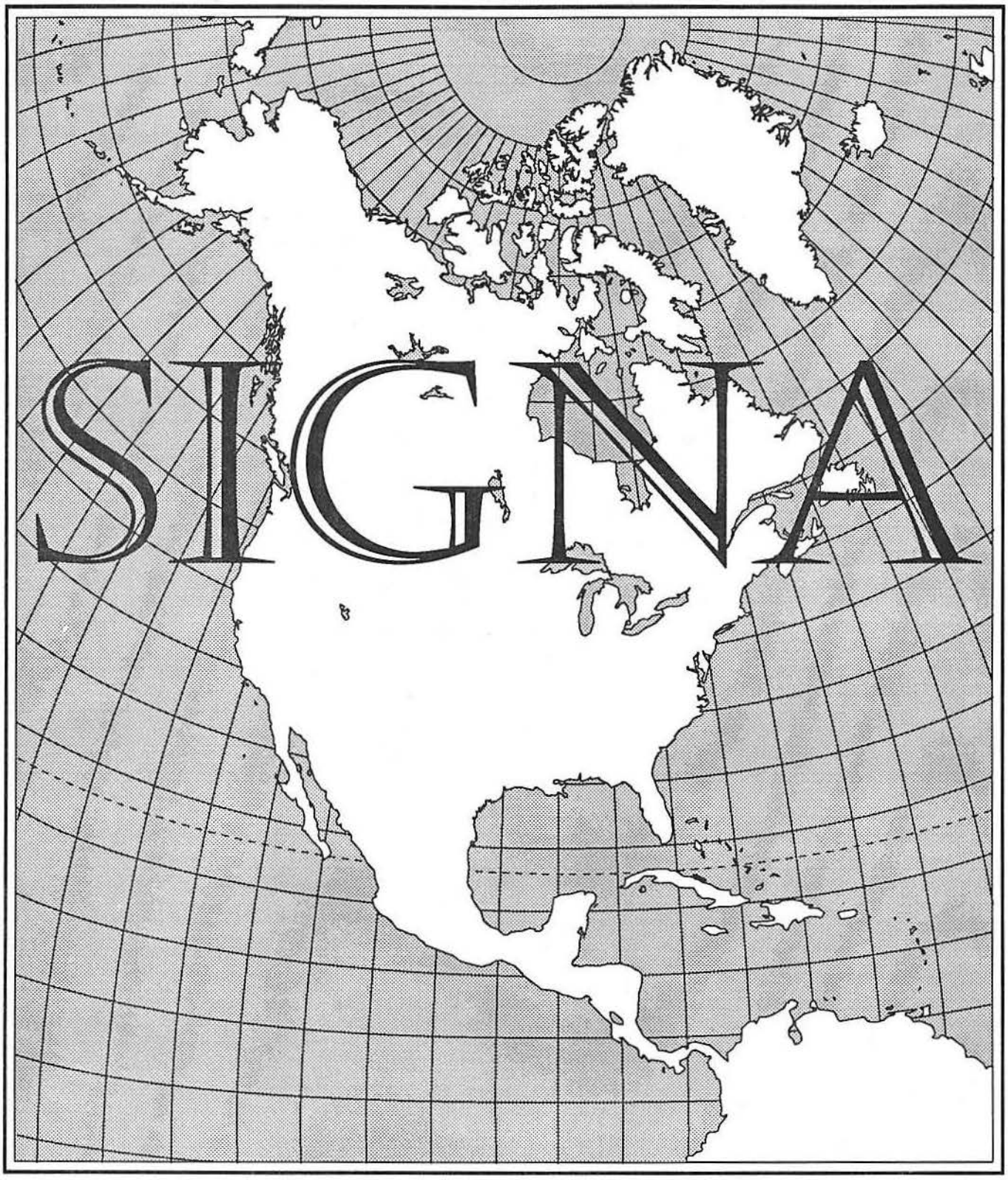


Number 52 Spring, 1994

Species Iris Group of North America

Spring, 1994 – Number 52

Officers and Executives

Directors

Feature Editors

Contents

President's Message

–Richard Kiyomoto–

I want to thank outgoing president Colin Rigby and all those who have worked for SIGNA to make it a worthwhile organization to be a part of. Colin has brought us up to date on the current status of SIGNA including the fact that it is now a very large organization. Currently, committees are working on the checklist which we hope to publish in spring of 1995, we are co-sponsoring a species symposium at the Missouri Botanical Garden on March 24-26, 1995, and arrangements are being made for medals. Looming over us, however, are the finances of SIGNA. In 1993 we almost spent our income; we have sufficient reserves to pay for upcoming expenses of checklist, symposium, and medals. While the checklist will enable us to make money, there are items which I am going to propose which will be additional annual costs.

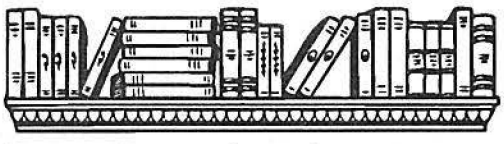
A SIGNA Directors meeting will be held at the AIS Convention in Portland, OR in May. I am going to propose that SIGNA (1) have an annual budget which will be published; (2) require a face-to-face Directors meeting; and (3) determine if and how SIGNA will accept applicants for convention sites.

Additional items I will propose will cost money: (1) The purchase of software and hardware that the secretary, treasurer, or editor may require; (2) request proposals and fund on an annual basis $500 awards (the number to be determined) for research/education; (3) budget money for the Seed Exchange for the purpose of purchasing plants or seed from foreign sources (including arboreta, researchers, private individuals or companies). The central theme I emphasize is SIGNA's position as a repository and source of iris germplasm and SIGNA's responsibility to advance the frontiers of knowledge on iris species. There are new approaches to plant taxonomy and evolution being applied to plants. Advanced high school biology students today use biochemical and molecular methods which can address many questions that have long been asked in SIGNA. The genus *Iris* will not be included unless we make this feeble gesture in the form of research grants, and the potential benefits are greatest by encouraging young people.

The final issue I will bring up to the SIGNA board is the formation of standing committees. New standing committees are necessary to deal with the business of SIGNA and to involve more people in the workings of SIGNA. Please contact me and let me know your interests.

We are in the phase where SIGNA has grown to the point it can no longer operate as it has in the past. The desire to do more has to be tempered by the money we have on hand, which is insufficient. I would like SIGNA to focus on its role in *Iris* germplasm and research and education, on altruistic goals. I am open to suggestions on how to raise money for SIGNA to support especially these specific programs. I would suggest that one method would be regional SIGNA plant sales.

In the next President's Message I will detail the Directors' rulings on these and other proposals.

Back  Issues

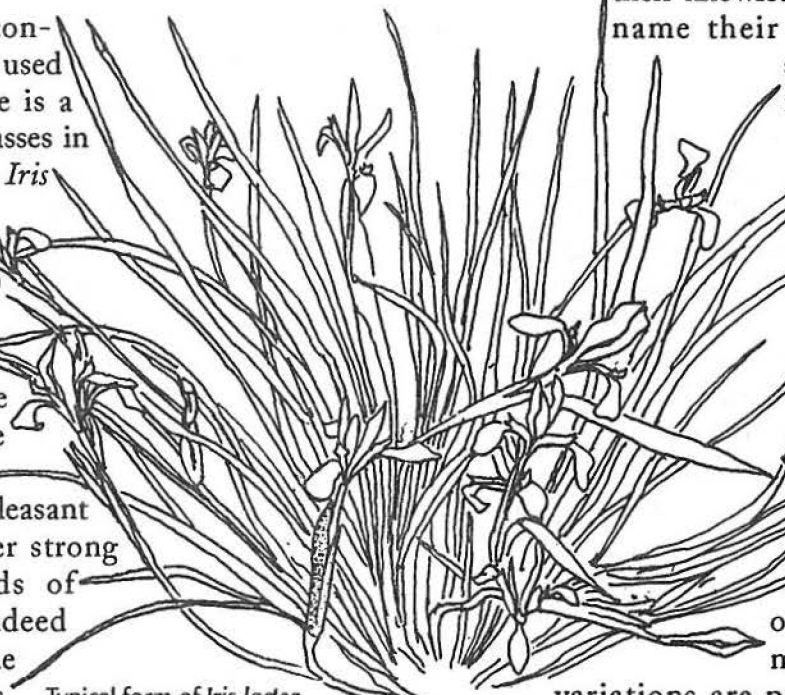
SIGNA will mke available all back issues. Issues 1 through 15 are now priced at $4.00 each, and all others are priced at $2.00 each. The Study Manual is out of print and no longer available. Order back issues from Carla Lankow, 11118 – 169th Avenue SE, Renton, WA 98056.

In Search of a Good *Iris lactea*

—Bob Pries—

Iris lactea is a very easily grown *Iris* species and should be a welcome addition to many gardens. Its ability to withstand adverse conditions, such as drought, and remain an attractive, permanent, perennial, needing little care, makes it useful for modern life styles. But which variety would serve the gardener best?

First one must consider how it would be used in the garden. There is a recent fad towards grasses in the perennial border. *Iris lactea* can provide the same kind of foliage texture as grasses. It forms a clump of narrow leaves that rise upward and curve downward as a fountain. This is a pleasant relief from the rather strong architectural swords of some *Iris* foliage. Indeed *Iris lactea,* with its one to two inch flowers provides the same type of foil to other specimen plants as would baby's breath. It is a plant that helps to complete the garden picture but not dominate it. Since the foliage remains attractive throughout the growing season it helps provide backbone to the garden's design.



Typical form of *Iris lactea*

Such a durable plant deserves the attention of hybridizers.

Since I do not have the space for long rows of seedlings where a chance variation can appear, I have tried to discover what variations of *I. lactea* have been reported and which are presently available. I would like to point out some exciting possibilities, in hopes that someone will develop them.

One approach for discovering variation is to see what names have been given to *Iris lactea* in the past. Botanists have often found variations which did not exactly fit the written description of a particular plant. Because of the limitations of their knowledge at the time, they name their new find another species. *Iris lactea* has many such synonyms: *I. biglumis* Vahl, *I. fragrans* Lindl., *I. iliensis* Pol., *I. moorcroftiana* Wall. ex Don., *I. oxypetala* Bunge, *I. pallasii* Fisch. and *I. triflora* Balbis. It would seem obvious, from so many names, that variations are present, but sorting them out can present some difficulties.

The first hurdle for the horticulturist is the name of the species itself. The name *Iris ensata* had been used for *Iris lactea* up until the 1950's, when it was pointed out that this name had been published prior to the name *Iris kaempferi* as the legitimate name of the Japanese Water Iris. *Iris kaempferi* became *Iris ensata.* The old *ensata* then had to accept its next oldest published name which turned out to be *Iris lactea.*

The older literature, including the 1939 checklist, refers to *Iris ensata* when talking about *Iris lactea.* Indeed, three cultivars were registered;

'Ensata Chinensis,' 'Ensata Grandiflora,' and 'Ensata Grandiflora Alba.' The strangeness of this seems obvious when one writes the full name *Iris lactea* 'Ensata Chinensis.' Fortunately new rules have been issued for the Code for Cultivated plants which do not allow the incorporation of their Latin names, so this confusion will not be repeated. But the Code also now discourages changes in established cultivar names so these strange, old names will be retained even though they violate the present rules.

Another such registered Latin-named cultivar is 'Pabularia.' This was registered as representing the botanical variety *pabularia* created by Naudin in 1888. Unfortunately I do not read German. But a fine colored painting appears in 'Gartenflora.' from which I have drawn a couple of flowers.

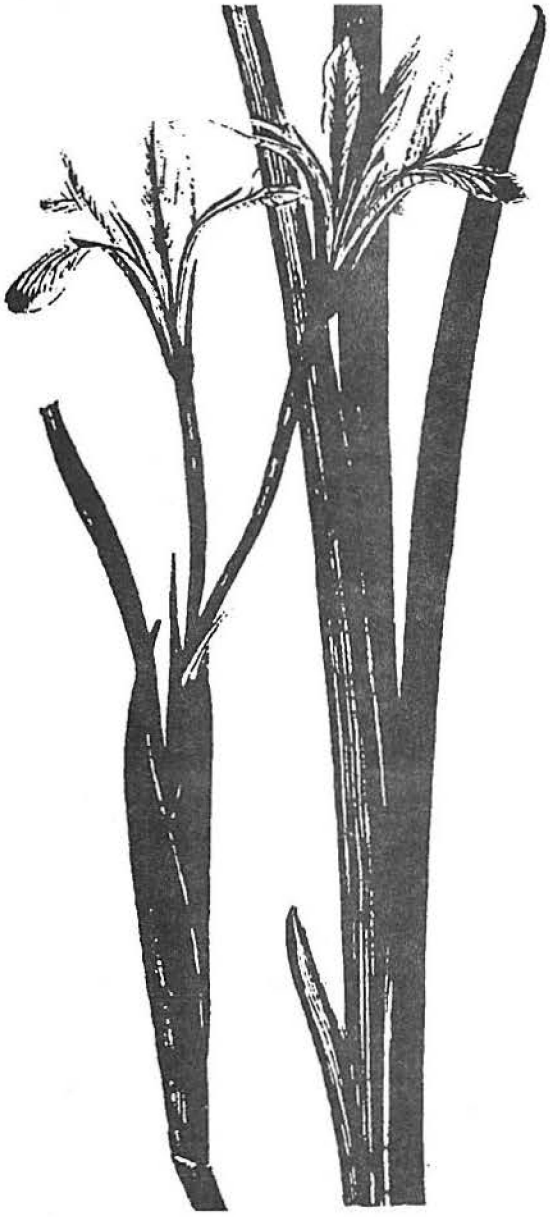
This was a fine watercolor of *Iris ensata* Thunberg var. *pabularia* Naudin., which showed flowers of two different colors, one was a light blue and the other a dark blue. I would like to point out that these old registrations of botanical varieties are in essence seed strains and as such can be distributed under the cultivar name in the form of seed. For plants that resent disturbance, seed or seedling distribution may be more practical than the distribution of mature plants as in a registered clone.

Since cultivars such as 'Pabularia' are broadly defined groups of plants said to be various shades of blue, it would be very desirable for gardeners to isolate different color forms, light blue, dark blue, etc. and register them as new more narrowly defined cultivars. The new cultivars could be better defined seed strains or distributed as clonal material.

In talking with a well known hybridizer, I learned that he had grown a large row of *Iris lactea* some years ago, and for a convention had chosen the best garden plants and distributed them to gardens on tour. In questioning him I discovered he saw a great deal of difference in the quality of these plants grown from seed but never bothered to provide the better forms with names, although he did distribute them. Unfortunately, for the lack of a cultivar name, all the best of the selections were not taken seriously by the recipients

and lost or thrown away. Here was an opportunity missed which could have improved the *I. lactea* as garden plants. This information encouraged my search for the best *Iris lactea* since I now had some assurance that there were forms with larger flowers and better substance.

The name *chinensis* often appears in the seed exchange and should be the cultivar named 'Ensata Chinensis.' A description appears in the *Botanical Magazine* 1832 along with a color illustration from which I made the following line drawing.



The article accompanying this calls it Pallas's Chinese Iris, *Iris pallasii B. chinensis.* It provides this fine description.

"Leaves narrow-sword-shaped, folded, striate, hooked at the point, erect, shorter than flowering-stem. Spathe acute, green, three-flowered. Flowers pale blue, tube funnel-shaped, green. Claw of the deflected petals twice the length of the oval streaked lamina, green on the outside with purplish margins. Claw of the upright petals filiform, lamina lanceolate. Stigmas not exceeding the claw of the deflected petal in length, bifid, and minutely serrate at the extremity, deep violet colored at the keel with white margins. German an inch and half long, nearly cylindrical, obtusely six-grooved."

The cultivar named 'Ensata Grandiflora' tells us this is a larger flowered form by its name and the registration indicates that is from Tibet. Perhaps this is where one should begin looking for the most garden worthy forms. Dr. Waddick in his recent trip through China brought back seed from plants he observed with larger flowers. Perhaps this is collection of the old 'Ensata Grandiflora' but I propose that anyone growing the seed think in terms of registering a new cultivar name since this would be less confusing and would allow for better definition. Cultivars could be utilized by the botanists to designate living representatives from unique collection sites. This could not only give us a living herbarium but help preserve genetic diversity. Gardeners could then identify distinct gene pools which may aid in the development of horticultural varieties. Thus cultivars might serve both a conservative and progressive use.

It would appear that out of seed of blue 'Ensata Grandiflora' that Dykes distributed there appeared other color forms. 'Ensata Grandiflora Alba,' a white form, was registered in 1933 from the Ohio State University Botanical Garden. 'Mani,' a white and blue bicolor, registered in 1935 by Elizabeth (Noble) Nesmith for Dr. Alfred Edward Waller of Ohio, was second generation from Tibetan seed. Perhaps these still exist?

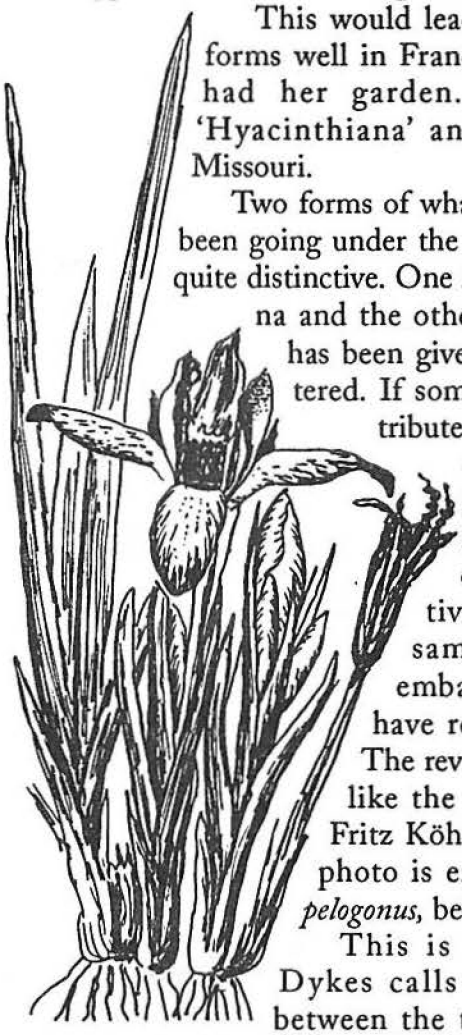
It would seem that Tibetan specimens came to us originally from the expedition of Reginald Farrer although Dykes also credits a Mr. Gumbleton as having sent seed before the Farrer expedition. Farrer was noted for his enthusiasm for rock gardening and several botanical travelogs. Between 1914 and 1915 he sent several collections along with descriptions and photographs of *Iris lactea* to Dykes. Some of their correspondence was reprinted in the *Gardeners' Chronicles.* A form that that has been registered and said to have the smell of hyacinths is 'Hyacinthiana.' It was called the Tibetan form by Dykes and he states "The foliage is dwarfer and stiffer than that either of the typical Japanese form, which Thunberg first described, or those that I have obtained from Turkestan or Shantung. The standards are of a pale lavender, and the falls are edged with the same colour, while the central portion is pale creamy-white or primrose yellow faintly and delicately veined with lavender. The blade of the fall is twice as broad proportionately as it is in the case of the type, where the falls are noticeably narrow"—Da Tung Alps to 11,000 feet. The accompanying illustration in the *Gardeners' Chronicles* looks very similar to the slide that SIGNA has in its collection labeled 'Hyacinthiana.' Below is a line drawing of a part of the clump shown in the slide.

This is the only old registered cultivar which seems to be extant. Even though this has probably been distributed as seed, it seems to remain true to its cultivar description and can probably be considered a named seed strain. Farrer encountered among the thousands of individual plants only seven individuals that were albinos and one that was a dark purple, otherwise the populations were amazingly uniform. He refers to one variation he named 'Felina' which was not registered and I can find no description, and another he called 'Kelaina' which was a very dark purple in the areas that 'Hyacinthiana' is lavender. Zhao Yu-tang has listed var. *chrysantha,* a yellow Tibetan form in the *Iris of China.* Presumably other variations may be discovered.

'Hyacinthiana' would appear to be an exceptionally choice form of *Iris lactea* because it forms a cushion of flowers, a trait of many rock garden plants. Other forms are much taller and form a fountain of foliage with flowers appearing to the sides of the leaves. Whenever leaves overtop the flowers the floral effect is diminished. Thus 'Hyacinthiana' would seem to be a special form.

Leaves later elongate after flowering. If this occurs too soon then the flowers are obscured. Dykes indicated that this may happen in England, implying that the more moderate climate may encourage the leaves to grow faster and reduce the effect. I would be interested as to how 'Hyacinthiana' performs in various parts of the USA.

Redoute painted *Iris triflora,* a synonym for *Iris lactea,* and it would appear to have the same good characters of 'Hyacinthiana.'



Redouté's *Iris triflora*

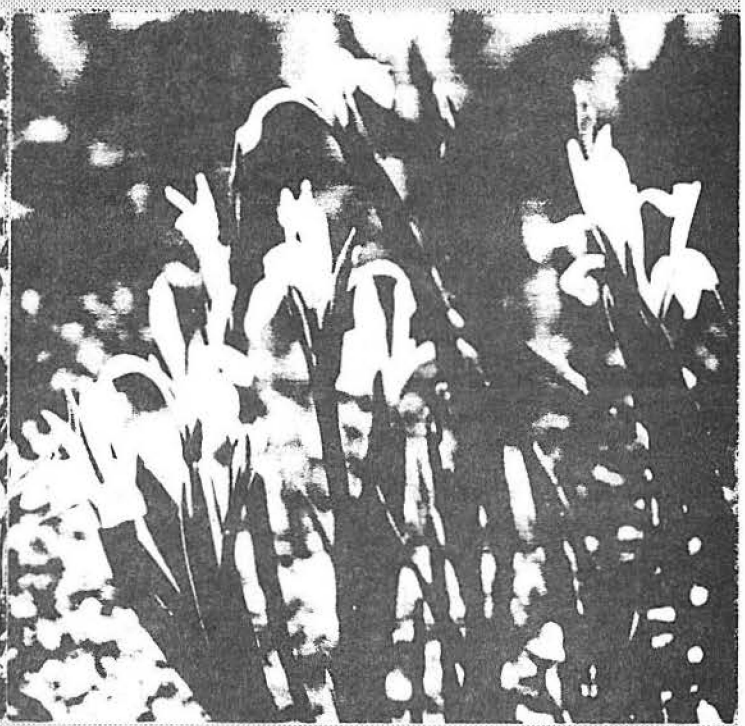
This would lead one to believe that it performs well in France where Empress Josephine had her garden. I would love to grow 'Hyacinthiana' and see how it performs in Missouri.

Two forms of what I believe are *Iris lactea* have been going under the name *Iris songarica.* They are quite distinctive. One is a light blue-lavender amoena and the other a reverse amoena. Neither has been given a cultivar name and registered. If someone could register and distribute these it would aid in pinning down these variations. Even if they were registered as *Iris songarica* and later had to be changed to *Iris lactea,* the cultivar name would remain the same and one should not feel embarrassed since these species have really not been well studied. The reverse amoena looks remarkably like the color photo on page 143 of Fritz Köhlein's book entitled *Iris.* The photo is entitled *Iris missouriensis* var. *pelogonus,* better known as *Iris montana.*

This is doubly intriguing. since Dykes calls attention to similarities between the two. Is the photo an error? What are the differences? Until I have seen what is truly identified as *Iris missouriensis* var. *pelogonus* I won't make a guess. Obviously without some baseline cultivars, it will be difficult to truly select the best gardenworthy *Iris lactea*s. Steve Varner has just introduced 'Illini Fountain,' presumably of garden collected seed from Budapest, Hungary. Certainly this light lavender blue bitone has garden value. Hopefully, others will help by registering their variants and distributing them. The garden potential for this species has hardly been noticed, its taxonomy is still poorly understood, but registration of its cultivars could aid in clarifying the taxonomy and provide us with new, interesting garden plants.

'Hyacinthiana' –Fry photo

'Hyacinthiana' –Fry photo



I. lactea, white form –Fry photo

Water Iris News

—James W. Waddick—

Water Iris seem to have more surprises and new "events," too.

Most timely is a cross involving a water iris and a Louisiana. I had been wondering and searching for any confirmed crosses involving a Louisiana and and *any* iris outside its series and could find nothing. Then a letter from Dr. Kevin Vaughn shed some possible light on the topic. While attending the SLI Convention in Lafayette, LA, Kevin saw a bloom at Ken Durio's that claims to be a cross between *I. virginica* × Tet LA. No specifics as to which *virginica* or which Tet LA Iris. Here's Kevin's quote: "an amazing blossom of pale blue, veined as a typical *virginica* but with absolutely horizontally flaring falls with a blossom about 5" across. Neat little ruffles rim the blossom and the thing looks like it has incredible substance." Apparently Mr. Durio has tried diploid LA iris before without success and this is his first possible new generation hybrid. A quick chromosome count will confirm its hybrid identity. I don't think it has been registered yet, but perhaps it will inspire our hybridizers out there this season to get wild.

I am excited about all the new water iris available in the last year or so and even older ones just getting into circulation such as J. Ellis (1988) 'Chance Beauty' (*I. pseudacorus* × *I. ensata*) with 2N=46 and fertile! Also his "Regal Surprise" and "Limbo" both 1988 and both *I. pseudacorus* × *I. versicolor*. These English hybrids are slowly making it to these shores and into gardens.

From Germany comes 'Berlin Tiger,' a 'Holden Clough' "kid" from Tamberg that bloomed in my garden last summer and is a wonderful companion to Ben Hager's 'Phil Edinger.' Also Tamberg's unregistered 'Disappointer' suggests a lot of potential, but from the name doesn't quite make it. It is a "kid" of 'Berlin Tiger' × *I. versicolor*. Tomas also sent me his 'Starting Chrytosa,' a cross of a forty chromosome siberian ('Berliner Reisen,' I think) × *I. setosa*. Tomas said over 150 hand crosses resulted in one seedling brought to bloom. A lovely delicate blue flower on stately stalks. His latest round of 120 additional crosses failed to produce a single successful seedling.

I also have an intriguing *I. setosa* × *I. laevigata* ('Berlin Sevigata,' Tamberg '88) cross that I hope will bloom this year-and I hope it doesn't do this during the Portland meetings!

After while he was visiting the Siberian Iris convention last year, Tomas returned home with some *I. prismatica* cvs. and pollen. Many seed capsules resulted by crossing onto the last of his Sino-siberian hybrids. He has colchicined these seeds and hopes to start a line of Tetra-Chrysmatica hybrids. He is also working on a white Tetra-sibtosa line and finally has seed in treatment. And more excitement: one of his Tetra-Versi-laev produced its first seed pod and he also has a seedling from Tetra versi-laev × Tetra *pseudacorus*. Wow!

Not exactly in the water iris line, but still intriguing. He continues to work on his Chrysatata lines—both diploid and tetraploid *I. chrysographes* hybrids × *I. lactea* in a range of colors and forms. Wow, I can hardly wait for these to make their way into American gardens and I wish more American hybridizers were playing with these combinations!

But there is more hybridizing news: I have seed of (*I. pseudacorus* × *I laevigata*) × self. The parent (*I. pseudacorus* × *I laevigata*) is fertile and selfs sows readily. The flowers are small, yellow and intermediate between both parents. Talk about a real *water* iris.

A couple folks (Greg Speichert and Elaine Hulbert) have told me about their crosses between *I. virginica* × *I. laevigata*. We are getting more Versilaevs (*I. versicolor* × *I. laevigata)* crosses

(including 'Asian Alliance'), but relatively few crosses involving *I. virginica.*

Mr. Eberhard Schuster, noted German water gardener, will give a program on water irises for the International Symposium on Gardening with Iris Species in March of 1995 in St. Louis, MO.

And we have more new introductions from Joe Pye Weeds, Laurie's Garden. The Canadian Perron Nursery *versicolor* and Versata hybrids are coming into our gardens. Their first Versata, 'Oriental Touch,' is available from the Perron catalog.

I. setosa:—I am thinking more and more of *I. setosa* as a water iris; partly by accident. A few years ago I bought a farm property with my partner Jim Murrain and planted lots of water iris and LA in the "pond" (2½ acres) where they have thrived. Paul Black gave me a big clump of *I. setosa nasuensis* which I divided into a dozen smaller divisions and planted at the high end of the pond. Of course they were immediately drenched and have spent most of their life in standing water or at best soggy mud. We must have planted them on the only and driest day ever. Well they seem to revel in water and more water and I am tempted to try some in even more water. Of course they do "dry" a bit in summer, but the small divisions have become enormous and they grow larger than I would have imagined.

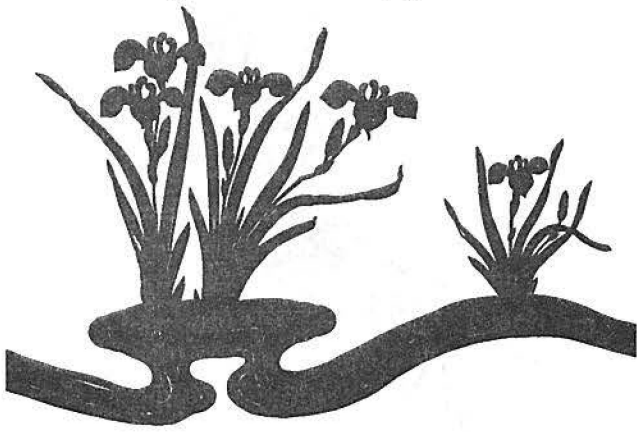
Is *Iris setosa* a "Water Iris?" I am curious about experiences out there with other gardeners. Does anyone grow any *I. setosa* in permanent water? Certainly the crosses between *I. setosa* and other water iris suggest a genetic link. How wet can it take and what is too much?

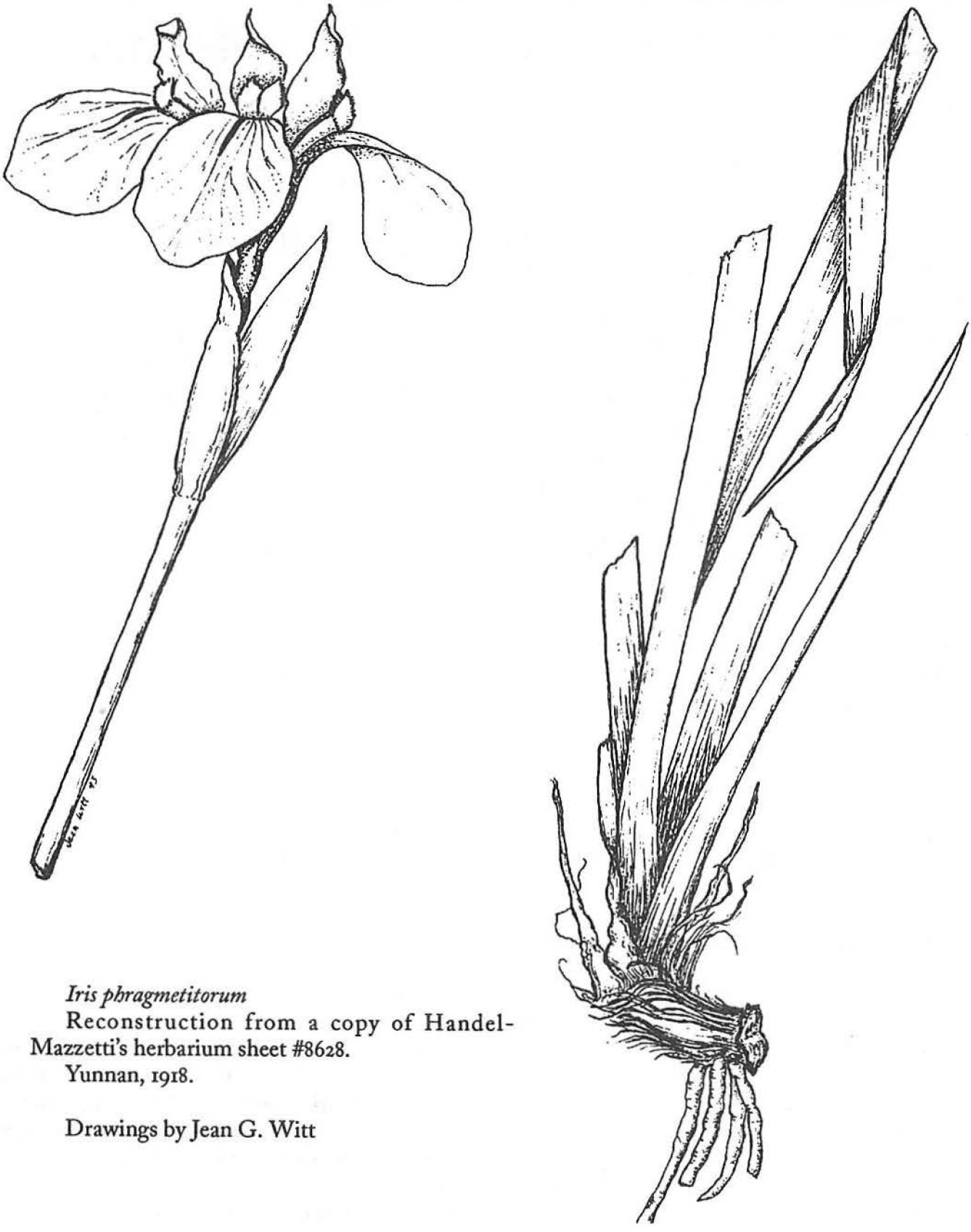
One of these days I'd like to see a test done involving steps down into a pond. At each step plant an *Iris pseudacorus*, a LA iris, an *I. laevigata* and perhaps a couple others. See how each one survives and grows at 6 inches deep, 12 inches deep, 18 inches, 24, etc.. How deep can they grow? In my farm pond I have inadvertently grown LA iris 12 to 18 inches deep all year long and they love it. During high water some are completely submerged and others just show leaf tips, but they grow and bloom well. Anyone have a record growing depth for a water iris? How deep can they grow?

Chinese water iris:—Last May Prof. Zhao Yutang and I visited Prof. Yen Chi near Chengdu, Sichuan Province. Prof. Yen and his wife Prof. Yang Jun-liang are really special people and dear friends. They head the Triticeae (Wheat 'family') Research Institute and have the unique capability to travel around western China to search out wild wheats and wheat relatives. They also happen to love irises. In a very obscure and unpopulated location in Qinghai Province they located an odd water iris and brought it back to the institute.

When Zhao and I visited, this iris was in full bloom and we both exclaimed "*Iris versicolor!*" ..."but, but...." A deep red-purple bloom and typical *versicolor* form made us both sure of the I.D., but *not* in Qinghai. Well a division of the plant went with Zhao for his herbarium and a live specimen is here in Kansas City and pushing new growth. Will it prove to be a new species or an escaped rogue? Or might *I. versicolor* prove to show another Asian-American, circumpolar distribution somewhat akin to *I. setosa*?

To all readers of this bit of water iris news and all water iris growers: In order for this summary to reflect the best and the latest, please drop me a note (3233 McGee, Kansas City, MO 64111, (816) 531-2373) with your experiences, new crosses, things you've seen or even questions about water iris. It is clear that water iris are an active area of interest and hybridization. Enjoy and share.





Iris phragmetitorum
Reconstruction from a copy of Handel-Mazzetti's herbarium sheet #8628.
Yunnan, 1918.

Drawings by Jean G. Witt

Iris phragmetitorum

Sect. Apogon, ser. Siberica.
Handel-Mazzetti,
Translation by Jerry Flintoff, 1993

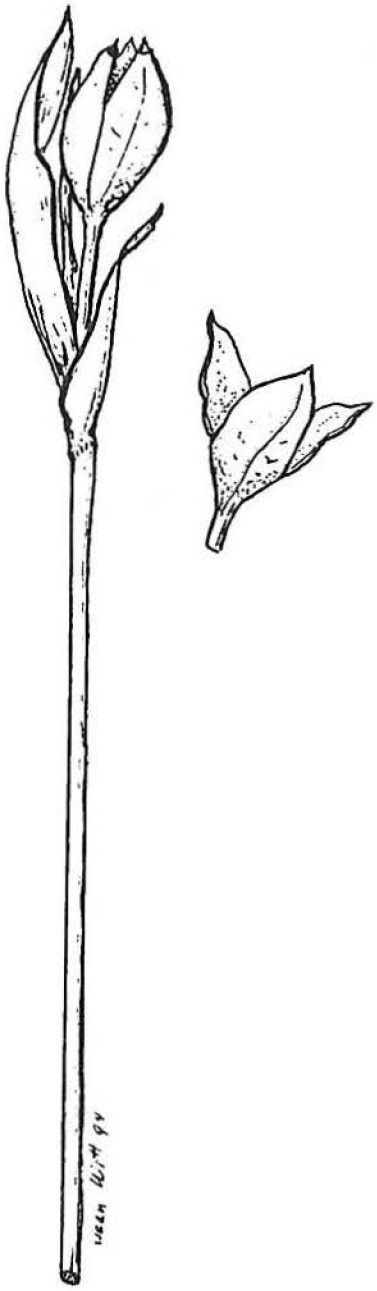
Rhizome thick, creeping, with long pale, crisped fibers, thick roots producing sterile fascicles and a stem 1.35 – greater than 50 cm. long, hollow and 1 – 2-leaved besides the basal leaves and with 1 – 2 flowers. Leaves linear, long acuminate to 60 cm. long, 4 – 13 mm. broad, concolored green-grey with 12 – 28 sharp veins. Valves of the spathe 2:ovate-lanceolate, 5 – 5½ and ovate 6½ – 7 cm. long, palish, scarious, lightly striate papillose. Pedicels 1 cm. long. Ovary 3 cm. long. Corollas 12 – 13 cm. in diameter, dark blue, tube 1.5 cm. long, funnelshaped above, the claws of the lobe 3 cm. long, blades of the outer lobes a little curved downward, broadly obovate, rounded, emarginate, with a middle white line, 45 – 50 mm. long, 32 – 40 mm. wide, inner lobes with the claws 5 – 6 cm. long, linear-oblong, 12 – 15 mm. broad, rounded, emarginate. Stigmas with ovate 1.5 cm. long bifid crests, outwardly sinuate toothed, 4½ – 5 cm. long, 1 cm. broad. Anthers 1.5 – 1.7 cm. long.

Yunnan Prov.: Very abundant in the Phragmites areas of stagnant parts of lake Kunyang-hai at the town Yunnanfu in the warm temperate region; I collected it 19.IV. 1916 (Nr. 8618) and Schoch 4.V. 1916 (Nr. 77).

Most probably close to *I. clarkei, I clarkei* differs by the filled stem, leaves glaucous below, herbaceous bracts, *I. orientalis* [now *I. sanguinea*] by the smaller or narrower bracts and flowers much smaller with pointed standards, *I. delavayi* from the description by the flowers twice as small, violet, inner lobes erect-pateant, spathes foliaceous and also by the membranous tips.

Plantae novae Sinenses diagnosibus brevibus descriptae a Dre. Henr. Handel-Mazzetti
Akademie der Wissenschaften in Wien (Vienna)
Mathematisch-naturwissenschaftliche Lasse
Anzeiger 62(1 – 27): 234-241, 1926

Iris tridentata



Iris tridentata. Pods glaucous when green, cream to tan when ripe, eventually wide open. Outer bract keeled and dark brown; inner bract larger and less keeled. A small third bract belongs to a second flower which did not set a pod. Stem solid, 24 – 30 inches tall.
Drawing by Jean G. Witt

Review: *The Louisiana Irises*

—B. LeRoy Davidson—

"The Louisiana Irises," Norlan C Henderson, in *AIS Bulletin* 293: 73–82

We are greatly indebted to Dr. Henderson for his thorough investigation and definitive analysis of the botanical aspects of this race of native American species and their offspring, the so-called Louisiana Irises of gardens which in late years seem to have taken the world by storm. The study follows the familiar taxonomic precedent as interpreted by Mathew (1981) and goes beyond that, to a proposed systematic ranking of subspecific material including that of garden-bred clones, i.e. Stillman's 1925 'Cacique.'

This reviewer feels a great relief as well as considerable awe with this report, having himself waded through a great part of the cited literature which netted only brief papers for SIGNA. Dr. Henderson has proposed only three new taxa* and shifted classification of six pre-existing taxa to achieve an orderly inter-relationship between the more than one-hundred taxa and several hundred horticultural clones of these irises.

Iris × 'Cacique'*: Berry's hybrid of (*I. savannarum* × *I. fulva)*, recognized as the type of its grex
Iris fulva and *fulvaurea:* Small's species reclassified as a color form
Iris giganticaerulea fr. *miraculosa:* another of Small's species reclassified
Iris × *flexicaulis:* Small's species recognized as of hybrid derivation
Iris × *fulvala* var. × *washingtonia:* Ogilvie's taxon reclassified
Iris × *fulvala* var. *choctawensis:* Ogilvie's taxon reclassified
Iris × *vinicolor* var. × *nelsonii:* Randolph's species reclassified as the type of its grex, the backcross of *(fulva* × *giganticaerulea)* to *fulva*
Iris × *vinicolor* var. *holleymaniae**: 'Ruth Holleyman' recognized as a backcross to *giganticaerulea* and the type of its grex
Iris × *louisianica**: a new nothospecies to include any and all *hexagonae* members whose derivation is not known or is so involved that it cannot be satisfactorily placed elsewhere. Listed in this category are 74 of the 87 names given to collected material by Small and Alexander, while a good portion of garden-derived material likely can only be accomodated here.

Joan Trevithick

Joan Trevithick, the heart and soul of *The Siberian, Spuria & Japanese Iris Group (including Pacificas & Water Irises) of the British Iris Society,* succumbed to cancer on July 9, 1994

More than simply the editor of the semi-annual newsletter, Joan held or had held the positions of secretary and treasurer, and also operated the group's seed exchange. In recent years, she had been assisted by her devoted son, David, who had taken on the positions of treasurer and seed distribution officer.

Joan was honored in 1991 for her services to the British Iris Society, receiving the Pilkington Award.

A dear friend never met to a legion of correspondents, Joan never failed to mention David, nor to inquire into the wellbeing of family members. Her newsletter, like her correspondence, was alive with interest in these diverse yet easily allied irises as well as gardening and everyday life.

In Further Pursuit of Little Himalayans

—Elaine Hulbert—

ABOUT FIVE years ago I urged SIGNA readers to "try the little Himalayans." I believe *Iris decora* has since become fairly commonly grown by species enthusiasts, and *I. kemaonensis* seed has been sporadically distributed through our Seedlist. A couple that remain stubbornly rare are their "twins," *I. collettii* resembling *decora,* and *I. hookerana* the counterpart of *kemaonensis.*

Four seeds from a Himalayan collection distributed by the Alpine Garden Society came to me a few years ago under KEKE number. They resembled *decora* but were not that. I noted at the time that they were surprisingly like *cristata* seeds. Could these be *collettii?* Three germinated promptly and grew well. In their second year they had made small clumps unlike the individual fans of *decora,* and they were not so fugitive either. But the one flower—all I was vouchsafed—was the best evidence that this really *collettii.* (The seeds were later identified as such.) Two of the clumps were given away, and the bloomer did not reappear, so my *collettii* story does not have a lot of substance.

collettii

decora

hookerana

kemaonensis

Is this a decorative plant, or only curious? There are a few pictures in the literature. They show flowers rounded and flattened like *decora's* and numerous in a clump, but rather pallid. Actually, my one sample was a quite vivid violet-blue. (The tendency of the other three species I am dealing with here is to redden more or less the basic blue-violet, just as *milesii* does.)

The nagging thought when a grower tackles any plant from the Himalayan regions is how to come even close to the conditions under which it evolved. Rain all summer and early fall is what it is used to. It may have been spending its winters under snow, but the snow is always in place. For iris growers the description of its habitat is very often "open grassy hillsides," and this is to me the most provocative element of all, especially for *kemaonensis* and *hookerana.* (Not to mention so many other rare small irises of China, Korea and Japan.) One has the grass, all right, but one wonders if the irises will love it quite so much as they appreciate grass at home. At the same time, they are evidently used to considerable shelter from the other herbage, and it is probably wrong to expose them to the sun and wind in an open bed. In moist shade they will likely not bloom at all. The ideal solution would be to plant them so thickly that they support each other, but one is never going to have the big crop of seedlings for that.

I. kemaonensis has done surprisingly well here in the Blue Ridge in full sun but with neighbors like *I. setosa canadensis* and *I. kernerana* clustered around. The two plants of *I hookerana* that finally came to bloom in May of 1992 were spending their third year in a sunny nursery bed where normally only tiny seedlings are allowed. They began to look especially out of place when the flower stalks began to rise and rise. This was the first point where I was sure I did have *hookerana,* because the seeds of course did much resemble *kemaonensis'* and the fans of butterknife-shaped leaves were the same fresh yellow-green. The smaller twin however stops at about an inch of stalk and two-and-a-half inches of flower.

This twinness-with-a-difference has always been remarked on. Himalayan trekkers who have contributed to iris lore usually said they could not tell the difference except for height, and when you

yourself are going up and down steep slopes you expect the stature of the plants you observe to vary accordingly from alpine to sub-alpine to valley types. So I had been wondering whether this would turn out to be the only distinction—hardly worth splitting the species.

As soon as buds formed there was a striking difference: *hookerana* is two flowered. At least it is under the rather lush conditions of our spring of 1992. The first flower opened like an elevated *kemaonensis*. Its perianth tube was shorter, giving the blossom a good foundation for its fine form, which it held through wind and rain, though only for the space of one day. If it were not for its spotted coloring and its tall stalk (more than a foot by this time, though leaves were still only about half that height) you could even take it for a *pumila*. The beard is exactly like *pumila's*, white on the hafts and yellow inside, but all the *pumilas* were over five weeks ago and in any case are geographically so distant in their origin that you have to wonder about evolutionary convergence here. These Himalayan bearded twins live in a population of beardless irises—crested at best.

I. hookerana has a rather sweet smell and so does *I. kemaonensis*. I wish they had bloomed at the same time for a close comparison. I thought the fruiting might be significant: *kemaonensis* has never filled a pod here probably because two clones have never bloomed together. Here was *hookerana* in the same fix, and moreover without any two flowers open together (the interval between two flowers is four days.) But rather than risk all on self-pollination I did the job myself in hopes of getting some fresh seed. Pollen saved for a few days did work, and one capsule was probably self-pollinated after all. But as one pod was empty and the other contained only a few seeds, not much was learned.

Getting even those few seeds was rather exciting, because if this was the first seed set under cultivation—and I don't know of any other—then this could be the first fresh-planted seed, and it might be possible to defeat the latency that helps to keep *I. hookerana* down. If people could hope for seedlings in somewhat less than six years they might be planting *hookerana* more regularly. One authority gives six years as the approximate latency period, and I think that is about it. At any rate those home-grown seeds have not germinated yet.

Seeds of *decora, kemaonensis* and apparently *collettii* all germinate readily, even though one seldom obtains anything newer than last year's crop. Why *hookerana* should be so inhibited is a mystery.

That is, if and when available. *Ii. hookerana* and *collettii* are offered very rarely by seed exchanges of the plant societies, and two commercial seedsmen who have offered *hookerana* in the past do not list it this year.

Things ought to change with the several high-minded intrusions into the east and west Himalayas lately by expeditions including iris experts. Some SIGNA people as well as some Chinese iris people cultivated by James Waddick are working on exchange of seeds collected by natives in both hemispheres. A focus for the Chinese is far western Yunnan, Gansu and the Tibetan plateau. New irises seen lately in that part of the world include a couple apparently related to *I. collettii* or to the even rarer *I. staintonii*. The latest (March 1994) Alpine Garden Society *Bulletin* tells of an expedition to Nepal that at Brian Mathew's suggestion took a swing into the area where *staintonii* was once, and only once, discovered. I read this account with growing excitement only to come to the last page and a "to be continued."

I won't wind up this article that way, because I don't have any very bright prospects of new Himalayan developments in my own garden. All the new seed collections I have got hold of lately seem to come up lactea. And though the very widespread species is somewhat variable there isn't all that much difference once I have planted them between seedlings from Nepal and some from Qinghai. So I suppose I will go on pursuing the rare ones.

Seedling Information

—Sam Norris—

SOME TIME BACK while checking Plate IV, *The Parts of the Iris Illustrated* in the species study manual, I noticed that the information concerning the germinating seedling was contrary to what I had read and observed. The information given was that the cord that connects the seed to the seedling was the plumule and that it was positively geotropic. This was wrong on three counts. The cord is not the plumule, the cord is not positively geotropic and the plumule is not positively geotropic. The drawing of the seedling was different from any seen to date as there was no protective sheath surrounding the leaves but it could have been made from some species that I am not familiar with.

A letter to Dr. Homer Metcalf confirmed my thinking that the drawing was mis-labeled, and while he wasn't sure of the proper nomenclature for the connecting cord he was certain that it wasn't the plumule. He felt sure that what we had in the iris was a haustorial cotyledon. He also suggested that Dr. Lee W. Lenz be contacted in the hopes that if he didn't have the information at hand he might have time to research the question.

Dr. Lenz was contacted as suggested and replied: "As long ago as 1892, John Lubbock in his *Contributions to Our Knowledge of Seedlings* described three types of germination in the *Iridea:* the first being represented by *Iris pseudacorus* where he wrote 'The cotyledon thus consists of a short lower sheathing portion from which the first leaf soon breaks in the form of a long, slender, wedge-shaped sheath with a green tip, and an upper portion perfectly continuous with it in connection with the seed, its apex remaining embedded in the endosperm.' In the second type represented by *I. sibirica* et al he wrote 'The cotyledon shows greater differentiation of structure, the parts which perform the three functions being quite distinct from each other. The lower portion still forms the protecting sheath, but is much longer than in the first type. Attached to it, either at the apex or some varying distance below, is a long thread like connective, the other end of which is swollen into a more or less club-shaped absorbent organ buried in the endosperm of the seed.'"

Dr. Lenz continues with "There is no question about it. The whole thing is a cotyledon modified to perform specific functions in the establishment of the young plant."

At this point I would like to question the observation of Lubbock concerning *I. pseudacorus,* in that it would be a distinct departure from all I have learned if the second leaf was connected to the seed rather than having the first sheathing leaf connected to it. If anyone has observed differently please let me know.

Now for a brief rundown concerning Lubbock's comments concerning *I. sibirica* along with Dr. Metcalf's and Dr. Lenz's observation of the seedlings. *1.* A portion of the cotyledon remains in the endosperm and serves the function of a haustorial organ as in *Phoenix dactylifera,* as it absorbs nourishment from the endosperm and transmits it to the seedling via the connective. *2.* The cord connects the haustorial organ to the sheath and was designated as a connective by Lubbock. *3.* The sheath, which in most cases is a stiff, chlorotic tube that surrounds the plumule, the first true leaves, and provides them with a protected access to the surface. *4.* Collectively the above would constitute the cotyledon, and from Dr. Metcalf's observations should be designated a haustorial cotyledon.

In support of number four, seed of TB iris were dissected at various times following germination. The portion of the endosperm adjacent to the embryo is the first to be digested, and this is visible by the time the radical breaks through. As the endosperm is absorbed the cotyledon expands

to maintain intimate contact with the remaining portion of the endosperm. Unless the endosperm is defective this will continue until all that is left is a one or two cell layer that makes up the surface of the endosperm. At this time the greatly enlarged portion of the cotyledon will collapse and it and the connective will both dry up as the seedling absorbs the last of the nourishment from them.

Another point in question from the statements made in the study manual is that the plumule (actually the connective), is positively geotropic. Numerous observations indicate that when the embryo first starts to elongate it will grow in whatever direction the seed happens to be turned, and the positive geotropism is exhibited only when the radicle starts to develop. As soon as the first root has made enough growth for the hair roots to become established in the growing medium, any additional growth of the connective and the sheath must be upward or negatively geotropic. If the seed is firmly anchored in the growing medium the connective and sheath will elongate at the same rate. A large part of this elongation is due to the individual cells becoming longer, but a part is due to cell division.

The growth of the plumule is, of necessity, negatively geotropic as the plumule consists of the embryonic leaves that are enclosed by the sheath. Normally they will start growth before the sheath emerges from the soil. The elongation of the sheath stops when it is slightly above ground level and the embryonic leaves continue to grow and emerge as the first true leaves.

I would like to express my thanks to Dr. Homer Metcalf and to Dr. Lee W. Lenz for the information furnished.

References:

John Lubbock, 1892
Contributions to Our Knowledge of Seedlings
Foster and Grifford
Comparative Morphology of Vascular Plants
Fahn
Plant Anatomy

I. missouriensis var. *pelogonus*

Pods of *Iris missouriensis,* drawn from a herbarium sheet from the Pringle Herbarium, University of Vermont, which bears the following labels

Mexican Flora
States of Coahuila and Nuevo Leon
#1302
Iris missouriensis Nutt.
Lerios, east of Saltillo
Coll. Dr. Edward Palmer, July
February to October 1880

Before the recent finding again of this species it was sometimes speculated that Palmer's collection was of some bearded, cultivated iris, but these are typical pods of *I. missouriensis,* so there was never any real reason for doubting its identity.

Pods: Drawing by Jean G. Witt

Plant: Drawing by Bob Pries

A Brief Look at Watsonia

–Richard L. Doutt–

Professor Eloff (Executive Director of the Kirstenbosch Botanic Gardens in South Africa) wrote the Foreword to Peter Goldblatt's 1989 Monograph on the Genus *Watsonia.* He commented that "Any traveler through the natural veld of the South and South Western Cape in late spring or early summer will have noticed pink, red, orange, purple, mauve, scarlet or white patches of flowers dancing in the wind. Although the uninitiated motorist may consider them to be gladioli they are in fact *Watsonia* species."

On my visits to the Cape I have found it unnecessary to go into the veld to see *Watsonia* for they are effectively used as plantings in the median dividing strip in highways near Cape Town. They form beautiful mass displays at Kirstenbosch and the different species flower over an extended period.

About 1750, Phillip Miller, curator of the Chelsea Physic Garden in London, recognized that a flower he grew from seed was a new genus. He named it *Watsonia* in honor of Sir William Watson, who was instrumental in introducing the Linnaean system of binomial nomenclature to Britain.

Watsonia is a genus of about fifty-two species restricted to southern Africa. Some *Watsonia* species are deciduous with the foliage dying back in summer, others are evergreen. The species range in height from robust plants of six feet down to dwarfs that are ten inches high and ideal for pot or container culture. It is surprising to Professor Eloff that so little attention has been given to the cultivation and improvement of *Watsonia* in comparison to its close relative *Gladiolus.*

Watsonia humilis is a dwarf species which makes a nice container plant. The flowers are pink or white flushed with pink. Another dwarf with reddish flowers is *W. coccinea.* The taller evergreen species include *W. angusta, pallansii,* and *wilmaniae.* Beautiful tall deciduous species include *W. marginata, meriana,* and *borbonica* with its white variety *ardernei.*

Propagation of *Watsonia* is from corms or from seeds. The dwarf species may flower in the second year but the larger species require three or more years to bloom. The corms should be planted about four inches deep. Good drainage is important, and while they will respond to fertilizer, they are not heavy feeders.

The *Watsonia* species that were in my collection at BioQuest International are now sold by Jim Duggan's Flower Nursery, 1452 Santa Fe Drive, Encinitas, CA 92024.

References:

Doutt, R. L., 1994.
Cape Bulbs. Timber Press

Goldblatt, Peter, 1989.
The Genus Watsonia.
Annals of Kirstenbosch Botanic Gardens
Vol. 19.

Members of SIGNA please note that this section on Non-Iris *Irids* invites articles from you. We welcome any comment, short article, shared experience, or any other appropriate material on Non-Iris *Iridaceae.* Please send what you would like to have printed to Richard Doutt, 1781 Glen Oaks Dr., Santa Barbara, CA 93108.

[Readers of this feature should note that Dr. Doutt's long-awaited book, *Cape Bulbs,* has been published by Timber Press and is currently available at bookstores ($34.95). Received too late to review in detail, it features many fine illustrations by Shari Smith, 75 color plates, and a wealth of cultural information on the Cape bulbs and other non-*Iris* Iridaceae. –Ed.]

Typical *I. tenax*

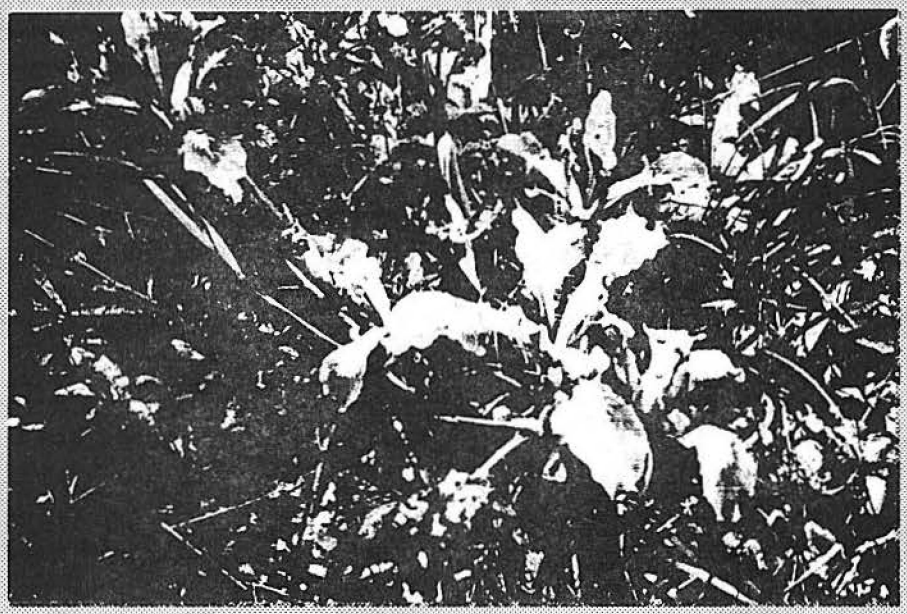
–Colin Rigby–

THE GREAT DIVERSITY of plant variation within a certain species never ceases to amaze me. The different colors and shapes of both the flowers and leaves makes it practically impossible, for me at least, to place a plant into any one species category. I know that there are certain genetic factors that control their "look like" qualities, but, like people types, it is sometimes difficult to tell just where they belong.

Some years ago while visiting the North Umpqua River in central Oregon, we came upon some beautiful, dark shades of *I. tenax* on the tables at a local restaurant. A lady who worked there took us to see the irises in the wild, a whole hillside above and around her house just outside Glide. Later that fall, a generous amount of seed arrived in the mail. Some was sent to the seed exchanges and a half-cup or so was planted in the far back corner of the yard where it came up like grass. There were a few lighter shades, but with a little roguing out, I eventually had a nice patch of plants with flowers of deep burgundy and plum-purple colors with sharp contrasting white signal patches. Flowers "typical" of *I. tenax*. There was one prized plant with deep plum-purple flowers, a sharp white signal area, and a thin white edge to both the standards and falls. I fear, however, it has been lost in the move.

Glide, and the Umpqua River we were visiting, is in central Oregon on the eastern side of Interstate 5 and I understand some of the darkest colors of *I. tenax* come from that area. The colors of *I. tenax* on the western side of I-5 seem to be lighter in color with blue-violet and the "bluish" colors typical. What a visual treat to encounter a large clump almost smothered in bloom.

I've planted seed of "white" *tenax* two or three times but they have always turned out to be very pale shades of lavender with some darker veining. One plant, a rather dirty cream-white color with slightly darker veins and more rounded fall petals, I touted as a white *tenax* until I realized it must be some sort of hybrid and added it to the compost pile. Another plant received from a fellow irisarian has yet to bloom. The plant is much weaker than its counterpart and it has been



Iris tenax in the area of Sutherlin, OR
Photograph courtesy of Rickie Campbell

difficult to keep it alive. I've never seen the yellow-flowered form that I know of. This form was once referred to as *I. gormanii* and was located in only two locations, one of which was along Scoggins Creek in Washington County, Oregon. Occasionally, you will find a plant with cream or dirty white flowers, but I don't know as I would call them yellow.

The colors of *I. tenax* in central Washington seem to be different again, all the way from pale lavenders, pinks and whites, with the darker colors in the red-violet shades. One large area we visited this spring had flowers in pale, delicate colors, some with "red" veining, lovely clear pinks, and two groupings of pure white with bright yellow signal patches. I thought they were the find of the century, but apparently, pure white is not all that uncommon. There is at least one named clone in existence. These white flowers had no veining at all, and except for the "typical" form of *I. tenax*, one would think they belonged to another *Iris* species. This is private property and we had the opportunity to gather seed.

Mother Nature does other things besides giving us a complete and complex color range of flowers by mixing up the species, one with another, thus adding further complications to an already complex field. *I. tenax* crossed with *I. chrysophylla* gives us the 'Valley Banner' pattern of white flowers with purple lines on the falls and purple styles. This pattern occurs quite frequently in nature, and hybridizers have now stabilized this pattern and given us modern hybrids with very wide petal parts. Another interesting flower I saw this spring was one simply named *'Douglasiana* seedling' at a show. The flower was "typical" purple *douglasiana* with elongated style arms "typical" of *I. chrysophylla.* I've never seen *douglasiana* with these exaggerated styles nor have I ever seen *chrysophylla* in any other color except creamy-white. Could this flower have been a cross between the two? I would guess that it was. At any rate, it was a flower with great merit and certainly something out of the ordinary.

By-Laws of Species Iris Group of North America

Article I
Name

The name of this organization shall be the Species Iris Group of North America, a Section of the American Iris Society, hereinafter called SIGNA.

Article II
Purpose

The Purpose of this organization shall be:

a. The study of the wild species of the genus *Iris* and related irids;

b. to promote a wider appreciation of these plants and their hybrids as garden ornamentals;

c. to further their introduction and distribution through our seed exchange while supporting their conservation in the wild:

d. to disseminate scientific and cultural information of these plants to both our membership and the general public through our publication; and

e. such other means that may arise from time to time.

Notwithstanding any other provisions of these articles, the organization shall not carry on any other activities not permitted to be carried on by an association exempt from Federal income tax under Section 501(c)3 of the Internal Revenue Code of 1954.

Article III
Membership

The organization shall offer membership as follows:

"Regular Members" shall be those dues paying members who are members of the American Iris

Society and who shall have an administrative voice in the organization's affairs. No membership shall exceed in length the current American Iris Society membership of a Regular Member.

"Associate Members" shall be members and receive all the privileges of regular membership, except that they shall have no administrative voice in the organization's affairs.

"Life Members" shall be those members who have paid life membership dues. Only those Life Members who are members of the American Iris Society shall have an administrative voice in the organization's affairs.

"Honorary Life Members" shall be those persons selected by the Board of Directors for outstanding service and contribution to the organization. They shall enjoy all the privileges of regular membership without paying dues but may not serve on the Board of Directors. Their number shall not exceed 2% of the total membership.

Membership dues shall be determined by the Board of Directors and shall be subject to periodic review as deemed necessary.

Article IV
Officers

The officers of the Society shall be a President, a Vice-President, a Secretary, a Treasurer, and four Directors at large, all of whom shall be voting members of the Society.

The President shall act as co-ordinator of the affairs of SIGNA and shall preside at all meetings. He shall be a member ex-officio of all committees except the Nominating Committee.

The Vice President shall in the absence of the President, exercise the functions of the office of President.

The Secretary shall keep the records of the Society and of the Board of Directors. He shall serve all legal notices to members. He shall conduct the legal correspondence of the Society.

The Treasurer shall receive, record, deposit and account for all moneys of the society. He shall pay all bills approved by the President or the Board of Directors. He shall report on finances at the Annual Meeting and at such other times as the President or the Board may require.

Article V
Board of Directors

The Board of Directors shall consist of the President, Vice President, Secretary, Treasurer, the immediate Past President and four Directors at large.

The Board of Directors shall have control and management of the affairs, policies and business of the Society.

The Board shall hold an annual meeting in the first week of June in each year for purposes of organization, and/or the transaction of other business. Other regular meetings of the Board may be held without notice at such time and place as the Board may fix from time to time.

Special Meetings of the Board for any purpose may be called at any time by the president, vice president, secretary, treasurer, or any two directors.

Vacancies of the office of a Director at large shall be filled by election by the Board of Directors for the unexpired term.

Five members of the Board of Directors shall constitute a quorum.

Article VI
Appointed Officers

Appointed Officers shall be an Editor, Membership Secretary, Seed Exchange Director, Slides Director, Robin Director and such other appointed officers as the Board deems necessary.

Appointed Officers shall be approved by a quorum vote of the Board of Directors.

Article VII
Nominations and Elections

In January of an election year, the Board of Directors shall appoint one member in good standing to serve as Chairman of the Nominations and

Elections Committee. The Chairman of the Nominations and Elections Committee shall select two SIGNA members in good standing and together they shall present a slate of new officers to the Board of Directors no later than March 1st. Members of the Nominations and Elections Committee shall be from diverse sections of the country. The consent of the nominees is mandatory. The slate of new officers shall be published in the spring issue of the SIGNA Publication and if no further nominations are made, new officers shall assume office the last day of December of an election year.

Any member in good standing may make further nominations by submitting a petition of no less than ten signatures of SIGNA members in good standing to the President no later than June 1st. A ballot of nominees shall be mailed to all members which must be returned to the Nominations and Elections Chairman no later than September 1st in order to be counted. Results of the balloting shall be published in the fall issue of the SIGNA Publication. Nominees receiving a majority of votes from the ballots received shall be declared officers for the next term and shall assume office on the last day of December.

Term of office for President, Vice-President, Secretary and Treasurer shall be for a period of two years. Term of office for a Director at large shall be for a term of four years, two Directors at large to be elected each election year. There shall be no limit to the number of consecutive terms the President, Vice-President, Secretary and Treasurer may serve. A Director at large may serve only one consecutive term. The term for an appointive officer shall be indeterminate.

Article VIII
Meetings

An annual meeting of the Society shall be held during the annual convention of the American Iris Society and is open to all SIGNA members and guests.

Special meetings of the Society may be called by the President or by the Board of Directors when it is deemed necessary to do so.

Article IX
Amendments

These By-Laws shall be subject to periodic review and revision at the discretion of the Board of Directors or by petition to the Board by 2% of the membership. Any proposed amendment shall be submitted to the membership by publication in the SIGNA Publication. Any such proposed amendment will become effective 60 days after publication unless within that time, five members in good standing have notified the President that they desire a vote on the proposed amendment. Any proposed amendment brought to a vote shall be ratified by a majority of votes cast.

Any amendments to these By-Laws shall be in conformity with the rules of the American Iris Society with regard to the Sections.

Article X
Earnings

No part of the net earnings of this organization shall inure to or for the benefit of or be distributed to its members, directors, officers, or other private persons, except to pay reasonable compensation for goods and/or services rendered to further the purposes and objectives of this organization.

Article XI
Dissolution

In the event of dissolution of this organization, after paying or adequately providing for all debts and obligations, the Board of Directors shall distribute all assets to the American Iris Society Foundation or another organization which is qualified as tax exempt under Section 501(c)3 of the Internal Revenue Code.

Revised: July, 1993

International Symposium: Gardening with Species Iris

St. Louis, Missouri

March 24—26, 1995

Sponsored by:
The Greater St.Louis Iris Society
The Missouri Botanical Gardens
The Species Iris Group of North America
The Gateway Chapter of the American Rock Garden Society

Symposium Headquarters:
Westport Park Best Western, 2434 Old Dorsett Rd. (at I-270 & Dorsett Rd.)
Maryland Heights, MO 63043 (314) 291-8700 or 1-800-223-516.

Hotel Information

Rates: $55.00 per room per night, plus tax. Up to 4 persons per room. Book your room reservation directly with the hotel, stating you are with the Species Iris Symposium for this special discounted rate. All unreserved rooms blocked for this convention will be released after March 10, 1995. Free shuttle service from the airport to the hotel arranged through the hotel.

Seminar Registration

Registration Fees:

Postmarked before Jan 1, 1995	$100.00
Postmarked Jan 1–March 1,. 1995	$125.00
Postmarked after March 1	$150.00
Youth under 18	$80.00

Make checks payable to Signa Species Symposium (SSS) c/o Riley Probst. and mail to; Riley Probst, 418 North Van Buren St. Louis, MO 63122.

All registrations will include a copy of the Symposium Proceedings. The Symposium Proceedings will be available for purchase afterwards at an estimated cost of $30.00 for additional copies. A box lunch on Saturday and the evening banquet are included in the registration fee. The Spring Flower Show will be in progress at the Missouri Botanical Gardens, along with regular features of the Garden, Climatron Rainforest, etc. Transportation between the Missouri Botanical Garden and the headquarters hotel provided as part of the registration fee.

Thumbnail Agenda

Friday evening at the hotel, there will be informal presentations and hospitality. If you would like to show some of your own slides please note this when making your registration. Saturday will be lectures, interspersed with opportunities to view Iris exhibition. Those wishing to exhibit plants and flowers, please contact Symposium Chairman, Bob Pries, 6023 Antire Rd. St. Louis Mo. 63049. (314) 677-8805.

Saturday evening: banquet and lecture by Brian Mathew, on Iris in their native habitats .

Sunday morning: lectures, afternoon early departures or opportunity to visit more of the Gardens. Sunday afternoon, an open meeting of SIGNA.

Photo Contest

Cash awards for best photograph will be given. $100.00 first prize, $50.00 second prize, $25.00 third prize and five fourth prizes of $10.00 each. Photos will be judged on composition, rareness of species or species cross, and technical excellence. Winners will be announced at the end of the symposium and in SIGNA. Please send copies of your best photograph in the form of a slide and an 5" × 8" print. Photos will not be returned and may be later featured in SIGNA with credits to the photographer. Photos must be received by March 20, 1995 in order to be displayed at the symposium. Each photo should be properly identified with specific name and or variety. Send photos to symposium chairman, Bob Pries, 6023 Antire Rd. High Ridge, MO 63049, U.S.A.

About the Speakers

BRIAN MATHEW is much appreciated by Irisarians for his work *The Iris,* in which he not only presents a comprehensive botanical review of the genus *Iris* but adds notes on their culture from personal experience of growing many of them in his own garden. In preparing the *Iris* section of the *Flora of Turkey and the East Aegean Islands,* he had the opportunity to see and photograph many *Iris* species in their native environments. He many publications to his credit including *Hellebores; The Crocus;* and *The Smaller Bulbs.*

PETER GOLDBLATT is a Curator of African Botany at the Missouri Botanical Gardens. As a specialist in the *Iridaceae* he has published several monographs on genera within the *Iris* family, including *Dierama, Moraea,* and woody *Iridaceae.* These wonderful works have set a standard not only for plant systematists but as understandable references for the garden enthusiast. Peter Goldblatt will address us on the evolution of the *Iridaceae.*

PANYOTI KELAIDIS is a long time Iris enthusiast and member of SIGNA. He is curator of the rock garden at the Denver Botanical Gardens and one of today's premier garden lecturers and photographers. He will be returning from collecting and photographing in the Drakensburg Mts. of South Africa. He will show us what can be accomplished with *Iris* in his renowned rock garden.

JIM WADDICK, now with two expeditions to China aided by the American Iris Society and SIGNA, has a unique expertise on these Asian *Iris.* An iris enthusiast and plantsman of the highest order, Jim grows most of the *Iris* he has seen and is responsible for the introduction to this country of many unusual plants. His book *Iris of China* chronicles some of his adventures as well as providing valuable China Iris Flora.

JEAN WITT is a plantswoman and artist. Jean has a lengthy legacy of contributions to the American Iris Society. She has experimented with many types of iris in her hybridizing and contributed greatly to setting the standards for miniature tall bearded *Iris* in the garden. She has named the class of Siberian *Iris* × Pacific Coast Natives. She is concerned about the preservation of species but also enthusiastic about potential hybridizing.

PHIL OGILVIE has traveled through the southern swamps to view the Louisiana *Iris* species and try understand their plethora of natural hybrids. Gardening in the Washington D.C. area, he brings an understanding of how these water plants can be grown in upland gardens.

DARRYL PROBST is a landscape designer and hybridizer. Darryl has interests in the temperate and tropical *Evansia Iris* and the hybrid *Pardancandas.* Developed by Sam Norris, the "Candy Lilies" have been carried a step further with Darryl's persistence.

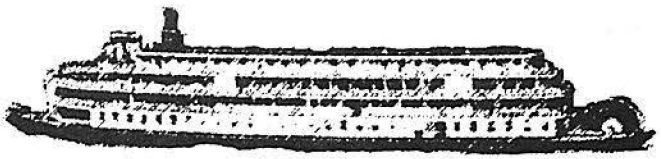
ALAN MCMURTRIE is an enthusiast of the bulbous species including *Reticulatas* and *Junos.* Alan traveled to Turkey in an effort to find fertile *Iris danfordiae.* He is presently working on monographs of the *Reticulatas* and of the *Junos.* An avid plantsman, he grows many of these unusual *Iris* from seed to flowering in his native Canada.

EBERHARD SCHUSTER operates a perennial and water garden nursery in Germany. He has been growing and observing *Iris* in water gardens for several years. He has developed some of his own cultivars and hybrids. He is active in the introduction new plants of his own, and other leading European plantsmen.

COLIN RIGBY, owner and operator of Portable Acres Iris Gardens, has specialized in the growing of Pacific Coast Native *Iris.* Some of his unique propagation methods have allowed people in less favorable climates the chance to grow and bloom these spectacular species.

DAVE NISWONGER: although Dave has won the highest award of the American Iris Society for tall bearded Iris he has hybridized, one can not overlook his interest in *Spuria* Irises. He has learned how to grow and hybridize this lesser known group of iris species

BOB PRIES, Dwarf species enthusiast, is interested in rock gardening and wild gardens. The harsh continental climate in St. Louis calls for plants that can take extremes; naturally *Iris* met this qualification.



Species Field Trip

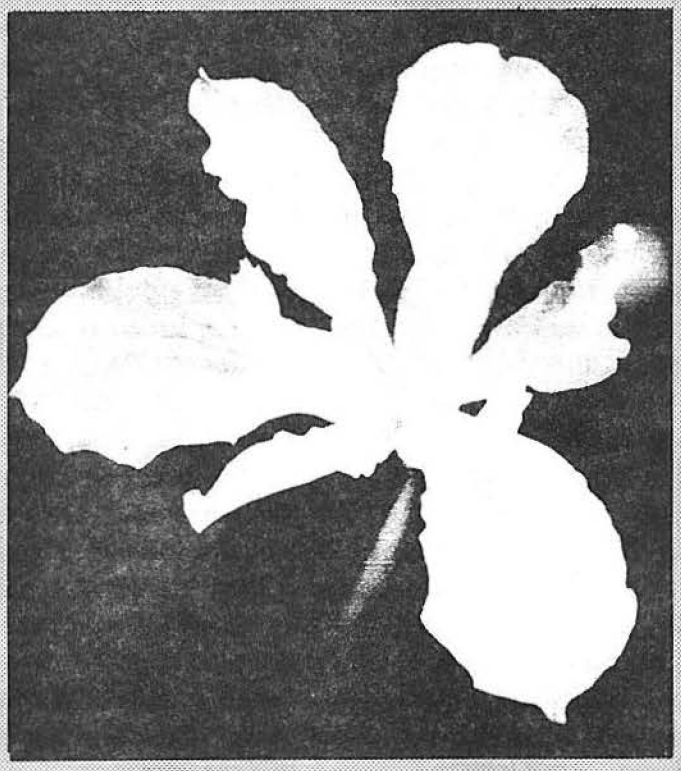
–Louis Fry–

APRIL 2 AND 3, 1994, a large contingent of members of the Society for Pacific Coast Native Irises toured the San Francisco Bay area in the latest of its now-annual treks. Saturday's trip focused on irises in the wild, and Sunday's took the group to gardens from Joe Ghio's in Santa Cruz to Vern Wood's in Pinole. The opportunity to view the latest PCN hybrids in their breeders' gardens, added to the usual species emphasis, may have accounted for this being the best-attended of the recent series of treks.

Saturday was spent entirely within Marin County, California, which was also trip headquarters. While the early date and the need to accomodate a pair of buses severely restricted the sites which could be visited, those who followed the main group were able to see substantial populations of the three PCN's native to the county.

From headquarters at Larkspur Landing, a short drive took the group to Marin Municipal Water District watershed lands above Fairfax, at the base of Mt. Tamalpais. A three-mile hike along a fire protection road and a single-track trail yielded some early-blooming plants of The Marin Iris, also known as *I. douglasiana* var. *major.* This plant is widely distributed over the county, with a wide range of colors but otherwise relatively uniform appearance. Most common colors are white, pale mauve, pale yellow, and lavender, with many specimens having eyed patterns in the style of 'Amiguita'.

Generally considered to be of hybrid origin, as are most irises in the Bay Area, these plants do not conform to typical *I. douglasiana* in every feature. For instance, the shape of the tip of the ovary is not that of the coastal relative. Yet they appear to be well-stabilized over a large area, being readily differentiated from nearby intergrades where *I. macrosiphon* shares territory. A few of the intermediate hybrids were seen in bloom by those who completed the route, as were a number of *I. macrosiphon,* but the primary attraction at this site was the Marin Iris. The most-photographed plant, however, was probably a small specimen of *Corallorhiza striata* which was found alongside the trail. A week later, near the terminus of the trail, a clump of this nearly a yard across was spotted, having apparently been missed by all the week before.



The Marin Iris

SIGNA President Richard Kiyomoto afield

Lunch was devoured in the picnic grounds which served as entrance to the fire road, substantial "poor boy" sandwiches on sourdough rolls with a marinated Greek salad, provided by Fratelli Deli of Novato. In keeping with the location, and the non-roughing-it atmosphere of this trek, picnic tables were available for lunch: a trek "first."

Traversing the county diagonally, the caravan travelled through the San Geronimo valley and Samuel P. Taylor State Park to a site in the Pt. Reyes National Seashore near Tomales Point. On this spit of land, with the Pacific Ocean on one side and Tomales Bay on the other, more typical *Iris doulasiana* thrives. Hybrids are common in the Inverness Ridge area which was part of the route, but roadside conditions there did not permit a stop.

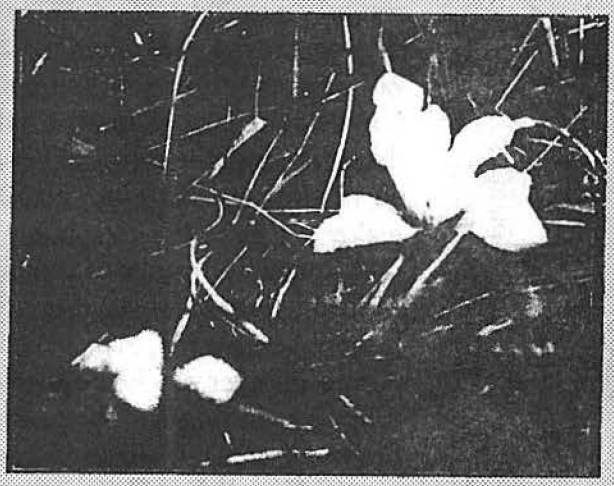
The Tomales Point site presented a sharp contrast to the heat of the interior foothills just vacated, as it is almost continually windswept, foggy at least part of most days, and inhospitably cold. In short, typical of the central and northern Pacific Coast, but with the bonus in this site of a renascent herd of Tule elk, which provided many with photo opportunities.

Iris douglasiana at this site exhibits a good range of color variations, all centered on the common deep red-violet. Varying degrees of reddishness or blueness, while quite within the normal range, are combined with other features to make an interesting population. In one patch which has caught the eye for years, a bright blue flash on the petals, much like that found on *I. munzii,* can be seen from a good distance. Other plants show variation in the width of flower parts, and in the extensiveness of the white patterning on the falls. Again, the variation is nothing which cannot be found on a drive along the coast, but the range exhibited in this one large population makes it a good one to study.

Companion plants at this site include large bush lupines (*Lupinus arboreus, L. ribularis,* but with a number of choice species nearby, including *L. Chamissonis, L. grandifolius*), California poppies (the small *Eschschólzia caespitosa* being very common here, as is the ever-present *E. californica),* and, nearly lost in roadside grasses, *Viola adunca.*

Another cross-county jaunt brought the group to the day's final iris stop, in Novato, where extensive swaths of *I. macrosiphon* were in bloom. This population, while possibly showing some hybrid influence, exhibits the greatest range of color and form the author has found in one site. Most common is the typical red-violet with white markings on the falls, somewhat reminiscent of the color and pattern of *I. douglasiana.* But from this beginning the color range diverges significantly. Some blooms have the color of faded blue denim, others approach cobalt blue, while one of the most unique is a very pale

ice-blue, which was immediately dubbed as white by the group. A similar plant, although not quite as pale in color, was shown to Richard Kiyomoto a short distance from a trail junction at the Fairfax stop; even there, the single clump is the only one of this color range the author has seen.



Pale blue specimen of *Iris macrosiphon*

Here, companion plants, although not all were in bloom at the time of this very early-season trip, include *Lupinus nanus, Navarretia viscidula,* and *Calochortus luteus.* On one of the adjacent hillsides but not examined by the group, a single clump of an apparent hybrid between *I. macrosiphon* and *I. douglasiana* v. *major* exhibits an appealing intermediate form and unusual deep-rose coloring. Over several years of visits, it has not spread its traits to the surrounding area; seedlings from the plant have been indistinguishable from *I. macrosiphon.*

The group proceeded from this stop back to the hotel at Larkspur Landing, to rough it with a cocktail hour and a banquet at a nearby Chinese restaurant, where slides were shown by a number of members. Sunday, the same two buses transported the group to Joe Ghio's garden in Santa Cruz, then in turn to Lewis and Adele Lawyer's in Oakland, David and Evelyn Lenette's in Berkeley, and Vern Wood's in Pinole. The Spring *SPCNI Almanac* featured full reports on the trek.

Since the trek:

The trip predated the normal and peak bloom season for the wild irises by several weeks. In the ensuing weeks, many things have changed. The fire road at the first stop was regraded, destroying the beauty of a fern-covered ravine and depositing several inches of powdery sand on the road. A brush fire above the school on the weekend the seed pods should have been ready prevented any significant seed collecting. And, naturally, the trails not taken due to time constraints and physical limitations have revealed vast numbers of irises and other desirable plants. Both the fire road leading to Phoenix Lake and the more scenic alternative, Yolanda Trail, have a dazzling variety of wildflowers to offer. *Fritillaria, Brodiea, Downingia, Dudleya,* and others are around every turn in the trails.

On Mt. Tamalpais, the irises were still in bloom on Memorial Day, when *Clintonia* was found blooming above Muir Woods. At Pt. Reyes, the trail to Abbot's Lagoon has provided sightings of many irises, but even more rewardingly, dozens of quails, rabbits, deer, swallows, and a host of *Lupinus* species.

Very near the Novato stop, on large open space preserves, both *I. douglasiana* v. *major* and *I. macrosiphon* have been seen in great numbers, forming in some places alternating bands of species, with a number of intergrades evident. Yet at the top of the ridge, apparently very pure *macrosiphon* grows in isolation. The trails here are both less used and more challenging than those taken on the trek, and have been a constant source of amazement in the months since the trek. While Indian Warrior (*Pedicularis densiflora)* was seen as isolated specimens at Fairfax, here there is a space of several acres well-covered.

Similarly, several additional stands of *Calochortus* have been found, as well as an especially appealing very pale yellow *Diplacus.* Most of these finds could have been duplicated at a number of sites in the county. *Zigadenus, Chlorogalum,* and, late in summer, *Zauschneria* blooming above a waterfall....