again I will grow it in a little more sun.

The previously little known Korean Irises, *I. odaesanensis* and *I. koreana*, are now rapidly entering the trade. Both Garden Vision and Joe Pye Weed's Garden are offering *I. odaesanensis* this year. When I received one of these catalogues with a color picture of *I. odaesanensis* I kept returning to the picture, questioning in my mind why an iris I had never seen before even in a photograph should look so familiar. For two days I walked around with this in the back of my mind until one night it hit me- *I. odaesanensis* looks just like *I. tenuis*! Compare the two photos of *I. tenuis* and *I. odaesanensis* on page 3307. I know that looks alone mean little in deciding the relationship of species but this resemblance piqued my curiosity and I began to read what I could find on *I. odaesanensis* and the rest of the Chinenses series.

What I found is that several characteristics seem to be found consistently in most of the Chinenses series. In conversations with several growers I discovered that small nodules are found seasonally on the roots of several species in the Chinenses series. They have long been known to appear in fall on the roots of *I. minutoaurea* and this fact is mentioned in the British Iris Society's new book "A Guide to Species Irises". Recently AIS President Clarence Mahan stated he had also observed them on *I. rossii*. Darrell Probst also told me they were found on *I. koreana* and *I. odaesanensis* and that I should not worry that I had root nematodes! Their root nodules look very much like the nodules made by nematodes and closely resemble the storage nodules found on clover roots.

Though not mentioned in any reference literature that I have read, I have observed

transverse veins like those found in the series *Laevigatae* in the leaves of *I. koreana*, *I. minutoaurea*, *I. odaesanensis* and *I. speculatrix*. I do not grow *I. rossii* or *I. henryi* so I cannot say if they are present in those latter species. I would appreciate any feedback or information from anyone who has these plants on whether or not these latter two species have transverse veins.

Another characteristic that is found in the *Chinenses* series is a low, undissected ridge on the center part of the signal area of the fall. This ridge ends in what might be described as a small pleat in the fall. It is very different from the crest found on members of the *Lophiris* section. There are other species of iris that have a similar ridge but not quite so distinct as those in the series *Chinenses*.

As mentioned at the top of this piece, Lee Lenz placed *I. tenuis* in the section *Lophiris* with *I. cristata* because of the ridge on the falls, a ridge that is identical to those in the *Chinenses* series. This was the same morphological reason why *I. speculatrix* was also originally placed with *I. cristata*, in the section *Lophiris*, although now research by Professor Zhao has it aligned with the *Chinenses* series. We must question how much importance we place on this distinctive ridge on the falls of *I. tenuis*? Is it enough to align *I. tenuis* within the *Chinenses* series?

I must stress that I am not a taxonomist but merely a curious gardener and amateur botanist. However, after noting some of the similarities between *I. tenuis* and members of the *Chinenses* series, I immediately searched for someone in our area that was growing *I. tenuis*. I wanted to know if their *I. tenuis* also had transverse veins in the leaves and if anyone had noted nodules on its roots. Alas, after a couple of phone calls I

realized that at this time of year *I. tenuis* is totally dormant. During dormancy the resting buds of *I. tenuis* look quite similar to the resting buds of *I. cristata* of the section *Lophiris*, the crested iris section to which *I. tenuis* is now assigned. The leaves of most of the species in the *Chinenses* series are at least semi-evergreen. So you see there is plenty of argument for *I. tenuis* to remain with the crested iris. (You can see why taxonomists are never out of work!)

A great deal more study must be done before we know how and if *I. tenuis* and the Korean species are related. Chromosome counts on all of them would be very helpful. I will keep you posted on my observations of *I. tenuis* and the irises in the *Chinenses* series as well as the small crested iris such as *I. cristata* and *I. gracilipes*. At present this article must end with that oft-heard phrase "To be continued".

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## The True Character of *Iris Subdichotoma* Y – T Zhao

By Dong Xiaodong (1), Li Jihong (1), Zhao Yutang (2)

[(1) Dali Normal College, Dali, Yunnan Prov. 671000; (2) Northeast Normal University, Changchun, Jilin Prov. 130024]

*Iris subdichotoma* Y. T. Zhao is a new species, described in 1980. Its leaves, flower scapes, fruits and seeds are very similar to *I. dichotoma* Pall. by outward appearance. The type specimen, which was the base for the description was not in good condition: no crest or beard on their fall could be observed. Because of this, I put this species into the Subgenus *Pardanthopsis* (Hance) Baker, as the second species of this Subgenus, when I wrote the book *Flora Reipublicae Popularis Sinicae*, Vol. 16 Part 1.

For get a clear understanding of the real feature of this species, the authors made three trips to the known location of the type specimen at Jiangbian Village, Hutiao Gorge, Zhongdian County, Yunnan Prov. This location lies on the bank of the Jinsha River (upper reaches of Yangtze River) near the border of Yunnan, Sichuan and Tibet Provinces. This place is at an elevation of around 3500 meters, in a remote mountainous district without good transportation facilities. We were not able to collect live plants of this species on our first visit, but finally, we were able to collect and observe living plant with their flowers, fruits and seeds.

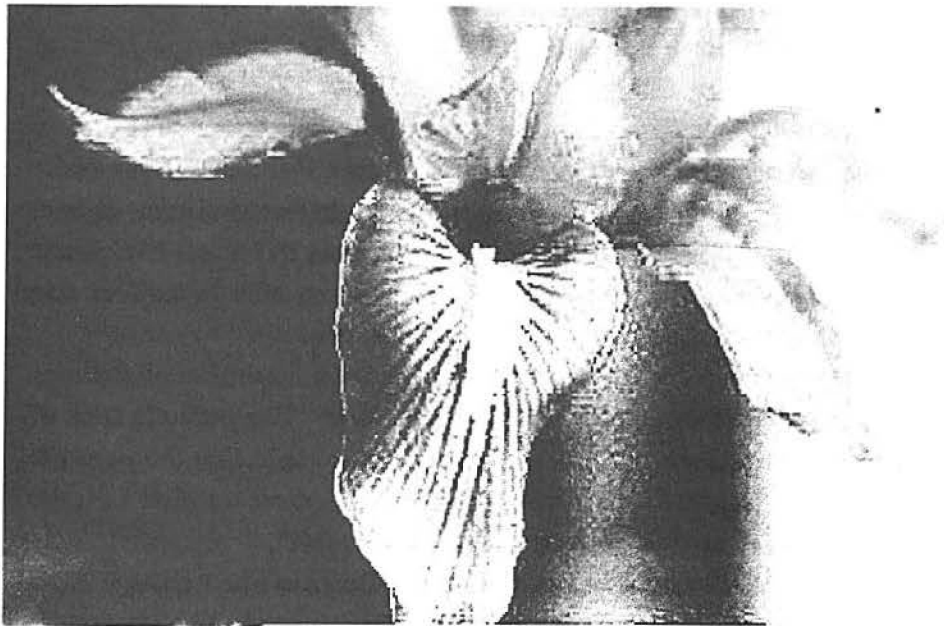
When we observed the live plants, we have seen a number of features which distinguish them from their original description. The perianth tube of flowers is almost absent; while the original description said that the perianth tube is "about 2 cm long"). there is a yellowish, rough crest on their fall; the original description states "not crest or beard on their fall".

Owing to the crest on their fall, their classification must change from the Subgenus *Pardanthopsis* to Subgenus *Crossiris* Spach\*. The characters of flower is very similar to the flower of *Iris decora*, which belongs to the Subgenus *Nepalensis*, which also has a crest on the falls of their flower. Studies of Palynology also support that this species belongs to Subgenus

*Nepalensis*, because the morphology of the pollen grain of *Iris subdichotoma* is 2-syncolpate and cross reticulate: these characters are similar to *I. decora* and *I. collettii*, but *I. dichotoma* which belongs to the Subgenus *Pardanthopsis* and their pollen morphology is monocolpate and reticulate.

Finally, there are no fusiform roots in *Iris subdichotoma*, although their flowers and the morphology of pollen grain are very much like the Subgenus *Nepalensis*. We think it is safer to place it in the Subgenus *Crossiris*.

(\* Ed. Note: According to the Mathew classification this would be the Subgenus *Limniris*, Section *Lophiris*



*Iris subdichotoma* Zhao, showing the raised ridge – like crest in the center of the falls. This species is newly assigned to the Crested irises, Subgenus *Crossiris*.

# Iris in Art and History

by Jean Witt

*[Editor's Note- Jean Witt has for at least 15 years searched for pictures of iris and references to iris in books on art history and archeology This is our latest report on a few more of her discoveries. Jean challenges SIGNA members with access to museums and large libraries to add to this information.]*

Taken from the book, "Gardener's Art Through the Ages", 7th Edition, Harcourt Janowich Inc. NY. 1980.

p. 257: Iris-like designs in the dome before the *mihrab*, in the (what?) mosque at Cordoba, Spain. This building was begun in 784 AD and enlarged several times during the 9th and 10th centuries. The *mihrab* is a niche, a standard feature in all later mosques. The iris-like designs are on the inside of the dome.

p. 527: Leonardo da Vinci's painting "*The Virgin of the Rocks*", circa 1485. There is a clump of small, tall-stemmed irises with light colored flowers in the lower left hand corner.

p. 582: Purple irises are one of the flowers decorating a page from the Bellevue Breviary, an illuminated manuscript circa 1325, done by Jean Pucelle, a Parisian illuminator.

p. 597: Hugo van der Goes "*The Adoration of the Shepherds*", center panel of the Portinari Altarpiece, circa 1476. Vases in the foreground have purple and white irises with red lilies and blue columbine.

p. 754. Philip Otto Runge "*The Time of Day: Morning*." 1809. Light colored bearded irises in the foreground.



# 1999 Seed Exchange Report

by Jan Sacks and Marty Schafer

This was a slightly off year for the seed exchange - there were fewer donations of seed and fewer people ordered seed. Many people wrote of difficulties with the weather causing poor seed set. On the positive side, we had 65 donors, including 20 brand new donors. Now if next year we can get all the new donors and more of the previous donors to send seed we will have a great list for 2000. We accept any amount of seed - if you have collected only one item please send it along. **The deadline for mailing seed in 2000 is November 10.** If you know your seed will not be ripe by that date, please send a list of these late species so they may be included in the seedlist. Send to Jan Sacks and Marty Schafer at 337 Acton St., Carlisle, MA 01741-1432, USA or use e-mail: [jpwflowers@aol.com](mailto:jpwflowers@aol.com). We must have either the seed or a list in our hands by November 10 in order to get the Seedlist out before Christmas and the seed in the member's hands in January (when there is still time to stratify seeds).

All seed should be clearly labeled. Anything hand pollinated should be marked **HP**. Anything wild-collected should be marked **coll**, with the location of the collection. On all seed it is very helpful to have a short bit of extra

information as to color, or any other specific characteristic of the parent. If you are at all unsure of the true identity of your iris let us know and we will include a question mark with the listing. It is always a good idea to look up a description of a species (Mathew, "The Iris" is a good reference) to confirm that your flower, plant, seed look like the description.

Among this year's contributions were some wonderful species that are often in very short supply and this year we had plenty. Among these were the evansias - *I. cristata* and *lacustris*. We even had a few *I. gracilipes* though we could use a lot more of these. Look for the germination note elsewhere in this publication regarding these species. As usual, collected and hand pollinated seed were very popular. A special thanks goes out to all of you who make this effort. It is so valuable to have hand pollinated seed as these are the only ones which we know to be pure species. **PLEASE** make a few hand pollinations. If you have access to irises or irids in the wild, please try to collect some seed. We always need seed of arils. The bearded people have been doing a great job on the pumilas, aphyllas and pallidas. Keep them coming. To 40 chromosome siberian and PCN growers - we REALLY

3314



REALLY REALLY need hand pollinations of known pure species. These irises cross so

readily in the garden that the pure species are disappearing.

**Here is a list of the most requested items in 1999:**

- |        |   |
|--------|---|
| 99A006 | pumila - very dark purple, nearly black ex. Caucasus from <i>John and Lucy Burton</i> .   |
| 99D045 | humilis HP from <i>Harold Mathes</i> .  |
| 99N217 | ensata - ex. Rodionenko coll. Vladivostok, Russia, very very early, fine plants from <i>Rob Stetson</i> .   |
| 99N276 | versicolor - coll. Madison Co., NY in swamp near Sangerfield, 1.5' with red outer roots and leaf bases, heavily branched, tight clumps from <i>Greg Davis</i> |
| 99R390 | unguicularis - Greek form from 94R184, bluish with markings, blooms above foliage from <i>Jim Rhodes</i>  |
| 99N392 | verna 'Eco White Angel' from <i>Sacks and Schafer</i>   |
| 99S404 | lacustris - ex. Presque Isle, MI from <i>Jill Copeland</i>  |

For the 1998 Seedlist we took in \$2,881.88 with expenses of \$555.79 for packaging and shipping and \$437.92 for the list. All of the work on the seed exchange is done by volunteers. Many of you sent additional donations which are greatly appreciated. The Seed Exchange is an important fund-raiser for SIGNA and supports both seed collecting grants and the cost of our semiannual publication. Anyone who is planning a seed collecting trip can apply to the SIGNA Seed Chairs for a grant. These grants are small but many trips are made up of just such small grants.

We received the following e-mail from Brita Carson and thought we'd share it with you.

"A 'better late than never' thank-you for the seeds you sent me in

January. I've been out to check their progress (The watched kettle which never boils - I try not to look on a daily basis, but how can we resist) and have some great germination results. Seeds from Andy Wheeler and Lorena Reid have been particularly good....The seed from SIGNA went into the glasshouse which is kept just above freezing. We have had some warm sunny weather over the last couple of weeks which must have worked the miracles....The tricky part for me comes now, when they go outside and I struggle to keep my seedlings free from slugs and either protected from too much rain or alternatively from drought. Under glass found quite a few caterpillars that had taken a few mouthfuls out of the leaves. However that's the challenge that

keeps us interested - to get them to the flowering stage.

"We do appreciate all the tiring work you and your team do to keep us supplied with seeds. It is an incredible thrill to receive a parcel with packets of seed through the post, and then to look up the sheets to find out which

ones you've been lucky enough to get. I do hope you know, you send us that same feeling of excitement that you had as a kid just when you are about to open your birthday presents. The anticipation before they arrive also helps to pass the winter days."

#### **GERMINATION NOTE**

One of the most popular species in the Seed Exchange this year was *Iris cristata* in its many forms. We have learned from experienced growers that *I. cristata* seed takes two years to germinate. So when your seeds don't germinate this Spring, save the pot until next Spring. We have also heard that *I. gracilipes* behaves the same way and we can guess that *I. lacustris* may do the same thing. Be patient and Good Luck to all. *Marty Schafer*

## 1999 Seed Exchange Update- April 2000

The 1999 Seed Exchange is over but as usual there are seeds that are still available. Almost half the selections are available! Here's good second chance for the seed freaks among us. As an experiment, Rodney Barton will have the availability list at the following site:

<http://lightning.prohosting.com/~plankow/signa/seedexch.htm>

Rodney informs us that Arils and Hexagonae are in very short supply but that the other categories are deep. Please list substitutes!!!

The following numbers are gone from the list- 157, 160, 178, 217, 257, 258, 438 and 443

Prices are \$.50 US per package plus \$1.00 P&H for non members. Make checks payable to SIGNA.

Finally Rodney's e-mail is: [rbarton@hscgw1.hsc.unt.edu](mailto:rbarton@hscgw1.hsc.unt.edu)

By the way, that is a one (1) after hscgw.

**Mail your orders to:** Rodney Barton  
3 Wolters St.  
Hickory Creek, TX 75065, USA

## Series *Californicae* and Species Definitions

A Review of Pacific Coast Iris species delimitations by Dr. Nelson Young  
reviewed by Anne Blanco-White

DNA analysis has become a well-established criterion in the modern botanical world of systematics (taxonomy) and is used extensively to confirm or counter claims of species status. Morphological qualities and biogeographical information are no longer the ramparts of what constitutes a species.

Dr Nelson D. Young of Vanderbilt University (formerly at Cornell U.), published a paper in 1998 (Journal of the Linnean Society) discussing his research into the Pacific Coast Irises. His research was based on a cladistic approach which is not tied to a fossil record or evolutionary method. Cladistics is a transformed phylogenetic method that compares species to its own tribe and tries to find a common ancestor.

There are a number of ways of defining precisely what constitutes a species in the plant world but three definitions seemed acceptable in this context: 1) similar plants isolate so that they cannot interbreed with any others-*biological* ; 2) a group of plants which can consistently be recognised by some particular characteristic which distinguishes them from their nearest relations-*phylogenetic*; and, 3) a group of plants which can be shown to be their own closest relatives are a form of phylogenetic species thus-*genealogical*. These three groups are not necessarily identical when the analyses have been completed.

The true beauty of the *Californicae* to a botanist is the mystifying variety they show within a limited geographical area yet their continued ability to produce fertile crosses while retaining clear physical differences. Dr. Young did not shy away from this phenomenon and challenge. Additionally, he restricted his

work to plants accepted as true species and excluded all intermediate populations that could be regarded as hybrids whether naturally occurring (swarms) or resulting from human interference in the general ecology. Thus, his genetic material was all of the species identified by Dr. Lee Lenz with the addition of *I. thompsonii*.

Since the various members of the *Californicae* have been differentiated by physical characteristics for a long time, Dr. Young started his investigations in this field using isolated populations. Plant material was collected from the five Oregon species and their subspecies. They are *I. chrysophylla*, *I. fernaldii*, *I. munzii*, *I. purdyi*, *I. tenax* as well as the subspecies *klamathensis*. Measurements were made of the lengths of the perianth tubes, spathe valves, longest leaves, ovaries and pedicels, while branches and flowers were counted and flower colours assessed even though this last feature was excluded from the final morphological analysis. They could all be clearly distinguished from each other except for *I. thompsonii* which, whether studied alone or combined with *I.*

*innominata*, could not be adequately separated from neighbouring species and appeared to be intermediate between *Ii. innominata* and *douglasiana*. Curiously, when flower colour was excluded, it did not prove possible to distinguish between *Ii. douglasiana* and *bracteata* though there are a number of other characteristics which make them quite different.

The next move was to perform cp [chloroplast i.e. pigment molecules] DNA analysis on the Series *Californicae*. Dr. Young used as an additional check or control three other irises called 'outgroups': They were *I. chrysographes* Dykes (since the *Californicae* are known

to cross with the Sibiricae (although the seedlings are sterile and also because there is a suggestion that the Sibiricae might have arisen from the Californicae), *I. prismatica* Pursh where again crossing can occur and *I. ensata* Thunb. None of these outgroup Iris were obtained directly from the wild and their presence or absence made no difference to the final sequencing of the P.C.I.'s (Pacific Coast Iris'). In fact, they were shown to be fairly remote from them. At least three individuals from separate populations of every species, except *I. munzii* with two, and at least one from each subspecies (and also the outgroups) from all three states were used for 'sequencing'. This process in DNA analysis is defined as a way of determining the order of the amino acids in a chain of nucleotides. This provides the background for a genetic map. The biochemistry employed is complicated and the subsequent computer reconciliations are very involved. The bottom-line in this phase of the analysis showed what was closest to each other from a genetic point of view. Again, *I. thompsonii* was included because it had recently been accorded specific status purely on morphological grounds: it did seem to be a fully stabilised form and to breed true. However, it became clear that *I. thompsonii* cannot be accepted as a true species since it was clearly shown that despite its physical resemblance to *I. innominata*, there is cpDNA from *I. douglasiana* in all *I. thompsonii* populations studied. All the rest were quite similar genetically.

The cladistic analyses by Dr. Young clarified some interesting points in regards to introgression. Introgression is defined as "the incorporation of genes from one species or subspecies into another related species or subspecies. It arises as a result of successful hybridization and subsequent backcrossing of the hybrids with one of the parental populations." [Penguin Dictionary of Botany] When the various

cpDNA samples from different populations of a species were laid out on what are known as cladograms, they were frequently inconsistent with each other but, at the same time, consistent with other species. There is one group of *I. chrysophylla*, *douglasiana*, *fernaldii*, *macrosiphon*, *purdyi*, *tenuissima* and *xthompsonii* which have shared 'polymorphism' (different looking forms of the same species) while other members of their species have slightly different arrangements. In fact, while they might be very different to the naked eye, different species could be nearly identical under cpDNA analysis. In effect none of them are descended from any of the others but are probably all descended from a single ancestor from which they have all diverged as a result of the influence of locality and meteorology. This again is the bedrock of the phylogenetic perspective. Curiously, it appears that the Californian species do not share certain basic cpDNA combinations with the more northern irises giving rise to a suggestion that they may have developed from a fairly recent but now seemingly lost common ancestor from the south.

Dr Young states that while the Section Californicae can safely be regarded as a biological species and its individual members (excepting *xI. thompsonii*) accepted as phylogenetic species, they cannot be accepted as genealogical ones. He is also quite certain that cpDNA analyses should always be carried out on more than one population of a putative species to give scientific results.

*Ref: Pacific Coast Iris species delimitations using three species definitions: biological, phylogenetic and genealogical. Dr Nelson D. Young, Biological Journal of the Linnean Society (1998), 63:99-120.*

# Phone Call from Florida

## The surprising tropical *Hexagonae*

By Sam Norris

**April 10, 1999-** Received a call from Florida from a gentleman named **Michael Gideon**. He tells me he collects the species *hexagonae* iris as well as growing and hybridizing them. He is interested in finding out more about these plants, and would very much like to see an evaluation of these made the way it was with *I. nelsonii*.

From what he told me in the short time we talked, there are variations in the *I. hexagonae* native to Florida that have never been described before, many more than were ever given a description by Dr. Small. Wide variations in bloom season, size of bloom, color, and in fact just about every variable characteristic.

Turns out that Michael started growing iris some seven years before Hurricane Andrew caused so much damage in Florida. The iris he grew was Mac's Blue Heaven that was given him by an old lady who was primarily interested in growing day lilies. After the Hurricane-of-the-century, he moved to Sarasota (**from where?**) and while driving back and forth, he saw some of the iris growing in a ditch. He and his wife were looking for something that could stand up to the vagaries of the Florida weather and the native *I. hexagonae* seemed to fill the bill. At this time, he and his wife started collecting them and buying some of the named cultivars. Eventually, Jim Waddick also sent him some of the plants he grew.

He and his wife have been collecting over an area that Michael estimates is about 30,000 square miles, from south of Miami to Tampa and then east about 100 miles. He thinks that they can be found growing any place in Florida where the fires haven't killed them.

The variations found seemed to center around the location of former native villages. Michael is of the opinion that most of the varieties were 'grown' by the native tribes for use in their daily life, possibly as

medicine from the rhizomes or fibers from the leaves and for other unknown ethnobotanical reasons. He is of the opinion that the LA's (Louisiana Iris') were either introduced into Florida by the natives or else there was a selection made of the plants that were already growing there when the natives arrived. He further thinks there is a good possibility that the LAs growing in Louisiana and Texas may have been transported there from Florida. The kind of investigation that Michael would like to see done could well pin this down. However, the majority of horticultural work being performed with *I. hexagonae* is slanted towards the iris growing in the climes of Louisiana and Texas.

One of the things that leads him to believe that the plants might first have been native to Florida is that he has been able to find duplicates of every one of the species usually considered to be endemic to Louisiana and Texas growing in the wild colonies in Florida! This includes the reds and the yellows of *I. fulva* and *I. nelsonii*, in the size ranges of both these species.

There are a number of things that could be done to help pin this down but unfortunately these are beyond my poor range of expertise. I told Michael that I was too old and my health too poor to start in on such a long project but my objections didn't deter him. 'Nonsense!' he chuckled and he offered to send photographs, seed, and plants for my evaluation. How could anyone turn down an offer such as that! I only hope that the Florida species do as well for me here in Kentucky as they have been doing in their home state and that I don't prove too much of a disappointment to Michael as have some of the others he's contacted.

**May 3-** Michael called again, primarily to check on whether or not the envelope he sent with pictures and descriptions of LA iris he had collected made it here all right. It had.

Later, about the third week of May, received two very nice rhizomes that Michael was certain corresponded to *I. savannarum* and *I. rivularis* as they had been described by Dr. John K. Small.

**June 17-** Got a letter off to Michael to let him know how the two iris were doing. Later that afternoon, received a package in the mail from Michael that contained collected hexagonae iris seed, somewhere between 1200 and 1500 of them. I would really like to grow them all but as precarious as my health is, this just isn't possible. Instead, will keep a couple of hundred, then with Michael's permission, will send the rest to SIGNA.

**July 3-** Another letter arrived from Michael and, as I had hoped, his intentions were that I take what seed I wanted and send the remainder to SIGNA. In my last letter to Michael I mentioned the problems caused by the Verbena moth. Apparently, this problem we experience isn't a problem for him with the hexagonae in the southern part of Florida. There, in Sarasota, the iris grow year round and in self-defense they have developed toxins that will either kill any predators or else strongly discourage them. Michael also writes that the LAs he grows are attacked by the insects but that the native FL iris are not! This would be a big plus for the iris growers if this could be bred and worked into garden varieties.

He also writes that *Bob Ward* in Arkansas and *Jim Waddick* in Missouri grow and bloom some of his collected plants. I am glad to hear this as plants from the tropics are always suspect in our colder climates. Apparently they are doing very well and, in fact, have more vigor than most of the conventional LAs.

The seed Michael gave me was collected in Monroe County, the southernmost county in Florida. This is in zone 11 and in the northern end of the Caribbean. Plants from this seed must be exceptionally vigorous to perform well over such a wide range of climates. These hexagonae are definitely tropical plants and the first that have ever been reported. Michael writes that Small never could have seen or collected any of these plants as there were no roads in that area at

the time he was collecting. As to whether any of these plants could be assigned species status seems doubtful, what with the wide variations that Michael writes about. They sound more like a hybrid swarm than they do good species. The location where this seed was collected is isolated from any other iris so there was little or no chance of outside pollen figuring in the crosses.

Michael and some of his friends are working to determine the range where some of the gene types express themselves. This is a big job they have taken on and no doubt they would welcome some outside help.

But whatever they are-good species or plants from a hybrid swarm- it will be a pleasure to grow these plants and to see them bloom.

**INSERT- UPDATE** on Norris rhizomes  
March 20/00

**Michael Gideon ( ) -**  
e-mail:

**Hexagonae Project Mission**

### **Cleanup Iris**

A note from the New Scientist, 22 March 1997, page 24, cites *Iris pseudacorus* as being the most effective of several kinds of water plants for removing the herbicide atrazine from contaminated water. This was apparently accomplished by microbes on the plants' roots--treating them with disinfectants killed the microbes and prevented the cleanup.

### **Bilingual Botanists**

Where were our bilingual botanists when we needed them? It seems that the place name for the station for *Iris missouriensis* in Mexico--Los Lirios--is simply Spanish for The Irises, suggesting that when the location was first settled there must have been great fields of wild irises such as we still see them in some places in eastern Washington. If someone had only made this connection sooner, we would have spared decades of doubt as to the reality of this species in Mexico!

# The LIVELIER Iris

by Bob Woodward

(Reprinted by permission of author from the BC Alpine Garden Club Bulletin, Fall '93)

In Greek mythology Iris was the goddess of the rainbow, a rather insignificant but well-meaning deity whose hallmark was her trouble-shooting capabilities. In fact, the Latin root of the word Iris is "rainbow". Whenever a hint of strife affected god or mortal, Iris was expected to travel the rainbow road and sort things out and without a great degree of success if we follow the myths closely. Iris is depicted as a rather earnest do-gooder, a bit plain-Janeish but with a flare for fashion style. Her "coloured raiment" is often remarked upon as having just the hint of the *outré*, perhaps a little *over the top* by overdoing the intensity in her tints and tones.

Curiously, much of the attendant mythological lore applies to the genus of plants named after the goddess Iris. Most people look upon the Iris as a rather serviceable plant- useful, well-meaning, even colourful- but possibly not of the first rank and inspiring unwavering affection.

Well not this cookie! Iris is, has been and, I believe, always will be one of my favourite genera. I've never met one that I didn't like. Several that I have met I have swooned over and there are some, as yet unacquainted, that I would simply die for.

Some of the common names for iris are: sword-flag, fleur-de-lis, dragon flower, daggers, livers and shalders, yellow skeggs!, fliggers, Jacob's sword, cegg (Anglo-saxon for a small sword) and gladyne (a Chaucerian reference and possibly refers to the Gladwin Iris).

So let's survey some of the lore associated with iris before getting into iris I have known and loved.

The ancient Egyptians used the flower as a symbol of triumph, (as well they might if they were trying to grow some of the more difficult ones!). The iris emblem is carved on statues, temples and even the Sphinx. The flower is of course the emblem of France (and Quebec), supposedly because a certain King Clovis in the 6<sup>th</sup> Century found an escape route in battle because he knew that where Iris pseudoacorus grew the water would be shallow and a place to retreat safely. The fragrant roots of iris are used for tooth powder, hair spray or moth repellent. A distillation of iris is useful in treating eye infections and Renaissance herbals touted iris root mixture as a face cleanser for "freckles, pockeye and whelkye." Yellow dyes are obtained from the flowers and black dyes from the roots. Your basic black frock from iris roots was originally called Sabbath black and was used by French Catholic priests that were simply known as Black Robes.

Iris is the emblem of St. Barbara.

Tennyson wrote "In the spring a livelier iris changes on the burnished dove." But the very next line is what has gained immortality-"In the spring a young man's fancy lightly turns to love." Iris Love! I'm sure and I'm all in favour. Milton praised "sky robes spun out of iris woof" and wicked Lord Byron spoke of colours "melted to one vast Iris of the West."

Thus the lore has gone from some very useful herbals and names like yellow skeggs to poetry that ostensibly the iris

connected the firmament to the earth. Often there are various colours within the corolla, especially an intense signal patch on the falls. The falls are also often pencilled and etched, all in the aid of attracting pollinators. Within the range of the genus almost every colour occurs. Many are angel white and one or two come as close to black as the plant kingdom (with its' oppressive emphasis on photosynthesis!) will allow.

There is a virtual kaleidoscope of colours which may not be the purest but let us not forget that the rainbow melds colours. But no one can gainsay the genus for dramatic colours particularly in the Sections *Onocyclus* and *Regeliocyclus* or for subtle and deeply affecting colours like the Section *Juno*.

#### Year Round Colour

It is possible in our climate in West Vancouver, BC to have irises in bloom every month of the year. Well, okay...nearly possible. You have to cheat a bit and include what I call the near irises from the southern hemisphere-genera like the *Moraeas*, *Dietes* and *Libertias*.

In January we see the *Iris danfordiae* burst into bloom to brighten the darkness. In February we're looking for the wee bulbous irises of the *reticulata* persuasion or the splendid *Iris winogradowii* or even the hybrid *Iris 'Katherine Hodgkin'*, one of the many legacies from one of the world's greatest plantsman, E.B. Anderson. In March comes the first of the *Junos*, probably *I. planifolia* or possibly that splendid newcomer *I. cycloglossa*.

In April the *Regelios* begin as do most of the bearded irises including *I. germanica*. In May the bold beauties of the

*Californicae* Section begin to strut their stuff as do the wet species such as *I. laevigata* or *I. sanguinea*. Nor can we forget the myriad variations on the dwarf bearded irises of the *pumila* persuasion adding to the riot of May colour.

June here is the height of the Asiatic irises such as soft yellow *I. forrestii* or dark and sombre *I. chrysographes*.

July brings the so-called Japanese irises, variations of *I. ensata*. Much too gaudy for me, I'm afraid. Oh, and there's the last of the *Californicae*, *I. tenuissima*.

In July is where you start to cheat with various species of *Dietes*. They are as fleeting and lovely to the eye as anything in the world. But you can also get rebloom on German irises

In August if they are positioned in full sun and given lots of water.

In September we may still have the wet irises such as *I. laevigata* and also the winsome bulbous autumn iris, *I. serotina*.

In October, many *Moraeas* begin, particularly the bone-hardy, bluey-purple *Moraea polystachya* or the yellow flowering *M. fugax*. The latter continues well into November when the first of the winter flowering irises, the Algerian *I. unguicularis* begins. This one needs full sun and cooperative weather to bloom in November. So what else is new?

Finally in December, the bulbous Israeli species *I. vartanii* graces our garden. We used to be able to get this regularly from our bulb sundriesman because we could never keep it.

We always wondered how the Dutch growers managed to do so well with it. Now I suspect that we were growing collected bulbs, which in those bygone innocent (but dangerous) days was perfectly acceptable behaviour. We



always counted it a good Christmas if our table was decorated with a posy of *Iris vartanii* and *Narcissus romieuxii*. Otherwise, forget it!

### **Iris Sections for the Uninitiated**

The idea of sections is one that is a nice way of dividing up a genera with a lot of species. Iris has a lot of species and so sections have arisen to simplify similar groups of them. The iris I knew as a child belonged to the bearded iris section or Pogon Irises, section Iris. We called them *flags*. The most common of these belongs to the tribe *Iris germanica*. (they've been in cultivation so long that their exact status is undefined: probably hybrids (natural or otherwise) of Mediterranean species) which easily characterizes the section: large flowers with well developed falls and standards, the three falls decorated usually with a prominent beard. There are both tall and dwarf species in this section that can also be very accommodating or very challenging to the gardener.

Two of my favourite species (although to be frank, I can't tell the difference between them) are *I. florentina* with its Italian Renaissance connotations and *I. albicans*, which is supposedly native to Arabia (brought back from the Crusade?) but is common throughout Europe because it was a plant with quasi-mystical connotations, often planted in graveyards. Both are handsome and stately.

I cannot describe all the species in this section but here are those that I have found perform reasonably well in ordinary garden loam. These include *I. chameiris* (and the closely related *I. lutescens*), the brightly coloured *I. reichenbachii* and *I. pallida* with its superb variegated foliage. As an aside, I am somewhat bemused at my passion for

variegated foliage at this stage in my life after ranting and railing at what I used to consider such ugly plant adaptations. I used to scoff at the Japanese passion for such heresies! Now I am smitten by variegation. One of my favourites in this section is, wonder of wonders, *I. variegata*, which is exactly as it sounds.

Other bearded iris that I've grown are the Portuguese *I. subbiflora* and the late blooming *I. sambucina*. It goes without saying that I've also grown *I. pumila*. It is alleged that this is an extremely variable plant (purples, whites, blue and whites, peach, near black, etc., etc) and that the *true* species is not in horticulture in very great numbers. It is also alleged that the plant is short lived. This might explain why I can't keep it for very long.

Not all the pogons are easy. The most challenging are the beautiful *I. schachtii* from Turkey (I am also now growing from seed the closely related *I. taochia*); *I. attica*, a full-bodied yellow; and, diminutive *I. timofejewii* (Ed: See Rodionenko article in this issue),

Which has that odd strangely-coloured dark look of irises of the Levant. It is a tricky customer that is best kept dryish all year round in a rich, gritty soil.

The Section Psammiris is closely related to the Section Iris with perhaps less prominent bearding and a more stoloniferous habit. I'm sure there are more erudite differences having to do with seeds but that is all beyond me ( I don't know nuffin 'bout arillate seeds, Miss Scarlet). The one to grow from this section is *I. potaninii*, either yellow or mauve, with a captivating flower just above the leaves.

Now we come to the Valhalla of Irisland: the Section Oncocyclus. These irises hold the same Holy Grail status among passionate plantsfolk as the rosulate

*Violas* and the aetian *Androsaces* and the polster *Dionysias*. I have always loved them, seldom succeed with them and yet, never give up on them. I should move to the Levant and die happy. My favourite passage in the English language (forget Shakespeare; forget Woolf; forget Austen) is Reginald Farrer's description of the *Oncocyclus* irises in his tome "The Rock Garden".

"they are the doomed and lonely race of irreconcilable Troades in weeds of silken crepe, sullenly and grandly unresigned to exile and captivity, passing out of their captor's hands in a last defiant blaze of dark and tragic magnificence. They are the chief mourners in their own funeral poms, wistful and sombre and royal in an unearthly beauty of their own...they are the maidens that went down to hell with Persephone, and yearly in her train they return to make a carpet for her feet across the limestones of the Levant."

Whew!! Who are these *Oncocyclus* and which are the best to grow and how???

Well the ones that I have succeeded with briefly have been grown in a bulb frame. My friend Daphne Guernsey had some great successes last year in her bulb frame. With camera in hand I would drive over to her oceanside spot with camera in hand and saw the following: *I. lortetti* with its stately iridescently pinkish/green flowers ; and, the grander-than-grand *I. gatesii* with its glistening blue tones. In my frame I've had the dwarfish and multi-coloured *I. sari*; and, *I. ibirrica* with its prominently blotched fall. *I. paradoxa* bloomed last year in the open garden at UBC, no doubt because of the long and deep snow cover. It also allowed for an exceptional showing for *I. elegantissima*. I waxed hysterical at its beauty in the presence of Doug Justice (now Curator for Collections at UBC

Botanical Garden) and I shall never forget the "Surely you jest" look he darkly gave me. Oh well, some people have all the taste.

As for my failures, they are legion (this statement could be a bumper sticker for overly ambitious plantsfolk): the bronzy *I. aurantiaca* is the one I'd most like to grow. Fritz Kummert in Austria does it well for it is illustrated in his superb book on alpine plants,

?, *I. sofarana* is one of the heavily-veined species, always an enticement. *I. meda* is rather atypical but its colour (originally denoted as "honey gold") makes it one of the most desirable.

But let's face it- they're all madly desirable! For instance, *I. barnumae*, with a reputation for tractability, but not for me; *I. atrofusca*, from Israel, brown and purple and black. What more could you ask? I think that *Oncocyclus* iris succeed best in the cold frame: they need the baking and the winter drought/dormancy. I grow them in huge tubs in a rather rich soil that is kept dryish at all times. I prefer this to individual pots as I suspect that they are gross feeders. Despite being frozen solid in the worst of winters they manage to bloom.

It isn't easy for me to be precise about the difference between the *Oncocyclus* and the *Regelicyclus* irises. But somehow one instinctively recognized the lesser breeding of the *Regelio* cousins. Not that they are to be snubbed. Far from it- they are more easily realized and managed and they also have a sumptuous array of qualities observable in very few other plants. The *Onco* irises are almost always one flower to the stem whereas the *Regelios* usually have two. In many cases the *Regelios* are more heavily bearded as well.

*I. hoogiana* is rather easy in a perfectly drained rich scree, its clumps of yellow and lilac blooms are one of the joys of spring's return. *I. heweri*, deep purple with a white haft and a lilac beard, is not quite so accommodating. My favourite regelios are the charming bi-coloured *I. afghanica* and the brown edged *I. stolonifera*, which is very high on my all-time fave irises. *I. korolkowii* (prominently etched and pencilled) and *I. darwasica* (if I have the true plant) are more plebian. There are many regelio hybrids which may be your best bet if you want to get into this game with a minimum of fuss. The dark-hued *I. x 'Vera'* is one of the best of these.

*kemaonense* of the Pseudoregelio Section (something about non-stoloniferous habit, unbearded standards) has always been something of a disappointment to me. Just no chemistry for me.

The next large section is the Evansias (or to be more snooty and precise—at least for now—is the Subgenus *Limniris*, Section *Lophiris*). The frilly crest is the hallmark of this group.

Some of them are marginally hardy, such as *I. wattii*, the dazzling white *I. formosana* and the best of the so-called bamboo irises (on account of their foliage), *I. confusa*. Best of all to my mind is the ubiquitous *I. japonica*, commonly know as the orchid iris. Oh, I know its foliage is usually the most tattered in the garden and it has an unwarranted reputation for tenderness but oh, that winsome flower is so delicately marked and shows itself off to such advantage in a naturalistic woodland setting. A great spreader is the dwarf, slightly more crested *I. gracillipes*

(very close to *I. cristata* which I shall get to later). Much more frail are *I. pseudorossii* and the late blooming *I. speculatrix*. The best among the fan-shaped irises is *I. tectorum* in both its purple and white forms.

The Section *Chinenses* has only one plant that I am vaguely familiar with and that is *I. minutoaurea*, one of the miniature yellow and browns. We first acquired this in the 1960's (at least we thought we did). Everyone asked whether it had bloomed and we demurred, "No, but its such a young plant, you know." Or, "No, but I think I'll stomp on it as I do my *Gentiana acaulis*." Or, "No, but who needs flowers with such irresistible foliage" (it looks like every other iris you've seen!). Finally, we, like many others discovered that we didn't have an iris at all but a species of *Acorus*—quel disappointment! When you think you're growing one of the rarities and you're not even in the same genus—oh. However, we did finally get *I. minutoaurea* and it bloomed in lovely clumps and showed itself a winner.

Then it decided that it wouldn't bloom and hasn't bloomed for the last 3 or 4 years. Plants are worse than operas divas when it comes to temperament.

The Section *Ruthenicae* has only two plants that I'm familiar with: the often ordinary *I. ruthenica* (some collection sites are better) and the very special *I. uniflora* which we had in its *alba* form. One of the true beauties. I believe this was an introduction of Roy Davidson, one of the deans of iris culture in North America. So many of our best plants came from him.

# \*Corrections for SIGNA Checklist

## Part 1

Page 11

**Line 7:** delete Syria; Substitute Israeli Coastal Plain

**Line 10:** *Latropurpurea* var. *eggeri* should be regular and not bold face italics

**Line 10:** add the word plant in front of not stoloniferous.

**Line 11:** add Syn. *I. atropurpurea* in bold faced italics.

Page 12

**Line 21:** delete Dinsm.; substitute Gazit-Ginsburg; delete Jordan Valley; substitute Israel, Hula Valley. Nomen nudem; delete c from *I. bismarkiana*.

Page 13

**Line 1:** delete c from *I. bismarkiana*: add ex Regel after Spreng.

Page 17

**Last line:** delete 2n=24 *9844*

Page 21

**Line 10:** delete Mallet and the ( ) around Baker *Haymer*

**Line 15:** add or *I. mairiae* -maybe

**Line 17:** delete ex Bacher between *I. heylandiana* and *I. himalaica*; add new entry: *I. hieruchamensis* Avishai. Onco. Nomen nudem

Page 26

**Lines 14,15:** delete Syn. and add "Mathew says this name was never published. Status uncertain;" substitute Related to in front of *I. atrofusca*, and add Nomen nudem after it, so that the sentence reads: Related to *I. atrofusca*. Nomen nudem.

**Line 26:** add ( ) around Dinsm. And add Feinbrun to read (Dinsm.) Feinbrun

Page 27

**Line 23,24:** delete Syn. *I. helenae*; add *I. mairiae* Barbey may be correct; issue not resolved. Syn. *I. helenae* Barbey, not *I. helenae* (Koch) Koch.

Page 29

**Line 14:** delete (Fos. ex Herb.); substitute (Foster); delete c from *I. bismarkiana*

Page 45

Under Syriacae: delete *I. aschersonii* M. Foster and *I. melanosticta* Bornm.

Correct *I. grant-duffi* to *I. grant-duffii*

Under section Hermodactyloides, correct *I. vartani* to *I. vartanii*.

[**Ed:** *Jean Witt* has kindly supplied this information and corrections courtesy of *Ofer Cohen* of the Hebrew University of Jerusalem. Jean says that these corrections represent the latest although not perhaps the last word on the *Oncocyclus* Section of iris.]

### More Odds & Ends

By Jean Witt

*I. setosa* is listed in Verna Platt's Field Guide to Alaskan Wildflowers, 1989, Alaskakrafts Inc., Anchorage, Alaska as being poisonous, causing vomiting if eaten (doesn't bother slugs, however.)

\* \* \*

Two forms of *Iris confusa*, CHENGDU, and Jim Waddick's clone, bloomed for me in the house during February and March. They are quite similar, each stalk bearing many small, frilly lavender flowers above a fan of leaves on 12-15 inch tall cane. Sadly, many of the flowers blighted because of rot which attacked the buds before they emerged from their bracts. Room temperature is probably too warm for them. They would doubtlessly do better in a cool greenhouse.

# SIGNA MEMBERSHIP REPORT

## 1999

by Rodney Barton

SIGNA membership totaled 608 at the close of 1999. That included 56 life members and 26 complimentary memberships.

*(Complimentary memberships are mostly botanical gardens and libraries.)*

The membership break down by country was:

USA = 496  
Canada = 31  
England/UK = 20  
Australia = 16  
New Zealand = 13  
Germany = 7  
France = 5  
Japan = 5  
Hungary = 3  
Holland = 2

1 each = Belgium, Denmark, Italy, Korea, Poland, Slovakia, Spain, Sweden, Ukraine

In 1999 there were 138 renewals and 73 new members joined. Sixty-seven memberships expired and were not renewed. Of the new members 28 came to us from the SIGNA web site, 17 from AIS via the convention or the membership chair, and 4 were gifts.

