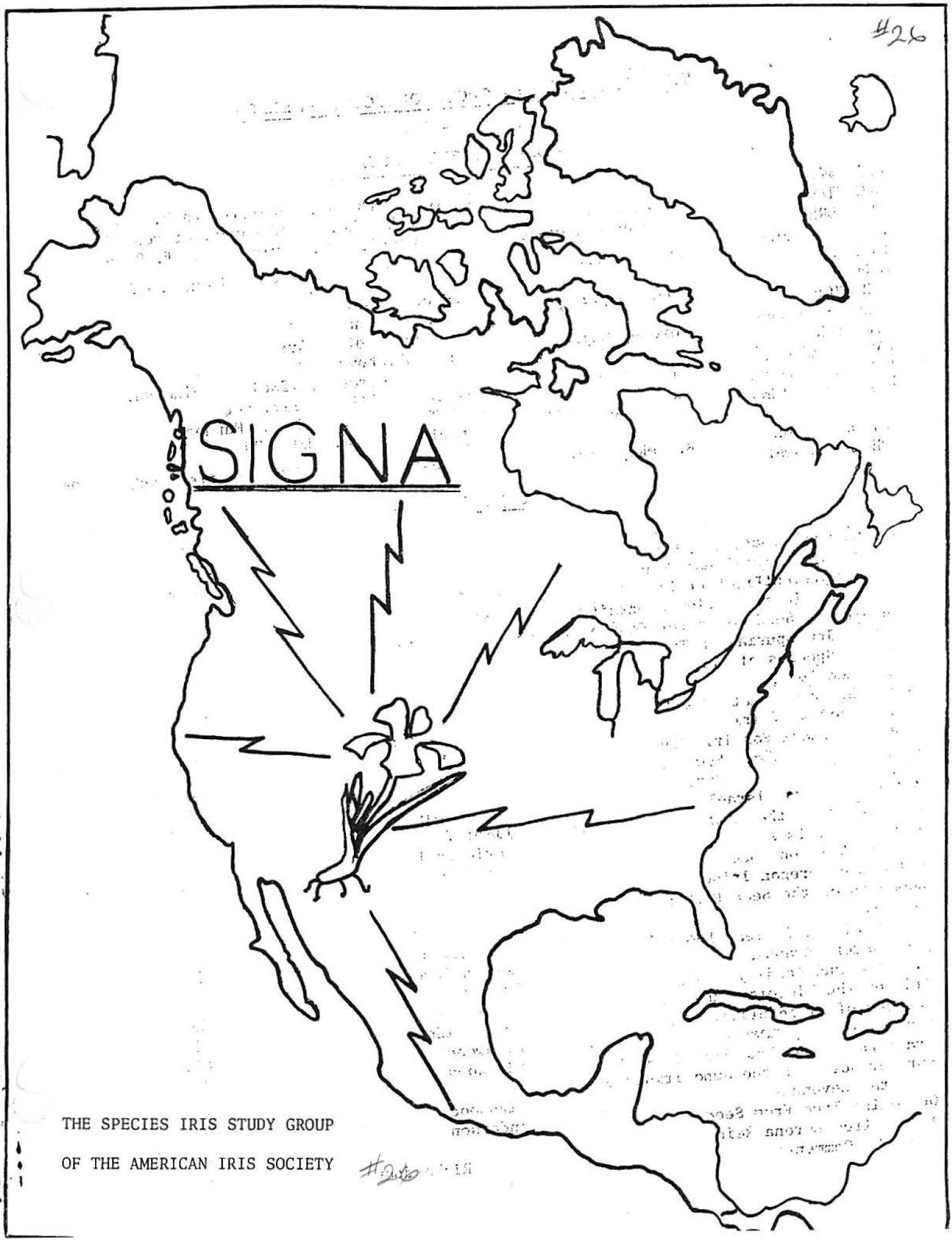
#26



THE SPECIES IRIS STUDY GROUP

OF THE AMERICAN IRIS SOCIETY

#26

THE SPECIES IRIS GROUP OF NORTH AMERICA

April, 1981 - No. 26

OFFICERS OF THE SOCIETY

CHAIRMAN	Jean Witt	16516 - 25th, NE., Seattle, Wash. 98155
SECRETARY	Grace Carter	1212 Tucker Rd., Hood Rover, Oregon 97031
TREASURER	Francesca Thoolen	255 Manzanita Dr., Orinda, Calif. 94563
SEED EXCHANGE DIRECTOR	Mary Duvall	Route 1, Box 142, Dassel, Minn. 55325
SPECIES ROBIN DIRECTOR	Joan Cooper	212 County Road C., St. Paul, Minn. 55113
SPECIES SLIDES DIRECTOR	Dorothy Hujsak	3227 South Fulton Ave. Tulsa, Oklahoma 74135
BACK ISSUES AND PUBLICATIONS SALES	Maryann Anning	La Cresta Gardens, 12864 Viscaino Rd. Los Altos Hills, Calif. 94022
EDITOR OF SIGNA	Bruce Richardson	4249 Twenty Rd., R.R. 2, Hannon, Ontario, Canada. LOR IPO
EDITOR OF THE SPECIES MANUAL	B. LeRoy Davidson	911 Western Ave., #200, Seattle, Wash. 98104

CONTENTS

		Page No.
Chairman's Message	Jean Witt	859
An Invitation for Guest Irises		860
2nd. Supplementry Seed List	Mary Duvall	860
Iris pumila in the Pavlow Mountains	Milan Blasek	861
Cleaning Up Seed Coats for Embryo Culture	Sweet & Bolton	863
More Yellow Spurias in Turkey	Roy Davidson	864
Two New Species of Iris	Per Wendelbo	865
Iris Seed Sources		867
Avoiding Contaminated Cultures	John Holden	868
Color Photos of Iris	Homer Metcalf	869
Heat Treatment For Iris Mosaic	E.F. Riek	870
I. longipeticella - New Species	Metcalf & Rumely	871
Drawing of *I. regis-uzziae*		872
A New Iris from Israel	Naomi Feinbrun	873
Excerpts from the *Iris Versicolor* Robin,	Flight 7	875
Louisiana Irises	Marie Caillet	876
Scatter The Good Seed	Anne Blanco White	878
Culturn of Oregon Irises		880
Comments on the Seed Exchange	Mary Duvall	881
Letters		883
Review of B.I.S. Yeai Books 1978-79	Roy Davidson	886
The Eastern Evansias	Roy Davidson	889
I. verna and Acidity	Roy Davidson	889
Iris on the Victoria Tube	Roy Davidson	890
Sources of Misidentification	Roy Davidson	890
Drawing of *I. fumosa & I. sindjarensis*	Highwood	892
Drawings of Two Juno Irises of Syria	Highwood	893
Further Notes on the Juno Irises of the Levenant	Highwood	895
On Coming True From Seed	Anderson	899
A Note from Lorena Reid		899
Editor's Comments	Bruce Richardson	890

***

CHAIRMAN'S MESSAGE

Jean Witt

Spring 1981 finds our Society thriving as to membership and finances, and interest in species iris continues to spread and increase. The machinery for our shift from appointed to elected officers is moving more slowly than we had hoped; but our executive board are busy people and we are working on the change.

I am pleased to report that Homer Metcalf, our former SIGNA Secretary-Treasurer, has been awarded a small grant from the A.I.S. for the purpose of compiling a new list of chromosome numbers for the genus *Iris*. This is welcome news for breeders of species and intersectional hybrids, since the Randolph of 1959 in GARDEN IRISES was not reprinted in the WORLD OF IRISES, perhaps because so many new chromosome counts have been published in the interim.

The friends who participated in a seed and plant collecting expedition to China last fall, went as far as Tibet, and actually brought home an iris! They found it growing in moss over boulders, by the roadside where their bus just happened to break down. Pieces of the pencil-sized rhizomes survived the trip home and are now thriving indoors in a pot. Plant characteristics suggest that it belongs to the Crested Section--internodes between the leaves of the original fan have stretched rapidly upwards, after the amnner of 'Nada' and 'Darjeeling'. Foliage lacks the shiny surface of *I. japonica,* and the rhizomes are not large enough to be *I. wattii.* Will it turn out to be *I. confusa?* Only time will tell--we must persuade it to bloom first. Keep your fingers crossed! Meanwhile the iris "grapevine" brings me word of other trips to China in the offing. With plastic bags and air travel, Chinese treasures such as *Ii. henryi, grisjii, pseudorossii,* and new collections of *I. chrysographes* and its relatives may not be as far away from our gardens as we have thought in recent decades!

Closer to home, I can offer you at least a glimpse of the white-flowered form of *I. verna* which is now growing in eastern gardens. If you can find a rock-gardening friend and borrow a copy of ALPINES OF THE AMERICAS, the Report of the First Interim International Rock Garden Plant Conference, 1976, you will find, in the section of colour plates which follow p. 150, a fine colour photograph of *I. verna alba.* References to many small irises will also be found in the text.

My question about fall-blooming in *I. lacustris* has brought a reply from Martha Wilkins of Oshkosh, Wis. "At the Ridges Sanctuary, Baileys Harbor, Wis., *I. lacustris* (called the Lake Iris), blooms intermittantly--after their first spring burst of beauty, until frost nips them in the fall...(it) is a fairly normal occurrance most years.

Caroline Dorman, writing in the 1947 A.I.S. publication THE IRIS, AN IDEAL HARDY PERENNIAL, has this interesting comment on another American species: "Some botanists designate the whole group of zigzag-stemmed irises as *I. foliosa,* but this is not quite fair to the attractive dwarfs of the group. The typical *I. foliosa* as the name indicates, hides its lovely blossoms beneath too-luxurient foliage, while the little fellows with bloom-stems only six inches high do not conceal their flowers, and are desirable additions to the cool rock garden. This iris bears firm wide-open flowers, with broad long-clawed sepals, and a radiant yellow signal patch. They are usually bright lavender-blue, occassionally pure white." Do we have any members who are working on dwarf Louisianas today? And does anyone know of a white *I. foliosa (I. brevicaulis)?*

With that let me wish you a great iris bloom year in 1981. Make some hand

pollenated crosses or selfings, and save seeds for the seed exchange. If you can manage it, make some seed collections from the wild. Keep your comments on what you are growing and how you do it flowing to our editor; our readers are waiting for it

****

AN INVITATION FOR GUEST IRISES

The King County Iris Society and the Pierce County Iris Society of the Puget Sound area will be hosting the 1984 American Iris Society Convention in Seattle. We will be inviting guest bearded irises in 1982, but we can accept plants this year, and encourge you to send beardless irises this year so that they may be seen on representative plants.

Experience leads us to believe that it often takes an extra year for irises to adapt to our climate, but once established, almost all types just love it here. Arils and many arilbreds don't care for our climate, but just about everything else does, and we should have enough variation in peak bloom season among our display gardens to allow you to see a wide selection of types.

ED: Plants should be sent to the Guest Iris Chairman, Mrs. George F. Lankow, 725 20th Ave. W., Kirkland, Wash. 98033.

This information is being given here with the thought that some of our members might like to show species or near hybrids and that extra year of growth might well be needed for slower growing types.

****

Since the SUPPLEMENTERY SEED LIST was printed in SIGNA #25, further seeds have arrived from Homer Metcalf and are listed below. The problem at Bozeman, Montana, is the late ripening of the seeds due to the climate there, and although we knew these seeds were coming, it was not possible to list them previously.

80M234 - crocea Jacq. MSU 11472, increase of A.I.S. 71M22
80M235 - Buttered Chocolate
80M236 - Counterpoint
80M237 - Imperial Ruffles
80M238 - Intensity?
80M239 - Michigan State
80M240 - Port of Call
80M241 - Proverb
80M242 - Ruffled Canary
80M243 - Russet Flame
80M244 - Shara Sands
80M245 - White Coin

SERIES ENSATAE - Iris oxypetala Bunge

80R246 - MSU 7772, ex F. Kalich
80R247 - MSU 7872, ex F. Kalich
80R248 - MSU 8072, ex F. Kalich
80 R249 - MSU 8372, ex F. Kalich
80 R250 - MSU 188-189/72, ex F. Kalich

80Z251 - schizostylis coccinea ar. Mrs. Hagerty - donor Dr. Egli

CORRECTION:

The following seed numbers were donated by Martha Wilkins, 7536 Waupun Rd., Oshkosh, Wisconsin 54901.

80J048, 80J051, 80J053, 80J055, 80J056, 80J057, 80J058, 80Jo62, 80J063 80J055 80J067, 80J068, 80J069, 80J075, 80M103, 80N125.

Iris pumila in the Pavlov Mountains of Moravia*

Milan Blasek
(Czechoslovakia)

Between the village of Pavlov (also sometimes called Pollau or Pablau) and the village of Dolni Vestonice in southern Moravia, a high mountain rises over the plain, catching the eye from afar by the ruins of Maiden Castle (Divci hrady) on its summit. From there to the south a chain of chalky mountins, the Pavlov Mountains, runs in the direction of Mikulov (or Nikolsburg). In its center on a rock above the village of Klentnice another ruin stands, called Rose Castle (Ruzovy hrad), lending a romantic character to the mountains. Fertile fields and vineyards extend along the foot of the ridge, but within the mountains forests of deciduous trees have been preserved, which in the higher regions give way to rocky or grassy slopes with steppe characteristics and xerothermic vegetation.

The Pavlov Mountains are a rich reservation with numerous rare plants, most of them among the prettiest wild plants growing in our country. In spring, immediately after snowmelt, snowdrops (Galanthus nivalis) bloom in the grove beneath the Rose Castle, soon being followed by a colorful mixture of rosy-violet and white Corydalis cava. In the cliffs or on the walls of the ruin we find light yellow Alyssum saxatile, and between the grasses on bushy slopes Pulsatilla vulgaris subsp. grandis shows its violet bells, while large flowers of Adonis vernalis and greenish-yellow bushes of Euphorbia polychroma are to be seen.

At the end of April the gayly-colored carpets of Iris pumila flower in the grass, and soon thereafter those of the little sand iris, I. arenaria, follow, accompanied by Anemone silvestris. In warm, sunny places, or on little rocks we see conspicuous rosy fragrant flowers of diptam (Dictamnus albus) shining under sparse shrubs. In light woods here and there one can find a stalk of the many-colored Iris variegata and the grassy Iris graminea, sometimes also Lilium martagon and very seldom Cypripedium calceolus and Cyclamen europaeum. In the autumn, the slopes become decorated by the blue and yellow flowers of Aster amellus and Aster linosyris.

Among the irises, I. pumila is the most frequent in the Pavlov Mountains (Pavlovske kopce). Variability of the petal colors is very conspicuous in this species and we find, except in Corydalis, no similar gayness of color in other wild plants.

In the southern extremity of the Pavlov Mountains there is the Holy Mountain (Heiliger Berg), at the foot of which lies the town of Nikolsburg. On the southern slope, along the trail to the church on the summit, Iris pumila grows abundantly. Here it exhibits only different hues of blue and violet-red. The plants with brighter colors obviously have been collected for gardens. On the western slope, which is untouched, some yellow-flowering plants are still growing and even the scale of violet is broader. In the brighter flowers the sepals usually have a darker tone and the beards are whitish, yellow or of the same color as the sepals.

---

*Originally published (in German) in the 1962/63 Yearbook of the Deutsche Iris-und-Lilien Gesellschaft under the title, "Iris pumila von der Pollauer Bergen." This translation provided by Mrs. Marlene Ahlburg, Rötgesbüttel, West Germany.

On the southwestern slope of the Holy Mountain, I. arenaria grows in scattered sparse tufts, its flowering time following that of I. pumila. Both of these species also grow on the Turold Mountain, which is situated north of Nikolsburg. A big part of it has been the victim of the quarryman, but on the rest some rare species have been saved. Here grows an interesting form of Iris pumila, with brownish purple-red flowers. Nowhere else have I seen similarly-colored flowers. This color is not a rare one in pumilas, but most frequently the sepals have muddy yellow to violet spots. Some forms show a big spot, violet or brown, with a yellow margin. These varieties remind me of I. variegata but in this case the dark color of the sepals is compact, not dispersed along the veins. I discovered a fine stock of yellow-brown pumilas on the eastern slope of the Tafelberg (Table Mountain) above the village of Klentnice.

The most varied mixture of pumila colors occurs on the southeastern slope of Devin below the ruins of the Maidenburg. The whole slope is covered by the gay tufts of irises, among which it is nearly impossible to find two plants alike. Besides many violet and yellow hues there are a few white-flowered plants, but the white color is not a really clear white. On the sepals usually are dirty flushes. Here I was happy to find some bright blue-flowering plants. One of them was very conspicuous. Its growth was more robust than the usual type and it had a stalk of some centimeters length. The stalk normally is extremely short in the pumilas, but flowers of this species have a very long perigon tube like colchicums and crocuses, which gives the impression of a stalk.

In Devin the yellow-flowering pumilas are abundant, but they do not represent more than one-third of the population. On the steppe slope in the vicinity of the village of Pouzdrany, a few km to the north from Devin, the yellow-flowered plants predominate.

Pumilas have an interesting, and from the standpoint of gardeners, important characteristic: in spite of having a very short stalk, which cannot be branched, strong plants carry more than one flower per rhizome. The first grows in the middle of the fan at the top of the rhizome and a few days later more flowers bloom out on one, two, or three lateral sprouts which do not yet have their own roots. By this behavior, the flowering time is greatly prolonged and the number of flowers in the tuft is higher. The later shoots, when flowering in the wild, are very short and do not produce new vegetative points, but in the garden under favorable circumstances further buds develop in the axils of the leaves. They become new rhizomes in the following year. New flowers will grow on the tops of the lateral shoots.

Iris pumila is not very adaptable in gardens, but in a sunny place with permeable soil it thrives well and in spring the plants are covered with a carpet of gay, fragrant flowers.

CLEANING UP SEED COATS FOR EMBRYO CULTURE

Those SIGNA members who practice embryo culture are continually faced with the problem of decontaminating the seeds from which they wish to extract the embryos. The seed coats carry varying loads of bacteria and fungi which will foul the cultures if nature is allowed to take its course. Various lotions and potions have been recommended and used for seed coat decontamination with varying degrees of success. Of course, some failures are due to the fact that seeds may have internal contaminations which surface treatments don't affect. This will be particularly true where seedcoats have been scratched, cracked, or broken. Hot water treatments have been developed for control of internally borne pathogens of such vegetables as tomatoes and cabbages, but use of these methods seem not to have been extended to ornamentals.

A recent study in which several methods of surface decontamination of a variety of seeds (but no irises) were compared may be of value to embryo culturists. Dr. H. C. Sweet [University of Central Florida (Orlando)] and Dr. W. E. Bolton [Baylor College of Medicine (Houston)] report that the use of calcium hypochlorite (0.5% phosphate buffer, pH6) for 10 minutes followed by three sterile water rinses was among the most effective decontaminating agents, and did not injure some species as did sodium hypochlorite, formaldehyde, ethylene oxide, and mercuric chloride. They found that release of microbes from the interior of seeds is associated with germination, and indicate that such infections may not become evident for 11 days.

Their calcium hypochlorite method is as follows: Calcium hypochlorite, obtained as either reagent grade powder (30-35% available chlorine) or HTH powder (70% available chlorine, Olin Mathieson Chemical Co.) was prepared as a 5% solution (active ingredient basis), filtered, and stored in the refrigerator. To reduce the pH of calcium hypochlorite to 6-6.5, 62.5 ml of concentrated hydrochloric acid and 500 ml of 1-molar monopotassium phosphate were mixed. The stock solution of a wetting agent, a 1% (volume/volume) solution of either Triton or Tween 80, was refrigerated until needed.

The final disinfecting solution was prepared immediately before use because the solution rapidly loses gaseous chlorine while the hypochlorite is being lowered from pH 10 to pH 6. One hundred seventy-four ml of sterile distilled water, 20 ml of 5% calcium hypochlorite, 2 ml of 1% wetting agent, and 4 ml of buffer were combined in an autoclaved beaker. To insure the stock solutions' quality, the disinfecting solution's activity was verified monthly by an orthotoluidine colorimetric test.

To prevent introduction of microbes, all decontamination procedures and aseptic manipulations were performed in a laminar flow hood which had been swabbed with 5% sodium hypochlorite prior to use. The operator usually wore autoclaved surgical gloves (which were periodically cleansed with hypochlorite) and a surgical face mask. The seeds were submerged in the liquid decontaminant for 10 minutes with occasional agitation. Then the solution was decanted and the seeds rinsed three times with autoclaved, distilled water. The treated seeds were transferred to culture media by using forceps which were flamed to incandescence and cooled.

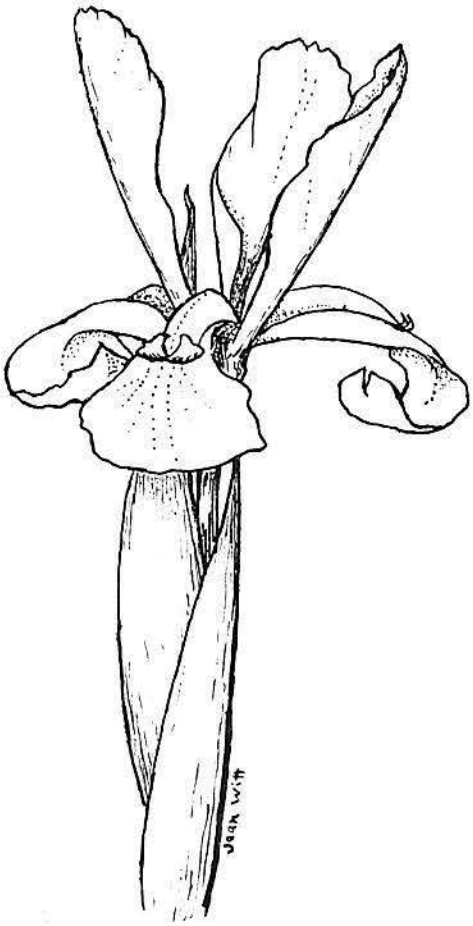
While the average SIGNA member practicing embryo-culture in the kitchen will not have available all the facilities of a university microbiological or medical lab, improvisation by ingenious practitioners should enable adaptation of many of the procedures followed by Drs. Sweet and Bolton. Remember to be careful when handling strong acids!

REFERENCE

Sweet, H. C. & W. E. Bolton
1979. The surface decontamination of seeds to produce axenic seedlings. American Jour. Botany 66(6):692-698

ED: This article is an abstract by Prof. Homer Metcalf of the original paper on the subject which was of a deeply scientific nature and as well did not deal with iris seeds directly.

****



MORE YELLOW SPURIAS IN TURKEY

Brian Mathew wrote as of November last that "Another yellow spuria has been found in the Antalya area; how these tie in with *I. aurea* and *I. monieri* I'm not sure." He and Dr. Hans Jurgen Leep of Germany had noted several and Dr. Leep had sent two prints in colour showing the form, the rich golden yellow and the growth habit.

Is it not possible that the iris found growing in Lemonier's garden in France could have come from similar sources, unknown collected seed, and not actually be the hybrid it was assumed to be? Dr. Leep is calling these yellow Turkish spurias *Iris monieri,* and there is a remarkable resemblance to the iris depicted in the Redoute painting, a photo of which is reproduced in SIGNA p. 31.

ED: Roy Davidson wrote the above from his correspondance with Brian Mathew. The colour print was sent to Jean Witt who produced the drawing to the left.

Two New Species of Iris from Afghanistan
Studies in the Flora of Afghanistan 10

By Per Wendelbo
Department of Plant Geography,
University of Gothenburg, Sweden

ABSTRACT

Iris porphyrochrysa WENDELBO sp. nov. and *I. xanthochlora* WENDELBO sp. nov., both of subgen. *Scorpiris* (Syn. sect. *Juno*) are described from Afghanistan.

Iris porphyrochrysa WENDELBO, sp. nov. (Fig. 1 D—F).

Subgen. *Scorpiris* SPACH

Bulbus 1.5—2 cm diametro, tunicis brunnescentibus nervis prominentibus, basi radices carnosas diffusas emittens. *Caulis* florendi tempore 4—5 cm longus, subterraneus. *Folia* 4—6, florendi tempore complete evoluta, basi vaginam caulem involucrantem c. 1 cm longam formantia, usque ad 17 cm longa, 1.5 cm lata, coriacea, canaliculata, falcata, marginibus et costa mediana subtus albis corneis valde distinctis, inter nervos minute papilloso-puberula. *Flores* 1—3. *Spathae* valvae 5—8 cm longae, membranaceae, acuminatae, minute papilloso-puberulae. *Tubus perigonii* c. 4 cm longus. *Segmenta exteriora* c. 4.5 cm longa; unguis erectus, c. 3 cm longus, c. 0.7 cm latus, taeniatus, marginibus ± parallelis, basin versus leviter gradatim attenuatus, brunneo-purpureus; lamina patens, c. 1.5 cm longa, c. 1 cm lata, late ovata, flava, centrum versus saturatior maculis parvis purpurascentibus; crista c. 1.5 cm longa, c. 0.1 cm alta, tuberculato-laciniata, aurantiaco-flava. *Segmenta interiora* erecta, 0.6 cm longa, lineari-lanceolata, obtusa. *Styli* rami c. 4 cm longi, bilobi; lobi c. 1.3 cm longi, c. 0.25 cm lati, parte basali purpurascenti-brunnei, lobis flavis; stigma bilobum marginibus crenatis. *Antherae* 1.7—1.9 cm longae; pollen 6—7-peltatum; filamenta c. 1.4 cm longa. *Capsula* et semina ignota.

Afghanistan. Parvan: Shibar pass east side near summit, steep rocky slopes, 2600 m, 20.V.1962, HEDGE & WENDELBO 3321, holotypus BG, isotypus E. — Bamian: a Ajdaha, 24.V.1947, LINDBERG 127; Band-e-Amir, 2900 m, 29.VI.1962, HEDGE & WENDELBO 4795.

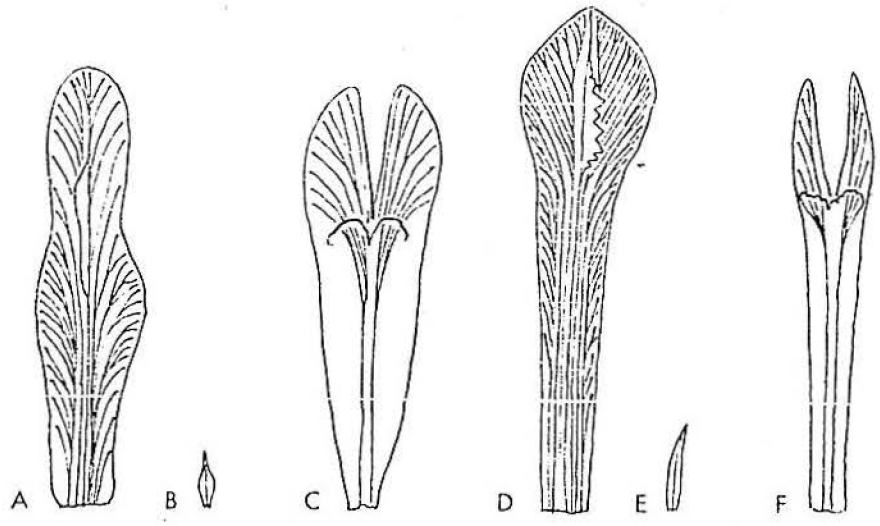


Fig. 1. A—C: *Iris xanthochlora* sp. nov. (typus). — D—F: *I. porphyrochrysa* sp. nov. (typus). — A, D: Outer perigon segments. — B, E: Inner perigon segments. — C, F: Stylar branches. — Nat. size.

The new species belongs to a group of species which have the base of the leaf formed as a closed sheath embracing the stem and which have a very small standard (inner perigon segment). Members of this group are *Iris parvula* VVED., *I. linifolia* O. FEDTSCH., *I. tadshikorum* VVED. and the new species *I. xanthochlora* WENDELBO described below.

I. porphyrochrysa differs from all these species in its flower-colour, and from the three former in not having a 3-lobed standard. *I. parvula* has a smaller flower and comparatively much shorter lobes of the stylar branches. *I. linifolia* has a somewhat smaller flower, a longer standard, twice as broad lobes of the stylar branches, narrower leaves and a more developed stem. *I. tadshikorum* differs in its much longer standard and in having twice as broad lobes of the stylar branches.

Iris xanthochlora WENDELBO, sp. nov. (Fig. 1 A—C).

Subgen. *Scorpiris* SPACH

Bulbus c. 1.5 cm diametro, ovoideo-oblongus, tunicis atro-brunneis tectus, basi radicis carnosis diffusis provisus. *Caulis* florendi tempore 5—8 cm longus. *Folia* 3—4, florendi tempore complete evoluta, basi vaginam caulem involucrantem usque ad 1 cm longam formantia: folium infimum 10—17 cm longum, 0.7—2 cm latum, apicem versus

sensim attenuatum, falcatum, canaliculatum, atroviride, marginibus et nervo mediano subtus corneis albis, minute papilloso-puberulum, cetera similaria sed gradatim minora. *Flores* 1—3. *Spathae* valvae 5—7 cm longae, submembranaceae, minute papilloso-puberulae. *Perigonium* flavescenti-viride. *Tubus perigonii* 5.5—6 cm longus. *Segmenta exteriora* c. 4 cm longa; unguis erectus, c. 2.5 cm longus, basi 0.6 cm latus, marginibus subparallelis superne divergentibus, c. 1 cm latus; lamina patens, c. 1.5 cm longa, c. 0.8 cm lata, elliptica, apice rotundata; crista 1—1.2 cm longa, 0.1 cm alta, subintegra. *Segmenta interiora* erecta, c. 1 cm longa, oblanceolata, acuminato-caudata. *Styli* rami 4—4.3 cm longi, anguste elliptico-obovati, bilobi, lobis c. 1.5 cm longis, 0.5—0.6 cm latis; stigma bilobum. *Antherae* 1.4—1.6 cm longae; pollen c. 13-peltatum; filamenta c. 1 cm longa. *Capsula* et semina ignota.

Afghanistan. Kataghan: Salang pass, north side, 2850 m, 7.VI.1964, FORSE 6579, holotypus K; Oberstes Andarab-Tal, Westhänge des Khawak-Passes, 3100 m, 8.VI.1965, PODLECH 11227; Höhenweg auf der rechten Talseite, c. 15 km westlich des Khawak-Passes, 2800 m, 8.VI.1965, PODLECH 11215; Andarab-Tal, Kleines Seitental südlich von Darrah-i-Shu im Taganak-Tal, 2700 m, 4.VI.1965, PODLECH 11109.

The new species is most probably related to *Iris linifolia* O. FEDTSCH. and allied species (see discussion under *I. porphyrochrysa*). It differs in having the claw of the outer perigon segments widened in the upper part and broader than the lamina. In this respect it is transitional to those species which have a winged claw, e.g. *I. stocksii* BOISS., *I. cabulica* GILLI and *I. microglossa* WENDELBO. These latter species have, however, more or less bluish or bluish-violet flowers.

ACKNOWLEDGEMENTS

I am indebted to the Dr. D. PODLECH, Munich, and to the Director, Royal Botanic Gardens, Kew for sending me material for naming, and to Professor K. H. RECHINGER, Vienna, for translating my diagnoses into Latin.

****

IRIS SEED SOURCES

The American Rock Garden Society had 85 listings of iris in their 1980 seed list. Dues are $9.00 a year and the Secretary is Donald Peach, Box 183 Hales Corners, Wis. 53130, U.S.A.

The Scottish Rock Garden Club had 77 iris listing. Dues are $8.00 and the Secretary is D.J.Donald Esq., Morea, Main Road, Salpeggie, Perth PH2 6E2, SCOTLAND.

The Alpine Garden Society had 115 listing of iris seeds. Dues are five pounds a year and the Secretary is E.M. Upward, Lye End Link, Woking, Surrey GU21 1SW, ENGLAND.

****

AVOIDING CONTAMINATED CULTURES

John Holden*

The best way to avoid contaminated embryo cultures from the outside of the seed is to keep it off the seed in the first place. This can be done fairly well by careful handling. Seed pods should be picked before they start to split open. You can judge the time with a little experience. When the pod begins to lose its greenish color and starts to turn yellow it is about ripe. The pod also loses some of its firmness and the skin feels a bit rubbery. Break the pod off the stem and place in a paper bag with the tag. Close the bag at the top and hang in an airy place to dry. A number 6 or 7 size bag should be used and it must be paper, not glassine or some other moisture barrier material. Seeds treated this way will be reasonably clean although there is a possibility that some contamination may be picked up from the outside of the pod. This can be avoided by dipping the pod in alcohol and flaming before placing in the bag to dry, although the writer does not follow this practice (he lives in a very dry climate).

In soaking the seed in preparation for culture, the bottles and caps must be sterilized each time by boiling. The Semesan solution, which the writer still uses, should also be prepared using boiled or sterile distilled water. Aril seeds in particular have a tendency to float when first put to soak due to air trapped in the aril. Shake the bottle to get as many as possible to sink and check again a few hours later and do the same the next day to be sure they are all well-covered with the Semesan solution. It is probably of more importance that the seeds be well covered with solution than that the solution be something other than distilled water as a stray spore at least will not multiply if not exposed to the air. Seeds are soaked in Semesan solution for a minimum of 3 days before excising - 2-3 weeks or longer won't hurt them.

I decant the Semesan solution (¼ tsp Semesan/cup boiled water), and cover the seeds with full strength Clorox/Purex and let soak for 15-20 minutes or somewhat longer (but not more than 1 hour). The Clorox works on the seed coat and with some seeds will practically disintegrate the seed coat (if left in it too long), making them most difficult to handle. The seeds are slippery and hard to handle after the Clorox treatment, but alcohol along with flaming will dry them out so they are no longer slippery. Using the Clorox as I do is the only reason for the alcohol treatment. If left in the alcohol too long the seeds will dry so much that the embryos are difficult to excise.

In the interest of speeding up the excising operation the seeds are no longer flamed one at a time. Instead a basket to fit in the container used for soaking the seed in alcohol has been formed from window screen. 15-20 seeds are put in the basket and allowed to soak for 2-4 minutes. The basket is then removed, excess alcohol allowed to drain off and the seeds poured into the bottom of an inverted saucer. Pick up a seed with tweezers, light it in the flame of the alcohol lamp, then place it with the seeds on the saucer to ignite them. Stir the seeds a bit with the tweezers until

- - -

* Aril Iris Farm, 1319 Gateway Blvd., Ridgecrest, CA 93555

the flame goes out. The seeds are now ready to excise. Seeds handled this way should result in less than 1% contamination.

I use methanol which I buy at the paint store as shellac thinner - it's cheaper, easier to get, and just as effective as anhydrous denatured ethanol, and won't hurt you if you don't drink it.

The writer now averages 60 seeds/hour and has on occasion excised over 70 in an hour.

- - -

Excerpted from: Holden, John, Embryo culture report, Aril Society International, 1967 Yearbook, pp. 20-27.

COLOR PHOTOS OF IRISES NATIVE IN NORTHEASTERN UNITED STATES AND CANADA

H. N. Metcalf

The following recently published book contains color photos of several species of irises (and other irids) occurring in the northeastern United States and eastern Canada:

"COMMON WILD FLOWERS OF THE NORTHEASTERN UNITED STATES", by Carol H. Woodward and Harold W. Rickett of the New York Botanical Garden, was published in 1979 by Barron's (Woodbury, NY 11797). It is a paperback version of the sumptuous two-volume work, "Wildflowers of the United States, parts 1 and 2, the Northeastern States", published in 1966 by McGraw-Hill Book Co. for the New York Botanical Garden with the aid of a subsidy from Mr. & Mrs. David Rockefeller. This new paperback version is eminently more affordable at $12.95/copy. It contains color photos of Iris prismatica, Iris versicolor, and Iris pseudacorus (naturalized from Europe). Also depicted are Sisyrinchium angustifolium and S. montanum.

HEAT TREATMENT FOR THE CURE OF IRIS MOSAIC IN ARIL IRISES

E. F. Riek. — Canberra, Australia

Growth under prolonged high temperatures has been used to free vegetative plant tissues from a few of the many virus diseases. With this basis of knowledge a similar technique was tried with aril irises. This treatment became necessary through inability to obtain virus free stock of the species **susiana** and a desire to grow the species for use in a hybridising program without risk of cross-infection to virus-free plants.

In this preliminary trial one plant only of **susiana** was treated but as results proved so satisfactory a report of the technique is presented at this time. A plant of **susiana** with one fan, showing leaf growth of about two inches, was dug from the open ground in May (autumn). Active root growth had commenced at this time. The plant was potted into an 8" pot and then plunged for a couple of weeks until growth was re-established. The potted plant was then transferred to a heated room held at 95°F (35 C), with continuous diffuse light. The pot was covered with an inverted glass beaker held an inch or so above the surface of the soil to reduce evaporation at this high temperature. The soil was well watered as required (about every two days). The high temperatude in combination with some slight excessive drying on occasion during the treatment period (at week-ends) caused considerable scorching of the leaf tips especially towards the end of treatment. Growth was at no time excessive and any attenuation in growth was slight. Apart from scorching, growth was comparable with that taking place in the open ground with falling autumn temperatures. The cumulative effects of leaf scorching made the plant look more dead than alive. This was the main reason for terminating the treatment after one month. At this time the leaf tip of an affset was just visible.

The plant was removed from the heated room, knocked out of the pot and the soil shaken from the roots. The original fan showed two small off-sets, one with the first leaf just visible above the soil level and the other without any obvious leaf development. The larger off-set had two rodts one of which was about two inches long. The off-set was broken off and planted. The smaller off-set, about the size of a small finger-nail, was also broken out. It had one very short root of little more than half an inch.

The parent rhizzome and the two off-sets were planted in the open ground close to and under conditions similar to those of the untreated plants. The larger of the two off-sets did not survive after an initial period of some growth. The smaller off-set has shown very active growth and now (13 September, 1961, early spring) has three leaves almost 3 inches long. The first leaf is pale at apex and a-typical but the following two leaves are uniformly dark green without any sign of flecking such as occurs in the untreated stocks. The treated parent rhizome too has shown active growth with the newly developed leaves much greener and more healthy in appearance than are leaves from fans of similar size in the untreated material. The central two leaves have lengthened as though the fan is preparing to send up a flower-spike but the base is not as solid as are untreated fans which are definitely going to flower. The high temperatures may have killed out the flower bud. With a mature flowering fan there is little new development of leaf tissue at this time and the last leaf that did develop on the treated fan still shows some slight flecking, so it is not possible to say at this time whether the mature treated fan has been freed of virus too. In any case, unless it throws further off-sets, it will most probably die out later in the season.

Although the off-set needs to be grown for a longer period to confirm that the virus is not latent and will not reappear in later growth, the present clean growth is such as to give hope that the new tissue was laid down in the off-set after inactivation of the virus by high temperature.

The treatment will be repeated with several stocks this coming autumn to see if these beneficial results can be confirmed with other plants.

Reprinted from: Aril Society International Yearbook, 1962, pg. 42.

Iris longipedicellata Czeczott, sp. nov., Sectio Apogon*

Rhizome horizontally creeping. Stems about 35 cm tall, bearing paired terminal flowers (sometimes additionally one laterally). Spathes (when dry) pale straw-colored; valves 11-13 cm long, 5-10 mm wide, narrowly lanceolate, acuminate, the tubule barely exceeding, not concealing, the ovary. Leaves subequal to the stem, ensiform, glaucous, 30-40 cm long, 10-12 mm wide. Pedicel 4.5-6.5 cm long. Ovary 1.5-2.5 cm long, passing gradually into a neck 2.0-2.5 cm long and abruptly into a tube (5-7 mm wide, 7 mm long), becoming campanulate-infundibuliform. Style pale yellowish; style-branches deep yellow-veined near the midline. Haft of the outer perianth-segment 3.5 cm long, about 5 mm wide, abruptly dilating into an oval, reflexed fall, 3 cm long, 2 cm wide, the apex emarginate. Standards roundish-cuneate, broadly emarginate, 5.5 cm long, 1.3 cm wide. Stigmatic lobes subfalcate, acute, 10-12 mm long, the margin entire. Anthers longer than the filaments. Capsule (immature) trigonal, 2-ribbed on the angles.

Galatia: between the village of Seraikey and the little town of Arab, in the Eldiven-Gagh mountains, in marshes near springs, 1300 m, colonial. 16 July, No. 282.

---

*Ed. note: Originally published (in Latin) in: Acta Societatis Botanicorum Poloniae (Warsaw) 9:44, 1932. A transcript of the original was provided by M. Rogóyski, Esq., Croydon, England. Translation by H. N. Metcalf and J. H. Rumely, Montana State University (Bozeman 59717).

It is doubtful that this member of the Series Spuriae is/has been in cultivation in North America. It is apparently endemic in central Asiatic Turkey (see map). The type may be preserved in Krakow (KRA or KRAM) or in Warsaw (WA).

The Province of Galatia is shown in black.

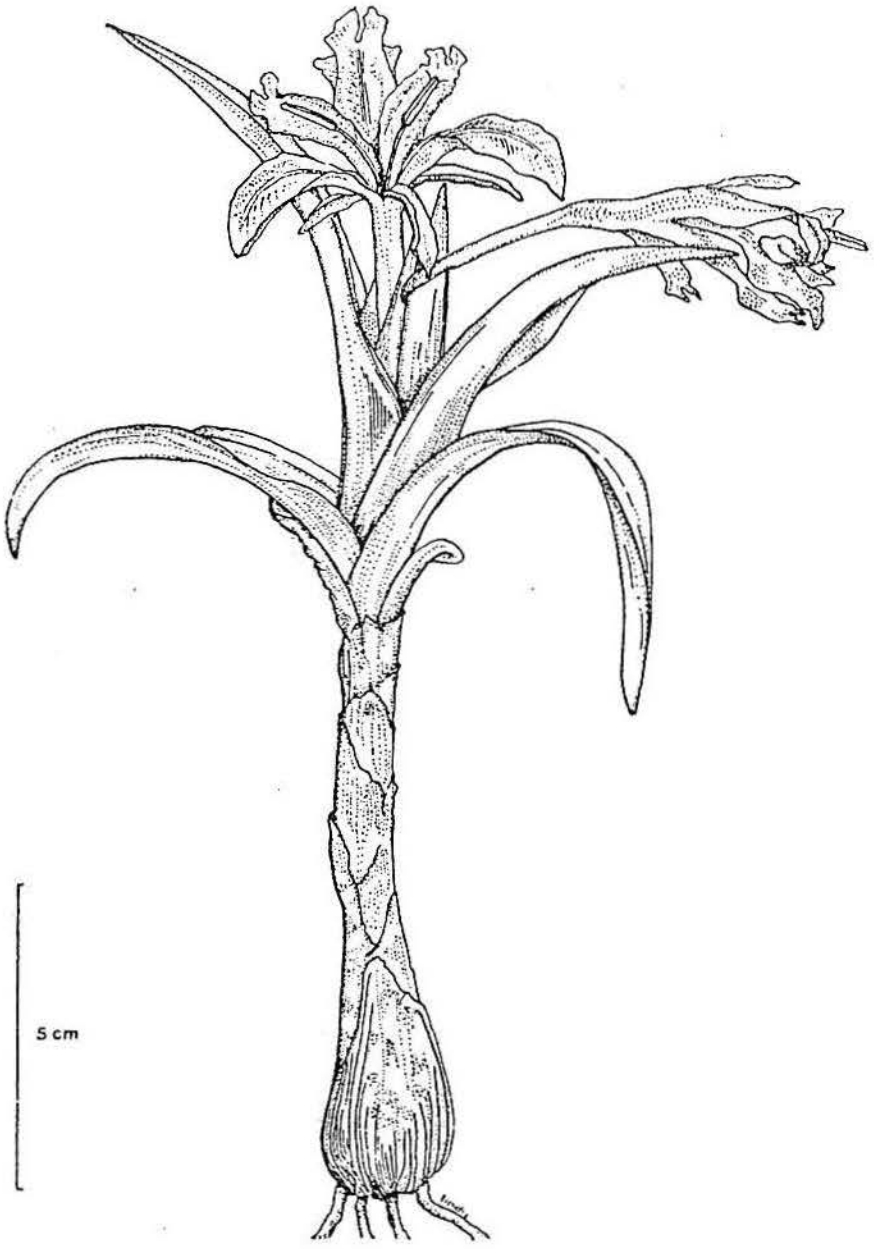


FIG. 1. *Iris regis-uzziae* × approx. ½.

A NEW IRIS FROM ISRAEL

Naomi Feinbrun

ABSTRACT: A new iris, *I. regis-uzziae* Feinbr., (Iridacae) belonging to subgen. *Scorpiris* Spach (subgenus *Juno* (Tratt.) Baker) and endemic to the Central Negev and S. Jordan is described. The chromosome number has been counted as 2n=22.

Several species of *Iris* subgenus *Scorpiris* Spach (subgenus *Juno* (Tratt.) Baker) are now known in the E. Mediterranean and the adjacent Irano-Turanian territories. They can be subdivided into two groups. The first comprises two species, *Iris palaestina* Baker and *I. edomensis* Sealy and is characterised by oblong acute to acuminate stylar branches and by perianth-segments marked with 1 mm broad oblong spots on a whitish background; in this group outer perianth-segments are ecristate. The other group contains *I. aucheri* (Baker) Sealy, *I. musairiensis* Mouterde and the new species described here, *I. regis-uzziae*. These species have ovate-rounded, obtuse stylar branches and are devoid of spot markings on the perianth-segments. The outer perianth-segments (Falls) are either uniformly coloured or marked with darker veins, and have a conspicuous yellow or orange crest, absent in the species of the first group.

Of these species, *I. palaestina* and *I. musairiensis* are E. Mediterranean and the others Irano-Turanian. *I. edomensis* is endemic in S. Transjordan, *I. regis-uzziae* in Cis- and Transjordan, while the area of *I. aucheri* extends from SE Antolia (?), N. Syria and N. Iraq to W. Iran. Sealy (Kew bull.1949:562 (1950) recorded a specimen of *I. aucheri* from S. Transjordan collected by P.H. Davis (D8839).

I. regis-uzziae differs from *I. aucheri* in its squat growth, fewer leaves and the yolk-yellow crest. It differs from *I. musairiensis*, which it resembles in its general habit, by its uppermost leaf-sheath not being dilated, and in the yolk-yellow crest arising from a zone of similar colour surrounded by a white margin.

Iris regis-uzziae Feinbr. sp. nov. Fig. 1.

Radices carnosae. *Bulbus* ovoideus, 3-4 x 2-3.5 cm; tunicae fuscobrunneae, scariosae, numerosae, ultra collum productae. *Caulis* brevis, 1-2 florus. *Folia* 5-6 (-7), falcata, plicato-canaliculata, acuta, multinervia, marginibus conspicue albo-incrassatis; inferiore tempore florendi usque ad 2.5-4 cm lata; folii supremi vagina non dilatata. *Flores* 1-2. *Spathe valvae* pallide virides, acutae. *Perianthium* pallide caeruleum, lilacinum vel pallide lilacium usque ad fere albidum plus minusve translucens. *Segmenta exteriora* c. 4.5 cm longa; ungue parte alata usque as 2.5 cm lata, alis sursum flexis; linea mediana vitellina purpureo-punctata et striata; lamina rotundata; crista vitellina elevata zona vitellina albo-marginata cincta. *Segmenta interiora* 2-2.5 x 0.6-0.8 cm, patentia, spathulata, apice saepe truncata et apiculata. *Styli* ramorum lobi ovato-rotundati. obtusi. *Capsula* 5-7 cm, ellipsoidea. *Semina* subglobosa, rugosa, c. 4 mm. Floret Januario-Februario. 2n=22

Habitu *I. musairiensis* Mouterde sed ab ea differt segmentorum crista vitellina elevata zona vitellina albo-marginata cincta, folii supremi vagina non dilatata. Differt ab *I. aucheri* (Baker) Sealy statura minore, foliis paucioibus (5-6 non 8), segmentorum exteriorum crista vitellina. Differt ab *I. edomensi* Sealy perianthio non maculis longitudinalibus atro-purpureis copiose notato, segmentorum exteriorum crista elevata vitellina, foliis latioribus.

Type: C. Negev, Mitzpe-Ramon, loessy hammada, Artemisietum herbaealbae, together with *Rheum palaestinum* Feinbr., *Crocus damascenus* Herb., *Malabaila sekakul* (Mill.) Boiss., *Colchicum tunicatum* Feinbr., 890 m, 31 i 1978, *Varda Raviv* s.d. (holo, HUJ; iso. E).

Hab.: Rocky and hammadoid slopes, in Artemisietum herbae-albae and in Zygophylletum dumosi, 500-1000 m above sea level; annual precipitation 100-200 mm. Highlands of C Negev and S. Jordan.

Israel: C Negev: Wadi Murra, near canyon (En Avedat), 4 iv 1950, leaves, Y.D'*Angelis* 13391 (HUJ); edge of Makhtesh Wadi Hathira, SW of Qurnub, Artemisietum herbae-albae, 10 iv 1950, *D. Zohary* 13393 (HUJ); between Wadi Murra and Tel Rakhma, 25 iii 1952, leaves, *M. Zohary* 13392 (HUJ); Nahal Nitzana, broad wadi, loess, 900 m, iii 1967, flowers, *A. Danin* s.n. (HUJ); C Arava Valley, Wadi Ajrim, 24 iv 1950, leaves, *Y. D'Angelis* s.n. (HUJ). Several colour transparencies from C Negev are available.

Two colour slides, kindly lent to me from the Kew photographic collection, seem to be of *I. regis-uzziae*, both taken at Ras en Naqb, Edom (S. Jordan). One of the slides by D. Birkinshaw, 13 ii 1966, shows bluish flowers; the other by L.Boulos, 12 ii 1974, shows cream-coloured flowers.

This endemic species was first collected in the early forties on the eastern slope of Mt. Scopus of Jerusalem by the late T. Kushnir. The bulbs collected in the Artemisietum herbae-albae on Senonian chalky soil were planted but no specimen has been preserved. Later, from the fifties on, the plant has been repeatedly observed, collected and photographed in the highlands of Central Negev; there are many cisterns associated with King Uzziah (*Chronicles* II 26,10) in the area and hence the name *I. regis-uzziae* was chosen.

The following is a translation from Hebrew of an extract from an article by Dr. Daniel Shimshi (Beer-Sheva, Israel), who published the results of his observations on *I. regis-uzziae* in *Teva Vaaretz* 16(6): 271-272 (1974). "This iris appears south of the line Bik'l Tsin -Har Boker and reaches Mt. Ramon. It is frequent around Avedat. Its bulb is oblong and situated at the depth of 10-15 cm; the tunics are membranous and persist for a few years only. The characteristic thick roots as well as the bulb serve as reserve organs. The leaves appear after the first rains; they are dark green with a white margin. At an early stage one can distinguish specimens which will flower during the current year from those that will not do so. In the latter, leaves do not exceed three in number and their width does not reach 1 cm; the former have more numerous leaves and the lower leaves are up to 4 cm wide. The flowers appear between the middle of January and the end of February, their height is about 10 cm. The falls are light sky-blue, with a deep yellow blotch at base. The standards are reflexed. In contrast to *I. palaestina*, the flowers are scentless. Towards the end of the growing season, in April-May, the capsules mature. The seeds are dispersed, as in the majority of *Iris* species, by ants. Last year's bulb scales shrivel while new ones fill with reserve materials. At the same time new thickened roots develop instead of the shrivelled old ones. The bulb thus is annual. Bulbs develop usually in the axils of bulb scales. As a result, one often finds clusters of bulbs".

Mr. Gideon Schutz of Beer Sheva reported on our new Negev species at an international *Iris* conference in Florence in 1963. He gave the following details on the vegetation at the sites of *I. regis-uzziae* in the Negev highlands. "The soil is calcareous and rocky, mixed with colian loess. Trees are rare. The tree species are *Pistacia atlantica* and *Acacia raddiana*. The dwarf shrubs are *Artemisia herba-alba, Reaumuria palaestina, Haloxylon articulatum*. The geophytes include *Ornitogalum trichophyllum, Urginea undulata, Bellevalia desertorum, Scilla hanburii, Gagea reticulata, Colchicum tunicatum, Tulipa amplyophylla, etc."* Mr Schutz sent some bulbs to the late Prof. M. Simonet, who counted 2n=22 (6 average-sized rods, 2 longer rods and 14 very V-shaped very long chromosomes.)

ED: Reprinted from NOTES FROM THE ROYAL BOTANIC GARDEN (Edingurgh) 37(1): 75-58, 1978
NAOMI FEINBRUN is with the Dept. of Botany, THE HEBREW UNIVERSITY OF JERUSALEM.

EXCERPTS FROM THE IRIS VERSICOLOR ROBIN, FLIGHT 7

Betty Wood, 17 Alston Ct., Red Bank, N.J. o8801

.....It seems to me that there are two ways in which versicolors have been named - (1) a sort of second species name, usually latinized, e.g. *Versicolor arkanensis* - which makes it sound as though Versicolor were the generic name and arkanensis the specific name. (2) a clone name, like those given to the rhizomatous bearded irises, e.g. Stella Main. I favor the latter for future namings, as has been done with the Siberian irises, which are not called *Sibirica blanca*, but Wing on Wing.

Bee Warburton, 2 Warburton Lane, Westboro, Mass. 01581

.....When I got back yesterday all the versicolors were in full bloom (June 7), and the pinks originally from Betty's seed, look great. I can hardly select...among the shades of pink and rose, the various sizes and bud counts, the flower form and carriage, foliage health and manner of plant growth.....

Sarah Tiffney, 226 Edge Hill Rd., Sharon, Mass. 02067

All the white or near-white versicolors I have seen...have been rather short, small plants, (except one...). The near whites have lavender veins, more or less, and it is a little difficult to decide if the "white" ones are really pure white, or not quite...I have one other...a pure white versicolor also from Garden-in-the-Woods. It has no veining or colour. It is taller, more vigorous, its standards and falls are quite narrow, so it is not an ideal flower...

Grady Kennedy, 9610 Todd Mill Rd. SE., Huntsville, Alabama 35803

....The local Wild Flower Society donated funds for a plaque to be placed in the park in memory of Skip. I have recommended that it be placed in the water in the little cove where Skip helped us plant the I. virginica we rescued from the UHA Campus. *(ED: The reference is to Julian Ross who died in July, 1979).*

B. LeeRoy Davidson, 911 Western Ave., #200, Seattle, Wash. 98104

From AIS bull. 127. p.13 (Oct. 1952) Jessie Wills quoting "Travels of William Bactram" (1791) "*I. virginica* was grown by the Indians of the Creek or Muskogee Conference (tribe) near Montgomery, Alabama, and at the time of their fasting "to avert a grievous calamity of sickness which had lately afflicted them and laid (many) in the grave..." they take "at the same time by way of medicine or physic a strong decoction of the roots of the iris" (which Bartrum misidentified as *I. versicolor*) a very powerful cathartic; "they hold this root in high esteem and every town cultivates a little plantation". The B.I.S. Yearbook, 1962, p.63 says that " *Iris versicolor* yields iridin, a powerful hepatic stimulant but a violent poison if taken in excess".

Joan Cooper, 212 W. County Road C, St. Paul, Minn. 55113

.....I made the mistake of going to a lily bulb auction and sale today so now I've got 20 more lilies to find a place for and I just got rid of a lot of them because I couldn't find room...Oops, there goes another patch of the lawn!

Mary Duvall, Rt. 1, Box 142, Dassel, Minn 55325

This fall I was able to collect over thirty rhizomes from different clumps of virginica in the slough near here. We had such a dry fall that I was able to reach all the plants. From a distance I've seen very pale ones and also a very pinkish one, so now is my chance to compare clonal differences at close range....

****

LOUISIANA IRISES

Marie Caillet

The native irises, originally found in the swamps, marshes, fields and roadsides of the deep South and now referred to as the Louisianas, are fast becoming one of the most popular of the garden irises. The original species are still available from some dealers, but most gardeners prefer the larger and more varied hybrids introduced in recent years. There is no limit to their colours, since the species from which they are derived were found in reds, clear blues, purples, yellow and white. Added to the basic colours of the flower parts are possible contrasting colours of the signal patch, radiating lines or edgings. Progress is now being made in developing good bitones and bicolors in the Louisianas.

The flower form and size also have multiple variations, with the newer wide overlapping and ruffled petals attracting the most attention. Interesting too, are tailored forms in deep velvety textures, small delicate forms that are good for arranging and fluffy doubles that show many upright flower parts. Height of stalk may vary from two to five feet. Since the Louisianas have no standard of height, size, or form, there should be something for every garden and every gardener.

One of our youth members is working on fragrance of currently grown Louisianas. Some varieties do have a sweet odor, but others have a scent like the outdoors, or possibly even the swamps!

Like other irises, the Louisianas need sun in order to bloom. Some shade will help maintain moisture during the summer. They differ from most irises in that good drainage is not essential, and that many varieties can be grown in or on the edge of a pond. They can also be grown in a regular flower bed with other preennials or annuals, but will need more water than we give most plants. Watering is especially essential in the late summer and fall during their growing season and again in the spring when stalks are forming. They are heavy feeders and grow best in soils high in humus and on the acid side. Peat moss and composted leaves can be worked into new beds, adding rotted manure and/or a balanced commercial fertilizer. Old plantings will need to be fertilized in the early fall and again about two months before bloom. When growing the Louisianas in competition with nearby shrubs and trees, consider lining the beds with a heavy plastic. This works well also for sandy soils, when water and fertilizers leach out rapidly. Summer mulching with leaves or pine straw will also help hold moisture, keep down weeds and shade the rhizomes. "Sun scald" may cause a rhizome to rot or will keep it from blooming. A winter mulching for cold protection is also recommended for northern areas. Removal of winter mulch should be as soon as possible, but never before all danger of a hard freeze is past.

Planting or transplanting is usually done after the summer dormant period, but rhizomes need time to become well established before winter freezes. Some gardeners in the North with short growing periods are now trying spring transplanting, but keep the beds well watered all summer. Few commercial dealers, however, will ship Louisianas except in the late summer or early fall. I have sometimes planted in pots in the spring, kept them watered all summer, and then transplanted intact in the fall.

Rhizomes are planted just under the soil and with roots spread out much the same as for tall bearded iris. Some varieties grow or "travel" great distances in a year, so should not be placed too close together. Increase will vary with the variety, culture, and climate. One of their best features has been ease of care once they are established. Being a native wild flower or "weed", they seem more resistant to the pests and diseases common to other irises. One poor feature is ugly summer foliage, but this can be hidden by planting other flowers, such as daylilies, in the same beds.

Bloom season for Region 3 should normally be in June, with some varieties starting earlier with the tall bearded iris and others coming in later, thus extending your iris season by two to four weeks. Late blooming varieties not only extend bloom, but have less chance of being damaged by late spring freezes.

It is difficult to recommend varieties for a location different to my own; however, I am listing some that have grown and performed well in North Texas. Summer temperatures stay close to 100°; but winters may have several snow and ice storms, and our temperatures get down to 10° or below. A temperature close to zero combined with a 40 mph wind this March gave the Louisianas a good test for hardiness in my garden. Those without a windbreak or protection looked bad and didn't bloom in many cases. However, this was not true of all varieties. The following list are hardy for me, old enough to be inexpensive, cover most of the colour range, and are available from most dealers. Many have been national award winners and are still winning at iris shows.

BEGINNER'S GROWING LIST OF LOUISIANA IRIS

AMBER GODDESS	A golden tan
BLUE DUKE	A large blue-violet
CAROLYN LAPOINT	A pink-lavender self
CHARLIE'S GINNY	Bitone rose with yellow styles
CHARLIE'S MICHELE	Ruffled rose
CLYDE REMOND	Small deep blue
CHROME DOME	A large yellow
DENEB	Very large light pink
DELTA STAR	Blue purple with yellow signals
DIXIE DEB	Small yellow with many blooms
FARENELIA HICKS	Rose-red self
FREDIE BOY	Dark rose red
MARIE CAILIET	Tall blue purple, late
MRS. IRA NELSON	Ruffled lavender

All the above are priced under $4.00 each, and their total value is less than $40.00. You may want to have a dealer make up a collection for a lesser cost, and some dealers may not have all of those I have listed. When your "Beginner's Collection" grows and blooms for you and one wins "Queen of the Show", you'll then be ready to try some of those $25.00 introductions!

For some excellent reading material on the Louisianas, join their two organizations. The Louisiana Iris Society of America, a Section of the A.I.S., was organized two years ago. Dues are $2.00 a year, and you receive two bulletins a year. The Society for Louisiana Irises, an independent group organized in 1941, publishes four newsletters a year and special publications with coloured pictures. Dues are $5.00 a year and can be sent to the Secretary, P.O. Box 40175 U.S.L., Lafayette, La. 70504. Either group will send you a dealer list on request.

ED: Reprinted from the REGION 3 NEWSLETTER (not dated, but I believe the most recent publication) for which it was especially written and is reproduced here in its entirety with the kind permission of the Region 3 Editor, O.M. Otte. Although this article is oriented to cultivars, rather than the species SIGNA usually deals with, the information is quite useful for growing the species as well and is a companion article to the one in SIGNA 24, p.804 and will give two viewpoints. It is becoming clear that these irises will grow and thrive far to the north of their native clime, such as in Wisconsin, but I know they can't make it in Montreal as Cleveland Morgan determined over many tries with stock from the New York Botanical Gardens from 1916 on. See his notes in SIGNA #4, p.99 starting. ******

SCATTER THE GOOD SEED

Anne Blanco White

ED: This article was written a year ago and intended to be part of the germination series in SIGNA #24 by Mrs. Ruby Buchanan. Unfortunately it arrived too late to be included in that issue and was not put in the following issue as it was hoped further information on germination would surface and could all be assembled in one issue. A bit more has, although not as much as expected, but then it is a continuing subject and more will come later.

There is no fun sowing seeds which don't grow as any small child can tell you and as far as irises are concerned the available information on how to get the best results is sadly inadequate. This is an attempt to outline what is currently available in Britain and the references given are to items in British Iris Society Year Books.

We often conclude that if seeds which fail to germinate had been left to fall on the flower bed, most of them would have come to flowering stage. This is rather unlikely. Some irises seem to seed like weeds, but, if you think about them, those seedlings represent a very small proportion of the seed harvest. Consider the sibiricas and spurias - these plants tend to dry out the stems at the same time as the seed capsules and this woody combination can remain upright for two seasons. If the capsule remains unsplit there is no way in which that seed can be distributed: sooner or later, of course, the stem will fall and the capsule will rot at ground level and the seeds will be released. Similarly, the capsule frequently only splits for a short distance at the end and so rations the seed sowing process over time, easily retaining some seed until the following autumn. Plants such as the Pacific Coast Irises tend to allow the spike to subside to ground level and the seeds are deposited very close to the parent plant. We have no reliable information about the germination habits of such seeds - is there a mechanism which retards germination of seeds close to the parent plant until after that plant has been dead for a period as seems to occur with some shrubs? We do know that seedlings can occur in the middle of a clump on occasion, but what proportion of the available crop do these represent and would there be a higher germination rate if the capsule were moved further away from the parent? But then plants such as the true water irises necessarily have their seeds spread by flood waters and something similar happens to all irises in heavy rains.

Iris seeds in general are able to survive for very long periods - up to 18 years (Reffil 1945) - and still germinate when conditions permit. It is always worth sowing unusual seed which has been overlooked whatever the conditions under which it has been kept. Naturally, the careful gardener will keep seeds under what are hoped to be optimum conditions, but what really are those conditions in the wild? I have seen seeds of *pseudacorus*, kept for a couple of years in a tightly closed container, grimly germinating in spite of the absence of air and water.

It seems to be generally agreed, however, that for quickest results the seed should be sown as soon as it is harvested. Most research has been done on T.B.s and we need to extend it to the species. Mrs. Anley (1942) gave advice on ripening immature seed and some seeds will give equally good results some time after harvest (Bastow 1967) and this could apply to several species. For very difficult species and inter-specific crosses it may be necessary to embryo culture, but this is not a method for the beginner or average gardener. Information is available from Werckmeister (1956), Oliphant (1958) and Tamberg (1979).

Usually the beginner makes a suitable seed bed in the garden and sows the seed direct, but this is an unreliable method since the seeds and seedlings are liable to diaster from wet, drought and predators. For better results greater care is necessary; seeds should be sown in pots which have the drainage holes blocked against invasion and which are filled with an appropriate compost (Linnegar 1977). The pots can be kept in greenhouses or in the open, but away from direct sunlight. They may be regularly watered or left to the mercy of the elements, depending on the grower, until germination occurs. When exasperation sets in, tip the lot onto a spare patch of soil and the seeds will probably germinate forthwith! That's life.

One difficulty is to know whether the seed was viable in the first place. Iris 'Gerald Darby', for instance, can produce large quantities of apparently good seeds which prove to have nothing inside. Doubtful seed can either be squashed dry or soaked and then squashed. Good seed will certainly remain whole, though some whole seed may not be viable, but there is some check on plausible seed quantities.

Seed obtained through Society or commercial sources is probably very dry, therefore we do not expect (whatever we may hope) immediate germination. In Britain, we say that the seed should have germinated in two years time. But we don't know for certain; it is a matter of probability. So we come to the problem of trying to induce germination. Bartlett (1979) did controlled experiments, with T.B. seeds, using Gibberellic acid or Kinetin. The chemicals appeared to induce earlier germination in some seeds, but made no long term difference to the germination rates and he finally recommended that seed be soaked for a short time after harvesting, chitted and stored in a domestic refrigerator under moist conditions for for twelve weeks at about 2°C (the standard temperature.

The main hazard in extrapolating from work on T.B.s is that these plants are necessarily selected for 'instant' germination since the raisers have neither the time nor the space to keep ungerminated seed for long. Taylor (1977) uses a form of sedge peat with nutrients, sold in Britain as 'Alexpeat' and finds this gives good germination rates; Scopes (19770 was dissatisfied with her experimental results from soaking and scraping as there were too many inconveniently early germinations; Dodsworth (1977) dries his seed for a couple of weeks, soaks them for a couple of months, peels them and soaks again for a further week after which they are sown into a 50/50 vermiculite and seed compost mixture. He finds the results are variable, but is in no doubt that the peeled seeds give better germination than unpeeled. Hall (1977) has experimented with most suggestions, but could draw no definite conclusions and prefers simply to sow in pots. Comment over the last 50 years or so indicates that T.B. germination is strongly linked to the actual cross and varies as the irises used.

The newest system in Britain is that employed by Dr. Jack Ellis who is noted for his work with Evansias. He puts seeds into a shallow, covered container (petrie dish); the water is changed daily for the first month and after that merely kept topped up until germination occurs. The containers are kept in the light. It is quite obvious how many of which cross have done what by when and the sight of a number of determined seedlings lifting off the lid of their container has real charm. Teasing out the roots of well grown specimens before planting on is a little tedious, but they seem to transfer well and should be kept in a humid athmosphere to start with and hardened off gently.

I have used this method myself for a number of species; as one would expect, the pseudacorus, sibiricas and spurias take kindly to it, but oncos need to be potted up as soon as the leaf is visible and require a good deal of care afterwards. I have not had total germination from any species at one time and have not, I am

afraid, kept any figures for proportions either. I would estimate that about one third germinate in the first flush.

Recently, I have skinned a number of seeds which I thought had been around too long - some from soil and some from water - in some cases this has produced germination within the week and in others they have simply taken umbrage. There may be a temperature element here. The seeds which were promptest to respond to treatment had lost their labels.

So there we are; no definite information about when or the best way to obtain germination either after harvesting or with dried seed. Mrs. Anley had *I. xiphium* var. *lusitanicum* germinate in October after sowing in September (1942), but her *boisseri*, sown a week later, germinated the following spring. Now there must be many members who keep meticulous records of their seed sowing and its results. If they would like to write and tell us about them, we could collate the material and what, if any, useful information we could offer about various species.

And we need enthusiastic and tidy minded members to follow up these remarks and try experiments for themselves and the rest of us. You all know the disappointment of failed germination and it is much worse for the beginner. We would like to be able to present new members with some really useful advice to help maintain their enthusiasm and if you will produce the basic material, we will collate and publish.

****

ED: Further on iris seed germination I would like to mention a seven page article in the 1980 B.I.S. Year Book written by Mr. C.E.C. Bartlett. This article treats the subject in a scientific manner but still in language readily understandable by beginners. It deals not so much with methods of successful germination practice as the way in which seeds germinate and the conditions which aid or inhibit it. I highly recommend it to anyone attempting to work out methods of fostering better germination of any seed as it can save making a lot of mistakes and running up blind alleys, as it is basic to have to understand how germination takes place before you can improve on nature and her natural methods.

I would also like to add That Mrs. White has a short article in this Year Book on seeds of 'Gerald Darby' and description of the plant.

CULTURE OF OREGON IRISES

There are two times a year when one can move Oregon native iris, spring when growth is beginning and fall after the first rains have moistened the ground well and started new white roots. Nurserymen prefer to send them before blooming. Taking one in full bloom is more risky, but most people do it to be sure of getting the right colour. To do this successfully requires shading and watering the transplant during the growing season. It is best to cut back the longest leaves when digging. A little shade helps, such as that provided by a lath cover or light natural shade such as the edge of a shrub border or under deciduous trees. A light well-drained soil is needed, and humus must be given annually by adding compost or fallen leaves. These irises do not like lime and do not need manure.

Reprinted from the A.I.S. Bulletin #140. Jan. 1956
Item from the ROBINS ROOST by Ella Heide, Oregon
Submitted to SIGNA by Roy Davidson from his species file notes

COMMENTS ON THE SEED EXCHANGE

Letters to Mary Duvall

Phyllis Harrington: In past years I've poured over the list for weeks and then missed out on the short supply items. So this order goes back the day after the list arrived. The packets always arrive at the worst time (for gardening) and are promptly set up in starter cartons in the refrigerator and housed there for four to six weeks and then placed under the flourescent lights for more loving care - that way I can garden all year round.

Herb Rommel: Things are beginning to explode. The seeds I first planted in Jan. 1979 are coming along and two bloomed (nothing special). Then all the seeds I planted last winter and spring have come along. I had a stretch roto-tilled (one lane) alongside the sidewalk about 100'. Have planted new iris (Jap. and Sib.) along here.

Dot Hujsak: #73M114 seed listed as *I. crocea*; planted 12-23-75; germinated 2-1-77; bloomed 5-25-77. Description: falls 1 3/4" long; standards 2 3/4" long, 1" wide; large yellow thumbprint (splotch 1" long & 1½" wide) Falls curl under some. Could it be a hybrid?

Marlene Ahlburg: Here come some seeds. The best of the lot is *I. setosa Hoccaido* from Dr. Hireo. (Current list #80Q169). He says it is very rare. I had three seeds a few years ago. One gave me a plant and the flowers are a very pale lilac self. Indeed, the flower form of my plant is very poor, but I think by growing a number of plants one can select an improved form. This is the first time the plant flowered and set seed and I thought it better first to distribute the seed and later on sowing a new lot myself to get a better flower form.

The *I. cengialtii* is from Hanselmeyer originally and the *I. albertii* from Kew. I find the plants absolutely identical. The clone Atroviolacea is from a plant which grows in every farmyard here and I <u>think</u> it is Atroviolacea.

I had a plant of *tridentata*, the only seedling I got from three seeds again (as far as I remember I got it from the B.I.S.), nearly flowering this spring. In the big "Dykes" I found Foster saying "it needs a warmhouse to open its buds" and so it seemed to me too. The buds grew quite well, though the plant is obviously virus infested (I believe poor tridentata feels so cold here). The time came when the two buds should have opened. They seemed to struggle well for nearly a week and then withered. The pods swelled so much that I thought they were contaminated by their own pollen, but after a fortnight or so they dried up. I think, if this iris, weak as it is, will overcome another winter in the north of Germany and starts to flower again, I shall put a cloche over it to give it the feeling of being in a warm house. It deserves a little pampering! The petals were mottled and stiched dark violet on a lighter violet ground. That was all I could see when I unfolded the withered buds. The plant is about 25 cm high and I believe the flower would have been 5 cm broad.

Out of the Exchange I now have about 10 plants of PCNs. One is a tiny yellow-flowering *innominata*, one is *douglasiana x munzii* in blue and white, one seedling from a Hardy strain flowers orchid or mauve and another in yellow.

One plant of spuria violacea which is from 1974, flowered for the first time this year. As far as I can see spurias are difficult here. My old plant of *I. aurea* flowered only twice for me. Little *I. graminea* sometimes shows a few flowers.

I have six plants of *I. subbiflora* now. One of them, which is two years older, flowered with a proud little dark violet bloom of nice form. I like it. Two seedlings of *I. cristata*, one a light blue and the second a bit darker, form a little mat of about 30 cm x 50 cm now. They flower each year and set seed. A white flowering plant which I bought did not live for me. I grow them under a tree in light shade and sandy soil. The 12 seeds were planted around the mother plant. One of the two sometimes blooms in the fall.

Of *I. foetidissima* I do grow the white, yellow and blue form, and the variegated plant. The latter is the only plant which has already flowered but has set no seed. I have Gerald Darby and Holden Clough since several years and they grow like weeds and flower. This year I saw the bumble bees flying from my 40 chrom (?) to Holden Clough, from there to the siberian Cambridge and then to Dr. Tamberg's 40 chrom. yellow chris. And not only one day but every day as long as those iris flowered. I wondered if H.C. would set beepods, as the ovaries on this plant stay green for a rather long rime. But it did not. Out of seed of so-called *I. koreana* I grew a little dark violet *I. sanguinea*, I think, and *I. ensata* (from the German exchange) seeds gave me a flower which I like very much. It is formed like a wild species flower with pointed, overlong and reflexed crests and has a very special soft but nevertheless bright reddish violet colour which I never before have seen in an iris. On the whole, it is very elegant.

Seedlings of *I. rudsky* did not flower blue as I waited, but like a hybrid with *I. variegata* or *reginae* and those of *I. reginae* were big plants like TBs, and the flowers were also like those of hybrids, perhaps with *I. variegata*.

Seeds from April Var. x *pumila* (MDB) gave me dark violet flowering plants, one with a sweet fragrance, and one very dainty dwarf with bright yellow standards and a sharply dark rimmed dark brown spot on the falls. Y9c and Y9a brought dark violet pumila and so did seed of Snow Sparkle. Two seedlings of *I. imbricata* flowered the same yellow colour, but one had a form by far better than the other, so I discarded the bad one. I hope it was not a mistake as the better plant seems to be weaker.

Stanley Walther: I might mention that the seeds (Louisiana) that I planted in July of this year are now germinating (Nov. 26th). I planted them in plastic flower pots and set the pots in a pan of water about three inches deep. I kept them in that water for at least two months and they have been coming up for the past month. New ones arrive nearly daily.

Mrs. W.G. Childers: Louisiana iris seeds are listed as being difficult to germinate. Jan. 12, 1979 I planted 11 seeds. They were G.W. Hollyman 780192. Three have germinated. We have had a very wet summer. That may account for it.

Mary Duvall: *I. potaninii* collected in Soviet Central Asia (west shore of Lake Baikal). Checked Dykes and noted that he listed *I. potaninii* as Chinese, Tibetan or some such. Dykes mentions that *I. tigridia* had been collected "beyond Lake Baikal". An intriguing mystery, eh?

May I please have reports back from you as your plants flower?

****

Bernice Lowenstein of Albuquerque N.M. remembers that along with the other children of Pescadero, she made whistles of the spathe-valves of the Santa Cruz irises.

LETTERS

Akira Horinaka, 17 Kitamonodani, Minami-Ku, Osaka, Japan

I am sending a book of IRISES by ordinary mail. This book was written with a co-author; I writing TLs and Western Native Irises and Dr. Tomino about the Japanese Irises.....You will find a colour picture of the ROYAL BOTANICAL GARDENS, which was printed from your fine colour slide.

I am much interested in Siberians, Louisianas, *I. setosa* and *I. versicolor*. I am also looking for Apogan and Pogan varieties with variegated leaves (that are not in commerce). Do you have the rarest colour of *I. setosa* and *I. versicolor*? As you know a hybrid of *I. pseudacorus X i. Kaempferi* is growing in our country. I enclose a picture of it....

ED: The book refered to has arrived, some 5" x 7½" and 285 pages. It is entirely in Japanese print and is the first I knew that a Japanese book has p.1 at the "back" and ends at the "front" It has quite a number of black and white illustrations; gardens, flowers, even iris stamps and source maps of Europe and North America of species iris. Of great interest are the several pages of colour photos of gardens individual iris flowers and paintings of Japanese art. The first page is a magnificent photograph of a field setting of blue and white Japanese irises - several acres; perhaps a nursery. Besides the R.B.G. photo, which carried my name (in English), there was one other garden photo of irises with Fischer below it - the only two subtitles in English in the entire book. Photos of a chest decorated with water iris and leaves was intriguing, as was a painting of two Japanese gardeners tending Japanese iris in a water setting. I am most pleased to have this copy in print so strange to me and only wish I could read what it has to say. Thanks Akira.

Sarah Tiffney,

Last summer I managed to sef-pollinate a clone of white versicolor, from Garden in the Woods, which I think is different from the white or near-white clones now in circulation. The plant is large and the flowers are pure white, while the others have smaller plants and flowers with a suggestion of colour - or maybe some are all white by now. Anyway, I am sending some of these to the members of the versicolor robin, whether they want them or not! If not, throw them out. I am also including some self-pollinated *I. setosa alba*, from a plant by Roy Davidson. Its flower had a very little suggestion of colour in the throat.

John W. Wood, Rt. 3, Box 373, Gaffney, S.C. 29340

I have finally located *I. tridentata* 200 miles south of here in low country about 60 miles from the coast. It is growing under semi-bog like conditions and was in bloom the last of May this year (1980) A lady at the J.I Show in Summerville, S.C., on the 30 and 31st had collected some and had them in a tub of soil for display. I immediately identified them as *I. tridenta*. She asked that I take some plants and try them. I took four with nothing but bloom stalks and some rhizome, doubtful that anything would come of it. I planted each plant in a pot of soil containing a copious amount of black peat and kept saturated with water and good drainage. The foliage and bloom stalks died but new plants put out from the rhizome after about a month. I have kept the plants watered about three times a week to saturation. I have planted two in bog-like conditions and plan to winter two over in pots. As of this writing (Sept. 23/80) the foliage is about 12" tall. The foliage on mature plants is 18-20 inches. I have requested seed from that area where the plants are growing, but do not know if the request will materialize.

I ordered a plant from Lorena Reid (Laurie's Garden) in Oregon last year and planted it in bog-like conditions. The plant wintered over well , put out two new plants on creeping rhizomes about six inches from the mother plant and very near the surface. The original plant did not bloom this spring but I have high hopes that it will next season as the mother plant and the two from it look extremely healthy. Very lush foliage. They are growing with *I. pseudacorus* varigated form and also the double form. Will give you a follow-up as to how these plants perform for me next spring.

Pamela Harper

Some experiences with *I. unguicularis* in Virginica: My first *I. unguicularis* from England arrived in spring and did beautifully, but plants received the following spring (which was a nasty windy and frosty one) all died.

One of the best doers is the one that came from Broadleigh as 'Cretensis', dark violet, reddened at the base. I also have 'Wylam Discovery', 'Marginata Alba' and 'Winter Snowflake'. All flower freely and give no trouble at all. I agree with the English books, that the whites are rather thin petaled as compared with the blues. 'Winter Surprise' also does well and so does what I think to be 'Marginata', it is margined, anyway--which was found in an old local garden--the owner had no idea what a treasure she had!

The only one that has not flowered for me came from Broadleigh as 'Lazica'. Brian Mathew, in an ARGS lecture, said this grows in wooded, shaded places. Here it is in full sun, nestled at the southern base of a pine tree, a sizeable and very congested clump of leaves, much broader and stiffer than the rest, but so far, not a flower. It was received in April 1977.

The one I think may be 'Walter Butt' came from my English garden. Its leaves are among the narrowest and most sprawly (close to 'Winter Surprise'), the flowers pale orchid....This never flowers until early spring (February sometimes), more often early March, whereas all the others produce odd flowers from November on, varying with the season.

I do not follow the advice in English books to give them a starvation diet. They get pockets of good soil (lots of sieved leafmold mixed with my sand), and a mulch of shredded bark. They do not need lime, the pH here is 5.00. And, of course, they get lots of nature-provided water (60" quite often, 45" average, spread fairly evenly through the year). Temperatures are a fairly steady 80-100° from late May through September, the sort of baking never provided in English or West Coast gardens. My problem here is finding out for myself how to garden in this area. There are no books to tell me, and no tradition of gardening in the area.

Winter low averages 15°F. Lowest in the eight years I have been here was 5°. No deaths that winter, but a friend in Maryland lost hers, so this would seem to be the northern limit of reliable winter hardiness.

Homer Metcalf, Montana State University, Bozeman, Montana

ED: The reference is to seeds for the seed exchange. *See p.860 this issue.*

You'll note that I've opted for use of the name *I. oxypetala* for the things ascribed to the Ensatae. This is because all the things I've grown in this series appear to represent one species, in spite of having been received under a number of epithets. They appear to agree with the description of *I. oxypetala* in the illustration reproduced on p.114 of Werckmeister's "Catalogus Iridis" from Maximowicz'

1880 publication. I'm coming close to the conclusion that *I. lactea* Pallas (1776) is probably not in cultivation in the Western hemisphere. *I. biglumis* is a later hononym for *I. lactea.*

Still unpicked out in the field is a long row of additional garden spurias cvs. I'm not at all sure we'll be able to get them in hand this late in the autumn due to access problems (snow, mud), but they'll still be there in the spring...

ED: The time above was Nov. 28/80, but as you note on p.860 Homer did get these garden spuria seeds collected and sent to Mary Duvall. The mild and unusually open winter did make a difference and I quote Homer from a letter to me dated Ja. 27/81 "However, we've been having such mild dry weather, sans snow or rain, that I enjoyed a very pleasant afternoon finishing the job on Jan. 19th, an unpreceedented occurrence here in the nearly 34 years I've been at Bozeman."

Hilinary Catton, Wyuna Gardens, R.R. 2, Hastings, Hawkes Bay, New Zealand

I have grown quite a lot of Higos and this year had a really gorgeous display of bloom. I grew them in trenches that I was able to flood a couple of times a week. I was so impressed with my efforts that I hope to plant more this year. I also have quite a few laevigatas which do ex remely well in my pools and multiply madly, but have had very little experience growing them from seed, and any that I have tried I have grown by the same method - pots sunk in the ground - and have had a resonable strike. I am planning to try some from seed this year so will report on what success I have or otherwise.

Robyn Gully, 3 Louis Ave, Hawkthorndene, South Australia 5051, Australia

I have for the first time, this year put out a small list of species and hybrids for sale to local friends and acquaintances. The response has been quite heartening already. There is no local iris society here however of any sort. The nearest is in Melbourne which is 1000 miles away.....*I. gracilis* did flower well for the first time ever - what a treasure it is! I do love miniature blooms. *I. cristata (I. lacustris* ? as its very small) was a mass of blooms and has increased to quite a sizable clump. I keep these two gems at opposite ends of the property, as they obviously do not like each other's company! Gracilipes tends to fade quietly away. *I. verna* is increasing slowly but as yet unbloomed. The biggest disappointment was a third year seedling thought to be *I. wilsonii* which turned out to be *I. pseudacorus!* ....A few of the aril species I imported last year from the A.S.I. have settled in well and they are starting to increase abet slowly. I did hope for a flower in *I. sari* but no such luck..... The spurias, mainly the hybrids, have had extremely tall spikes this year - one or two almost six feet or more. *I. graminea* and *I. sintenissi* did not perform as the former had to be shifted last autumn and the latter is going to need border conditions, so I'll be shifting that too. I have some first year seedlings of a cross of these two I made last year.

Eckard Berlin, 7950 Biberach an der Riss 1, Marktplatz 5, W. Germany

...when I drove from Chicago to Boston and was overnight in Hamilton and now I read - too late - there is a botanical garden and iris collection to see nearby as well as your home at Hannon.

Therefore, I think we should have a little list of "objects of interest for an iris-fan in the U.S.A." This would be good for a foreigner who goes abroad, especially in the U.S.A., in this big land. In driving from Chicago the heat was over 100° and drove me to take a northern route through Canada.

ED: Eckard has a good idea here; lets hear about your beauty spots!

REVIEW: THE B.I.S. YEAR BOOKS, 1978 & 1979

Roy Davidson

In spite of drastic space reductions the scope of the British Year Books remains very much oriented to the species grower. As Dr. Hall writes in turning the editorial hat over to Mr. Bartlett, "although the TB enthusiasts may deplore the space given to species articles, it should be pointed out that the latter are likely to be of more lasting value than those concerned with current TB favorites."

Show reports for 1978 tell that species are still very much in the race, both as show flowers and garden plants; there are splendid short accounts of *I. filifolia* as shown by Mr. Bartlett, of *I. fulva* by Mrs. Goodwin, and *I. speculatrix* by Dr. Ellis, and in general the competitive classes seem to have been quite well filled, often by growers whose names are new to us. Unusual entries include the reported cross of *versicolor/pseudacorus* (Mr. Linnegar), the controversial 'Gerald Darby' (Mr. Minney), and tetraploid *pseudacorus* (Herr Berlin). The last was given a Preliminary Commendation Certificate indicating that the judges hoped to see it again, properly named and registered. The Hugh Miller Trophy for a beardless iris went to another of the controversial ones, the puzzling 'Holden Clough'. (The report of a shining yellow seed was sent to the B.I.S. as well as the A.I.S. and appears in the '79 Year Book).

Among the registrations we are intrigued with the P.C.I.'Alex Back' raised by the late Mr. Back from the cross of (*douglasiana x bracteata*), a selected clone of *hoogiana* named 'Alpheus' from Mr. Bastow, and two from Mrs. Brummitt, the P.C.I. 'Banbury Dream' of pinkish colouring, and another Siberian from the famous cross ("White Swirl x 'Tycoon') this named 'Delicate Spray'.

Three co-workers at the John Innes Institute of Norwich present a paper on "Natural and Induced Colour in Irises" which proves an aid in predetermining the ability of an iris to produce antocyanins, certain to be useful as a breeder's tool that might save years of futile effort if one wants anthocyanin. Though dealing in the main with TB pigments, the results with a number of species both pogon and apogon are given.

Mr. Horinaka's fine paper covers much the same Japanese species as his recent contribution to A.I.S. and SIGNA, and another of Mr. Luscombe's erudite treatments tells us this time of *I. gigantic aerulea,* illustrated by one of his fine drawings. (It may be mentioned here that the policy of registration of names as interpreted by the A.I.S. probably regards both 'Elephantina' and 'Citricistata' as clonal entities (although Viosca considered them as forms) thus disallowing similar clones the use of the names.) The orris crop of Tuscany is accorded a most interesting historical review in a translation from the Italian Society's publication, and we learn it is known as 'gioggiolo in Tuscany.

Dr. Rodionenko writes in a rather bemused manner of some of the fanciful but not impossible flowers we might be getting from the wild species of iris, both directly and through manipulative breeding from odd and atypical flowers; illustrated are a number of strange or improbable possibilities. We read with pleasure of the awarding of the Foster Memorial Plaque presented last May to Dr. McEwan for his work with tetraploid Siberians and his careful recording of the process in both A.I.S. and B.I.S. publications. The Pilkington Award for service was given Mr. Jeffs for meticulous handling of the records of the Wisley Trials for irises. We might learn something of his procedures and shortcut methods in view of the fact we are soon to revise to a degree our judging principles as they pertain to species, a point made by Mr. Dodsworth in the 1979 Year Book as well.

The late Paul Furse was one of Iris's greatest admirers. He had spent a decade of his lifetime recording and collecting plants of southwest Asia, in Turkey, Iraq, Afghanistan and Iran particularly, and no less than four new Juno species have been described from his collections. Along with many other flowers he found, wrote about, painted, grew and shared there were oncocyclus, reticulatas and regelias, as well as junos, and we shall probably for a long time be growing many "PF" plants, many of them unique colour forms of otherwise well known species. These collections are particularly significant in view of the fact that so much of the area he covered is now inhospitable to any exploration, and we are all very grateful for his contributions both to botany and to horticulture.

Tribute is paid Mrs. Brummitt in the 1979 Year Book for her work with apogons in both Pacific Coast and Siberian fields. With the Dykes Memorial Medal going to her 'Anniversity' this year, the number of such medals to this lady is now three, and our own gardens are the richer for her devotion. This year the Hugh Miller Trophy for apogons went to the controversial 'Gerald Darby' of which we have had considerable discussion. In recording this award, the judges noted it to be "at least partly *versicolor*".

This seems to have been the year of the Evansia in the Year Book, and we note a most diverse and invaluable accumulation of information particularly on the Asiatic cane-bearing species. The Ellis *wattii* (SIGNA p.567) is now taken to be the true species and what we had known before is thought by Dr. Ellis to be of hybrid origion. The cytological evidence he presents seems conclusive enough and lends at last some shred of information on this little known alliance, now seeming to sound like a mating game, with more hybrids than authentic species in cultivation. First we had *I. japonica* (known then as *fimbriata* or *chinensis*) and in Dykes' time a taller growing and not dissimilar one was thought to be *wattii*. Then Major Johnson brought back living material from Burma that was taken for true *wattii*, the other now called *confusa*. Whatever their relationship, horticulture is richer for the numerous plants, both wild and grown in gardens, incidental or intentional hybrids; whatever they are, they are all lovely.

The latest of these is Ellis' 'Bourne Noble' from the new *wattii*, which he calls *nova* x the "Johnson clone". When shown to the Joint Iris Committee they accorded it an Award of Merit. Also shown was Jean Stevens' hybrid 'Queen's Grace' from the same "Johnson clone of *wattii*" from a bee-pod; it was awarded a Preliminary Commendation, probably subject to verification. As reported in SIGNA p.741, the American hybrid 'Elwood Molseed' was given a like commendation, subject to the formality of registration, now completed so that the name is here published. The paper on determining the differences between *cristata* and *lucustris* (A.I.S. Bul.233) was submitted for publication here as well, the intent being to try to straighten out the mystery of unauthenticated *lacustris* grown so easily and passed around so freely as a cottage garden plant particularly in Scotland and said to be a fine blue.

At the late show on the first of May, Mr. Jeffs owned one and all no less than three huge pots of Ellis' 'Bourne Graceful' which Win Tallack thought to be more beautiful and colourful than either of its parents (two other *japonica* related cultivars). Someone counted a phenomenal total of 174 buds on a single stem of one of the Ellis hybrids between *confusa* and Johnson *wattii*.

In the Wisley Trials P.C.I. 'Banbury Melody' garnered an AM for Mrs. Brummitt, as did also Dr. McEwan's Siberian 'Silver Edge', and the none-too-frequent flowers of *I. ruthenica* were seen (but only emerged from the bud on the second day) as shown by Mr. Mason. Kew showed a polyploid form of *I. korolkowii* at the Chelsea Show and it gained an AM. Of interest also to aril fans is the report of Dr. Rix's self

collected *Iris sari* (EMR 780) as being "a magnificent exhibit": it was given a certificate Cultural Commendation only because the AM had already been bestowed, although that was in 1893 and under a prior name!

Yet another new species of Juno is recorded; *Iris regis-uzziah* Feinbrun 1978 named for a bibical king of the area where the plant grows in Israel and Jordan. It is close to *aucheri* and *nusairensis*, both morphologically and geographically and is beautifully illustrated in a B&W photo.

There are several references to *Iris clarkei*, so widely distributed in the southern Himal Highlands. Of this species, Grey-Wilson has written it could well be placed in a section of its own for the scapes which differ from other Sibiricae on two points; they are not hollow and they are very frequently branched low. Mr. Service reports on this species as he has extensively studied it historically. Thomas Tamberg records that from a splendid form which he grew from seeds from the R.B.G. at Edinburgh, he has developed a fine hybrid strain of *I. delavayi*, named as a group 'Berliner Riesen'. As these are fertile hybrids they were back-crossed to each parent and also crossed to Californicae to give in the last instance pretty flowers, but of poor stems, and of course, sterile. Another wide-cross group he calls 'Calsata' from *douglasiana X biglumis (ensata)* are described as semi-evergreen, hardy and very drought resistant, with intermediate appearing flowers over a very long season. Some have been converted to tetraploids by colchicine. Also from work with colchicine E. Berlin has obtained a range of flower colour in *Iris pseudacorus* ranging from near-white to orange-yellow, of which four were registered in 1978. Other tetraploids registered at the time include *setosa* 'Moorsee' (vigorous, tall, flared), Siberian 'Laurenbuehl' (vigorous, tall blue-violet) and *forrestii* 'Gelber Knirps' (low and flared).

The utilization of colchicine has also given fertile Cal-sibes at the tetraploid level; from his ('Berliner Riesen' x *fernaldii*) Tamberg obtained two plants and intercrossed them so as to now have an F_2 progeny to look forward to. His cross (*douglasiana X biglumis*) responds in a most astonishing way to colchicine so that he is quite certain he has obtained Calsata tetraploids of that combination as well. What he calls "embryo-cutting" in which soaked seed have their uppermost ends cut away and are then placed in a germination medium is described and reported in a variety of irises and iris-related plants, but not with Junos, Japanese irises nor Californicae, though satisfactory with Cal-sibe hybrids.

In the field of cultivation of irises, Mr. Linegar tells of his method of growing show pans of reticulatas and timing them for the show date, and Mr. Knowles assures us that container grown P.C.I. are certain to become eagerly-sought, flowering sales-items, ideally suited to sunny smaller gardens and in fact to many situations.

There is almost no end to the wealth of information in the B.I.S. Year Books and every species enthusiast should join.

MEMBERSHIP IN THE BRITISH IRIS SOCIETY

SUSCRIPTIONS: Before March 1st, 1981 - 6 pounds or $14.00 (U.S.)
After March 1st, 1981 - 7 " " $16.00 (U.S.)

Treasurer and Membership Secretary:

Miss E.M. Sharland
Broad View, Farnborough Common
Farnborough, Kent BR6 7BU
England

THE EASTERN AMERICAN EVANSIAS

Roy Davidson

Pete Callas grows *Iris lacustris* and *Iris cristata* side by side in the cruel Boulder climate with equal success, and would point out a most distinguishing factor between them. Whereas the stolons of the latter form a tangle on the soil surface, rooting towards the tips and pushing up fans therefrom, the smaller *I. lacustris* has its offset stolons out of sight in the soil. In winter, therefore, this is especially obvious, *I. cristata* in view and requiring some cover as frost insulation and the other, more northerly species, fully hidden from view and self-protected.

"BRITISH *I. lacustris*"

Appropos of a request from your editor, I attempted last September to determine just what it is that grows so readily under the banner of *Iris lacustris* in England and Scotland. I asked a number of persons who grew one or the other, but no one was exactly certain how to tell which they had. My own observations in late summer are not very conclusive, but I would wager that I did not see the true *I. lacustris* at all.

Again in Edinburgh I was to see their plant labeled as that, without flower and only imperfect, dried flower stalks; I would say they likely have a small form of *I. cristata*. As it grew on the cooler face of the rock garden proper it was making a nice spreading clump in more than a single place. Whether or not the same clone, another clump in an arid, sun-drenched scree-bed atop a dry wall had burned badly and only those portions with a little protection were surviving, off to the shaded side.

In East Surrey, I asked Elizabeth Strangeman of the Washill Nursery, Hawkhurst, her opinion of the plant she had as *I. lacustris;* she too was uncertain as to just how to recognize the true species. The late Miss Davenport-Jones, former propietor of this fine little nursery, had once shown the purported hybrid between *Lacustris* and *cristata*, said to have come from British Columbia, and this may indeed be what is growing there still, whatever its secret origin. Is it not possible then that this may also be the plant around so commonly in Scottish gardens, and may that not be the reason no one is willing to comit themselves on identifying it? It might just be that in-between and therefore quite unidentifiable as either of the species.

This is put forth, not as a conclusion, but as a distinct possibility, and steps are being taken towards securing material from several sources for further observation.

Iris verna and Acidity.

Edgar Wherry, Bull. American Rock Garden Society, 34,1 p.3

"Note for prospective growers: Having devised a simple method for ascertaining the acity or alkalinity of soils by observing colour changes of dyes, I was invited by Dr. Coville to study this factor in connection with native plants reputed difficult of cultivation. Dykes had recorded his failure with *Iris verna*, his garden being in limey country where the soil should be circumneutral. My observations throughout the range, both in the slender type and the stout *smallina*, showed both to be limited to decidedly acid soils, indicating the source of Dykes' problem."

IRIS ON THE VICTORIA TUBE - March 29/80

Roy Davidson

Oh, it was easy to say "Sure I'd be delighted to appear on your show", but as the taping date arrived it didn't seem like a very clever decision.

Doris Page is into her seventh season with her visual garden column, during which time she had never featured irises so it seemed a fine opportunity to spread the word about species. We decided in the short 23 minutes there would only be time for a limited number and decided to feature those lesser known, and from the amateur gardener's viewpoint. We could show as many as 54 pictures if we hurried, and the show began with the spectacle of the unmatched colour in the tall bearded season as certainly the epitome of iris gardening, then went back to the earliest sorts and proceeded from reticulatas, dwarfs and medians through the calendar to *unguicularis*.

We concentrated on those easily obtained, easily grown and easily maintained, but we also showed some teasers that deserve special consideration, as the oncos and junos. We found time to discuss the American Native sorts and to feature species for the water garden. Plant portraits were interspersed with scenic shots, both in nature and in the garden. There was mention of sunshine for the majority, of high soil fertility for most, of the dangers of a water-logged soil for all but a very few. And in addition to bonafide species we found time to mention some near-irises of the beardless wide-cross hybrids. Plant wisely and well, and then leave them alone, we advised, quite the opposite of maintaining the precision flowering in the bearded iris garden. Such things as reblooming and growing for winter flowers in pots were also mentioned, so that the gardener may have an iris every day of the year.

And so when the taping was finished and the actual airing came nigh, I felt, of course, compelled to phone everybody I knew to be sure and watch (modestly concealing my reason for calling, of course.) And at last came THE time. Watching oneself on the monitor had been sort of ghostly, but the airing itself was easier to watch, although no one's voice sounds familiar to himself. Perhaps there is an opportunity for the ego-oriented among the members to volunteer for a similar interview to help win for irises some greater familiarity. There are lots of slides available and help in putting a presentation together. You too ought to be in pictures!

****

Sources of Misidentification of Seeds and Plants - *"I. montana"*

Species identified by uncertain names include all those belonging to the Ensatae, including, of course, *Iris ensata* itself, since what we formerly knew by that name is now to be called *Iris biglumis*. But another persistant misnomer is *"I. montana"*; seed so-called almost always turns out to be the "lactea form" of *biglumis*, as the result of misidentified seed sent out for years by Thomson & Morgan. Some errors can be caught by looking at the seed, but the Ensatae have seed very much like the American Longipetalae and thus it is not really possible to tell whether you have *montana* or *biglumis* until it has flowered and you note the differences in the ovaries, although the flowers themselves are somewhat distinct to those familiar with them.

****

Iris fumosa (primrose and green) and
Iris sindjarensis (pale blue)

Drawing by R. W. Highwood

Two Juno Irises of the Syrian Desert
(Left) a pale blue from Palmyra, perhaps *I. persica*
(Right) an unclassified iris from the same locality
Drawing by R. W. Highwood

SOME JUNO IRISES OF LEBANON AND SYRIA

R.W. Highwood

The Juno irises from the countries of the Levant are uncommon in English Gardens; perhaps they are less attractive in cultivated surroundings than in their native rocks and desert plains. But it is their habit of early flowering that makes many of them difficult subjects for colder climates. This is perhaps the reason, too, why in the Syrian desert they have remained unobserved by travellers and plant hunters alike, for in February when many of them are in full bloom the rains in a normal winter make roads and tracks almost impassable, and the plants springing up with the early grasses do not escape the attention of sheep and camels seeking the young green growth.

The Junos which have been described from Lebanon and Syria are *Ii. palestina, caucasica, persica, sindjarensis* and *fumosa,* while others undescribed have been reported from the drier zone east of the mountain ranges. One of the interests of this spring journey was to collect further data on the plant suggested as a blue or purple variety of *I. palestina* (var.*caerulea*), and also another possible species. *Palestina* is well-known along the coasts of Palestine and southern Lebanon. Its bright green leaves and pale yellow flowers, in varying tones shaded with green, are well-known along the coast among the purple and scarlet anemones of early spring. There is sometimes a bluish tinge but this may oftem be only the transparency of the segments; a few plants with wider wings and generally larger flowers proclaim its affinity to *alata*. Probably deeper shades of yellow have accounted for reports of *caucasica* in this region, but the specimens of *"caucasica"* I have seen are clearly *palestina,* and it is now generally held that the former does not occur in this area. The standards of this iris are very frail and are often damaged, and this perhaps accounts for the peculiar shapes with which they have sometimes been credited.

For *persica* Dykes lists eight varieties, and it is probable that the plants found in the Anti-Lebanon and near Damascus must be associated with this species as well as those in the desert of which I shall give some account below. If this is so, the area of distribution of this iris is wider than it has yet been reported.

Sindjarensis and fumosa are found in north-west Syria, the former in great quantity in the hills among the limestone rocks near the Turkish border; the latter in drier ground near Aleppo and also in the mountains in the north-western part of the Syrian desert. The dried leaves of these two plants are almost impossible to tell apart and if, too, the flowers have faded, there is little wonder that they were for long classified together. *Sindjarensis,* however, is a taller plant and it flowers at least a fortnight before *fumosa*; the pale blue flowers with their broad falls and sturdy standards are altogether different from the primrose and green narrow segments of *fumosa.* It is curious that while *sindjarensis* is mentioned in Dyeks from North Syria, it is not given in Post or in any other Flora of the area.

This year the winter had been very mild, but when, at the end of February, we were able to make the journey to Palmyra and the north-eastern part of the desert, there had been sufficient rain to give many parts of the desert green areas where thousands of sheep were concentrated, and in place the earliest Junos were in full flower.

We were nearly halfway to Palmyra when we found our first Junos--two plants nearly all bitten off, but a standard remaining on one was pale yellowish-green flushed pink and the other came out later sufficiently to show an inky colour, dull bluish-green. Some twenty miles farther east, in soft sandy soil, a very lovely variety was intact though narrowly missed by the wheel of a large lorry. It was

pale powder-blue with dark mauve markings on the falls, and near it was another plant of the same colour but much narrower in the standard. Neither Palmyra nor the desert to the east yielded any plants, but after turning north through the faded caravan town of Soukne, with its hot springs, the track led close to the western foothills of the Bishri mountains, and here the morning sun lit up the shining flowers of Juno irises scattered in groups close to the hills among the low grass. Here they were all transparent, in pale colours varying from blues to mauves, to yellows and to whites; darker purple or maroon shaded the centres of the falls, and the leaves, like all those we had found, were white-edged. The seedlings scattered up the hillsides among the rocks where small patches of the sickle-shaped leaves of the desert Oncocyclus iris were pushing up. Further north, as we passed from one geological formation to another, only the *colchicum* and *Gynandriris sisyrinchium* kept company with the stones, and in the ruined city, Rasafa, built to honour Sergius the Martyr, the yellow *gagas* were the only bulbs within the square of the silica-encrusted walls.

The desert track some miles north joins the metalled road to Aleppo, which runs near the banks of the Euphrates. As we came nearer to Aleppo, where the soil was calcareous and then cultivated, the same transparent types of Junos were in bloom, studded singly along the road-side, and everywhere *colchicum*, sometimes pushing through the asphalt of the road itself. It would be fairly safe to suppose that the north-western route from Palmyra to Aleppo would have shown this same iris growing where the soil favoured it. South from Aleppo along the road were others, and a feature of the more northerly specimens was that the leaves were less grown than those further south; some pure white forms which I had seen two years before had no leaves at all developed. In Aleppo two interesting forms gathered near the town were shown me, one white, with leaves showing no outer margin, and the other pale greenish-yellow with chestnut marking and narrower spear-shaped falls.

The plants are not easy to examine on a hurried journey, since the flowers and buds are frail and are not good travellers in hot cars, and the bulbs grow deep and are difficult to get up without damage. I hope however, that all the varieties will bloom in my garden sufficiently well for more exact descriptions to be made next year. Meanwhile it is interesting to record that a few damaged bulbs from the previous year gave two different flowers this spring, one in January and the other in early March. The earlier is probably a variety of *persica*, a grey shell colour shaded mauve; the edged leaves and the bossed pollen-grains show that it is not a *palestina*. The later plant had a tall thin stem throwing out three flowers from the alternate axils of the blue-green leaves; the flowers were reddish-purple although the others from among which it was lifted last april in the desert were blue. I do not know to what species this belongs but other plants may next year give clearer data.

It is probable that *I. palestina* does not grow inland from the coast, that the suggested *caerulea* variety does not exist, and that the specimens named as such may have been one of the two species mentioned above. Whatever species grow in the Syrian desert, we know, at least, that there are two, and if there are others, they remain to be found.

As a contrast to the desert irises the symmetrical fans of the *fumosa* were not in bloom at the time of our journey, but further west the blue *sindjarensis* were fully out, their strong-growing stems and untidy leaves among the grey rocks. West of the Orontes the road leads through chalk cuttings and the pale and bright purples and blues struggling through the bushes were flowers of *Iris cretensis*.

ED: Reprinted from the Year Book for 1951 of the British Iris Society.

FURTHER NOTES ON THE JUNO IRISES OF THE LEVANT

R.W. Highwood

In the *Year Book* for 1951 appeared some notes I wrote on the Juno Irises of Lebanon and Syria. Since writing these, I have collected a few more notes, and wonder if any readers would have or who have been in Palestine and Transjordan, would have some additional information to give, as I was never fortunate to visit these areas during the spring.

I. palestina would not be a popular garden-plant even if it were easy to raise; it is usually represented as a low-growing plant, with a flower and two leaves emerging from the soil. As it is known, however, in its native haunts, there are two or three flowers above the well-developed leaves; it is, in fact, botanically described as "1-3 flowered." In conditions of richer cultivation it becomes a more striking plant. On a rockery in partial shade in Dr. West's garden in Beirut I have seen it 18 inches high, with single flowers borne at the top and alternate axils of the leaves. In my own garden in full sun, also in Beirut, some of the plants made very strong growth, and the leaves were a foot long and one inch wide, with three large flowers between the top part of the leaves and single blooms from axils of two of the lower leaves. I have also found, after careful examination of a group in the hills near the sea, four-flowered plants--three at the top and one lower down, in sufficient numbers to show that *I. palestina* should be described as 1-5 flowered. It might also be thought that careful cultivation would make it a finer plant than is generally supposed.

In the Herbarium of Dr. Dinsmore, temporarily housed at the Agricultural Research Station in the Jordan valley, I found 3 Junos I had not expected, one of which was new to me. This last, which was labelled as *"I. moabitica,"* comes, as the name suggests, from the hills of Moab, which during the early spring especially are difficult of access. This no doubt accounts for the lack of records. It resembles a well developed *I. palestina* in dry conditions, and is not dissimilar to *I. jumosa*. The specimen was in poor condition and beyond the name and place there was no other data. The other two were labelled *I. jumosa* and *I. persica*, from South Jordan, east of Moab on the way to Akaba. The former is found in Northern Syria and the second there and in the Syrian desert, and it is not surprising perhaps to find them on this part of an ancient route; but it is a factor of interest in their present geographical distribution if they are indeed the species which they purport to be and which the specimens seemed to indicate. I have seen no description of *I. moabitica* and have read in no published records of the Juno species being found in that area, unless it be that to which Mr. Peter Davis refers in his article in the *Year Book* of 1948.

ED: Reprinted from the Year Book for 1953 of the British Iris Society.

****

NOTES ON SOME ONCOCYCLUS IRISES

W.A. West

The following random observations are offered in the hope that they may be of interest, and even possibly of some use. Many iris growers are fascinated by the Oncocyclus, but few in western countries see more than a few flowers of any species. The excuse for writing this article is that the author (who is no botanist) happens to have had unusual opportunities to see some of these plants in their native habitats.

It is the cumulative experience of these repeated inspections that is now being reported. Some of what is said here repeats statements already published in earlier *Year Books*, but the Society's membership probably includes sufficient of a new generation that such repetition may not come amiss.

Perhaps a short reminiscence may be permitted as a beginning. In early Dec. 1920 I chanced to spend a few days in southern Lebanon, and climbed the twin peaks of Tomat Niha, easily reached from Jezzin. There was a bitter west wind blowing and we dropped a few yards down the east slope for shelter. While sitting there I was puzzled to see what appeared to be miniature iris leaves breaking through the soil. A couple of plants were dug, carried in a coat pocket for three days, and replanted in Beirut. To my astonishment they flowered in April. Imagine the effect of an unfolding Oncocyclus flower on a garden-lover who had no previous hint of such a thing! Remarkably enough, the procedure then used has proved to be the only reliable method of flowering the high mountain Oncycli in Beirut. The sojourn in a coat pocket is, however, not an essential part of the treatment.

Some years later I guided the late John Dinsmore to the spot, and he eventually described the plant as a new species, giving it my name. It is always gratifying to be thus honoured, and as my knowledge of these irises grew I was naturally eager to justify the taxomic separation of the Tomat Niha colony. This and other colonies have been visited repeatedly and have been gone over in detail with this purpose in mind. Buds have been brought back to Beirut so that the flowers could be compared at leisure. As a result I have become convinced that there is no justification in separating the various Lebanese colonies which I shall mention, at least so far as concerns the gross characteristics of the flowers, i.e., pattern, colour, and form. It is quite possible that there exists, in the details of plant or flower, differences in structure which justify specific separation, although none have come to my attention. I am speaking from what might be called the horticultural point of view, and in this might claim the authority of familiarity. There is hardly room for doubt that, by exercising a little care in selection, one could interchange plants between the colonies without attracting the attemtion of the most meticulous field botanist.

There may be some value in listing systematically the known colonies of Oncocycli in the Lebanon, with notes regarding localities, blooming dates, and predominant characteristics of flowers. Such a record may be of use to interested persons who have an opportunity to visit this country. It is done, however, with a certain amount of trepidation, for reasons which will appear. The times of blooming are estimated average dates for the maximum flowering, but seasonal differences may shift these as much as two weeks either way. However, in the larger colonies there is a spread of nearly three weeks, so at the dates given one can almost always find flowers. If a specific name has been published it is used without prejudice one way or the other.

1. Tomat Niha: *I. Westii;* May 1st.

The main colony was on the eastern and south-eastern slopes of the southern peak, just below the top. We visited it in 1951 after a lapse of a dozen years , and were saddened to find that this colony had been almost completely removed by collectors. (See p.39, 1943 *Year Book*). Especially to be regretted was one magnificent clump, at the very top. A single plant, evidently of great age, had spread over an area of about ten square feet. There are, however, outlying groups whose locations I shall not further specify. The flowers are predominantly bi-coloured in effect, the standards being very pale blue lightly and sparsely veined and dotted, while the falls are rather heavily marked with a dull, dark purple, which sometimes has a brownish cast.

2. Jabal Kanisah: *I. sofarana;* May 10th.

A short distance to the north of the highest part of the Beirut-Damascus road there is a small level plain at the base of the Jabal Kanisah proper. The plants are found on the rocky parts of the plain and along the lower slopes of the mountain towards the east of the plain. Where gullies run down the slope the irises are found on the west sides of the gullies, facing south-east, the generally preferred exposure everywhere in Lebanon. This iris is also found on the east slope of the ridge to the north of Jabal Kamisah. The predominant form has a suffusion of purple over the petals, a feature which shows up well in transmitted light, in addition to the veining and dotting. These markings vary greatly in density, and are usually of a blackish blue-purple, but sometimes with a brownish tinge. The standards are usually somewhat paler than the falls, and an occasional speciment is found that agrees exactly with the description of *I. westii.* Many other variations appear. For example. I have a colour slide of one with rather sparse very dark markings on a pure white ground, both on standards and falls. At least four plants have been found with pure yellow flowers, one of which I have been watching for fifteen years. This is the most numerous colony in the Lebanon, and is very impressive at the height of blooming. The whole area is a botanical paradise, being extraordinarily rich in bulbous and tuberous species. *I. histrio* is very aboundant. We are somewhat alarmed by rumours that the place is to be selected as a site for re-forestation demonstrations.

3. Neba'a-al-Assal: *I. kasruana;* May 10th.

The locality is a large and well-known spring at the head of the valley above Faraya. The irises are found about ten minutes' walk to the north-west, on the north side of the valley, beginning at the level of the spring and extending up the mountain, on rocky knolls and slopes between cultivation. The predominant form follows the description of *I. sofarana,* with perhaps duller colouring. I have found several flowers with a strongly pink form of purple.

4. Luklouk: no botanical identification; May 20th.

These plants were reported by a field botanist about the beginning of the century. Dinsmore was unable to find them, but I finally located them in 1949. Luklouk is a rather ill-defined region, well-known as a skiing area in winter. In the middle of it rises a high, isolated, rather conspicuous peak, crowned with rocky pinnacles. The irises grow on the slopes running down to the south from this peak towards the town of Akoura. They are found between grain fields and on areas too stony or too steep to cultivate. On arriving in the region with a fellow enthusiast I pointed across half a mile of hills to a slope where exposure and lack of cultivation gave promise of irises, and the first plants were found exactly there. The flowers resemble *I. sofarana*, and the predominant form is duller, almost lead-coloured, but sometimes brownish, with less of the purple effect of the former species. Specimens of the *I. westii* type seem to be lacking. We found a few flowers which had a deep reddish colour centring around the signal-patch. The flowers and plants are smaller than those of *I. sofarana,* due probably to the greater altitude and much more exposed situation.

5. Bsherreh Cedars: no botanical identification; probably late May.

There appear to be only a few dozen plants, three or four hundred yards north-west of the large hotel at the famous grove of cedars above the village of Bsherreh. I have seen only a couple of flowers, but other observers confirm that they are a very dark *sofarana* type.

6. Tell Kalah region: *I. basaltica*; early to late April, according to altitude.

Tell Kalah is on the Tripoli-Homs road, about half-way, not far beyond the Syrian border. The irises are found on both sides of the road just at the point where the town first becomes visable to one approaching from Tripoli. They are found more abundantly on the higher hills a mile or two to the north, and very probably in the intervening area also. They grow in stony areas between cultivated strips. The predominant form has rather heavy veining and dotting of the black-purple type, sharply defined on a greyish-white ground. The illustration on p.73, 1934 *Year Book*, shows the pattern quite well. The frontpiece of the 1935 *Year Book* shows an exceptionally pale specimen, with an unusual brownish-purple cast to the markings. Although the predominant form of this iris differs quite appreciably from the predominant form of *I. sofarana*, there is the usual wide overlap. I have had side by side flowers that came from two colonies and were quite indisinguishable, as though from the same plant.

At this point it is appropriate to raise the question of *I. susiana*. In a published letter--I have forgotten where it appeared--Dykes expressed the opinion that it came from the region of the Lebanon. The following evidence confirms this opinion. All the Lebanon and Syrian irises, even those from six or seven thousand feet, start with the first wet weather in Beirut, and grow luxuriantly all the winter. This excessive and unseasonable growth makes them susceptible to disease, and so upsets the economy of the plants from the high mountains that even if they remain healthy they rarely flower. (Note the method previously mentioned for successfully flowering them). Plants from moderate altitudes like *I. basaltica*, and to a lesser extent *I. lortetii*, do well in Beirut. Irises from Asia Minor and Iran, however, act quite differently. They make some growth in autumn, then stop, and at least partly die down. An effort is made to start growth again in spring, but by that time the weather is too hot and they never amount to anything. In other words, plants from high Lebanon fail in Beirut because they grow too fast, those from farther north and east fail because they row too slowly, those from moderate altitudes in this region succeed. Now *I. susiana* acts exactly like a Lebanese iris from moderate altitudes. One cannot, of course, say it came from the region of *I. basaltica*, although judging from the flower it might well have done so, but it seems highly probable that it originated in the general direction of the lower mountains between Lebanon and the Amanus. Regarding the name *I. susiana*, my theory has been mentioned by G.P. Baker (P.45, 1936 *Year Book*), and P.H. Davis (p.37, 1948 *Year Book*). There is a definite Arabic word for Iris: "susan", each "s" being sharp and the "a" long. This is good, classical Arabic, not a local or dialect word. It can hardly be a mere coincidence that an iris long ago introduced into Europe from Arabic-speaking lands should have been known as the "Susian Iris".

7. Meis: *I. lortetii*; probably late April.

This is a small village near the Palestine border. Polically it is in Lebanon, but geographically the region is an extension of the hills of northern Galilee rather than the Lebanon mountains. Twenty years ago I located the place (which is the type locality for this species) and obtained a few small rhizomes. Ten years later Dinsmore and Whiting could not find a single wild plant. It appears that Palestine collectors had been buying them from the peasants, which is probably enough to ensure extermination. This well-known flower needs no description from me except to say it stands alone among its fellow-Oncocli in delicate, fairy-like grace of colour, pattern and form. In 1941, when it appeared that I should lose my garden, the surviving plants were set out in the midst of the *sofarana* colony, where they are still growing. Last year a friend found two magnificent flowers with obvious *Lortetii* characteristics. It thus seems probable that natural cross-pollination is taking place, and future botanists should take warning! At one time I did a good deal of hybridizing with these irises, and by using *I. lortetii* with the dark forms

was making progress towards a "red" Oncocylus, but, alas, as with so many more significant activities, war put a stop to it.

8. Bludan, Syrian Antilebanon: *I. antilibanotica;* June 1st.

This grows in small, scattered colonies, over a considerable area, so that it is impossible to give detailed directions, something I find reassuring. One sometimes happens on a completely isolated plant. It seems probable that they are being thinned out by the goats, which do not damage the plants, but frequently destroy the unripe seed-pods. This species goes well over 8,000 feet. The description written for the 1935 *Year Book* may be quoted without change: "Standards, intense purplish blue, from fairly dark to quite pale, deeper veining rarely conspicuous and sometimes absent,no dots; falls, maroon or reddish brown with a purplish cast, varying in depth of colour but never paler than the standards, no veins or dots; beard pure yellow or purple-tipped on a bright yellow ground". It may be added that we found a plant with almost pure white flowers, there being only a very slight blue shading on falls and standards. The 1935 frontispiece shows the colour well, although the form of the flower is abmormal. No other Oncocyclus I have seen even approaches it in brilliance of colouring. For example, on our visit in 1949, we diverged from the usual path to inspect a promising area. The irises not only grew there, but were visible from a distance of several hundred yards. The clumps stood out as brilliant patches of blue on the hillside, something that could not happen with any other Oncocyclus.

Dinsmore's description was taken, I believe, from a single flower. This resulted in the following rather amusing and somewhat instructive incident. In 1934 I sent some plants of this species to Mr. G.P. Baker, who shared them with Colonel Stern. The latter took one of his flowers to Kew, where a colour-plate was made of it. On hearing of this I wrote to Kew, explained my connection with the affair, and asked to purchase some off-prints, if and when the plate was published. The reply was that it would not be published till the flower was identified. They were sure it was not *I. antilibanotica,* but they did not know yet what it was. In other words, a botanical description of one flower could not be recognized as applying to a second, although both plants had been collected by the same person, in the same colony, and might, indeed, have been growing side by side! One wonders how often this sort of thing has happened before, and has contributed to the confusion of Oncocylus nomenclature.

ED: Reprinted from the Year Book of 1953 of the British Iris Society.

****

ON COMING TRUE FROM SEED

Edgar Anderson warns that some of us have ascribed an undue amount of significance to the fact that a certain plant may come true from seed, that is, their progenies are at least very similar morphologically to the parent stocks. "With more genetical or horticulture experience they would have realized the "coming true from seed" (or homozygosity) is a mere corollary of the amount of inbreeding which has taken place, and that it is of minor taxonomic significance."

The Problem of Species in Iris, Ann. Mo. Bot. Gard., 1928

Lorena Reid of Springfield, Oregon, has observed.....

On November 1st our native *I. tenuis* is still opening buds as they'd been doing throughout the summer. Since I have not visited the Clackamas River where it is narrowly endemic, except in the normal bloom time in May, I do not know whether they are naturally remonant, but they sure are close to being "Everblooming iris."

****

890 900

EDITOR'S COMMENTS

Bruce Richardson

A cold and windy March after our spring-like late February has kept me inside with the result that this issue of SIGNA has been put together in near record time, even if I did have some of the stencils cut last fall. A bit more than usual has been done by offset printing and this is thanks largely to Homer Metcalf and the items he has gone to a lot of trouble to research and have typed at the University ready for photo-copy. As well I used photostats of interesting items for offset printing that he had sent in, some of them quite some time ago. There are some more of Jean Witt's excellent pen & ink drawings which take the place of photographs that I cannot reproduce on this Gestetner machine. The article by Anne Blanco White was written especially for SIGNA and is much appreciated. This is the sort of thing more of our members could do to spread knowledge among our members. O.K., I know you are busy, but if you could have read the letter that accompanied - I was tempted to reprint it too - her article, you would find that this retired? lady is far more busy than most of us so-called retired seniors - so lets not hear any more excuses; just get busy and write - even its only a letter. Note what some have written in letters.

Anyway, all kidding aside, I am most pleased with the response we have received over this past year or two and especially the letters commending the useful information being presented in SIGNA, and at the risk of being called conceited, my own part in it all. However, I just assemble it and rarely write anything besides these Editorial Comments (which go on the last page so you don't have to read it if you don't get that far), so really the excelentence or otherwise of SIGNA depends to a large extent on you our members and how much cooperation comes through. It would soon die otherwise. I really am pleased with this issue and hope you are too.

The last page is always a good place to do the things you should have done on the first page and this is heartily thank Mr. L.J. Duffy of Fairbanks, Alaska for sending in some many collected forms of *I. setosa* from Alaska. These hard to come by seeds should create a lot of interesting subjects over the next few years. All our members and others who sent in seeds are to be highly commended and thanked, as the Seed Exchange is the only money making project operated by the Group and the proceeds pay for one issue of SIGNA each year. I believe we have a longer list of species than any other group or Society in the world - keep up the good work.

I would like here to comment on a book I received some time ago from Dr. Maurice Brossard and should have noted much sooner. It is a report on the International Iris Congress held at New Orleans, France on May 24-29, 1978. It is printed in English (there is a French edition as well) and consists of the lectures of five famous names in the iris world, as well as the introductory by Dr. Boussard. With men like G.I. Rodionenko, M.H. Hoog, M. Picard, J.D. Taylor speaking on iris and G.R. Delpierre on gladiolus species you are in for a real treat. I was fascinated to read about the many strange (to me) species of gladiolus found in South Africa, only knowing the large-flowered types so common here. Taylor spoke on breeding and the name Hoog has long been associated with bulbous iris. Picard discussed weed control and Rodionenko delved deeply into future possibilities of restructuring flower parts.

One last short item - the New Zealand Iris Convention will be held this fall, starting Oct. 30th and on to Nov. 3rd in Hastings, N.Z. My wife Alberta and I hope to be among those attending. A trip to Hawaii the last part of January taught us how to fly and we are anxious to try out our new wings. SIGNA 27 will have to be early, that is on time, to be away before we leave. Lets count on Oct. 1st this time round.

March 17, 1981