The Review

The Group for Beardless Irises

Issue No 10 Autumn 2013

Iris ramsayi growing in Kew Gardens ©Richard Wilford

The terrain in the Mishmi Hills where Magnus Ramsay and Michael Wickenden found the new iris. See page 6

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Brita Carson

Iris foetidissima during the floods of winter 2013/14

This photograph was taken by Anne's daughter, Susan, in a park in Reading. No words can describe the wet winter any better and it started before Christmas and still continues in February. The ground was already saturated before the weeks of rain started, so it will take a long time to dry out. They say don't work the soil if it sticks to your boots. Some poor gardeners have lost half their gardens so they have no soil to work.

Other problems to test the gardener this year have been the extremely cold spring and then the very high summer temperatures that lasted several weeks, although thankfully not anything as hot as Australia with 40°C and over. Or could you function in −40°C which some of our members in Massachusetts are suffering just now?
And the irises bloom on regardless.

In this edition look out for a charming little *I. setosa* like the one Tony found in New Zealand or the Scottish primula if you visit Scotland.

I hope many of you will give in to temptation in 2014 and hybridise with lots of help from Jennifer; make compost Alun's way; encourage your Siberians and Japanese to rebloom with Terry; try Mark's ideas with his Lousisianas; examine your PCIs Philip's way or try your hand at making a pseudata. There are lots of theories in this edition, plenty to agree or disagree with. Plenty of things to try in your own garden.

Chairman's Report
Anne Blanco White

For the Group itself, we continue in reasonably good form in spite of all that the weather can throw at us. And if any of you have suggestions about what more we could be doing, then do let us know. Our addresses are published so we are easy to contact. Historically, of course, we started by concentrating on the Siberian group, then added the slightly forlorn ensatas and rounded up the rest of the damp-landers especially as new hybrids came into play. But these aren't the only beardless irises which can be grown in our gardens and, indeed, we might well give more thought to growing irids. Again, large numbers of these are tolerant of our climate – crocuses perhaps? Gladiolus come easily from seed and help to fill flowering gaps. In fact, if you have a spare space among your latest resolutions, take a second look at the *Iridaceae* seeds in the lists and, if necessary, Google them to see if you could grow them.

But before I go any further, we should again congratulate the much decorated Dr Rodionenko on seeing his new book, *Discovering the Secrets of Nature*, in print and widely distributed so quickly after his centenary celebrations. Admittedly it is written in Russian, but is generously illustrated and there are pictures of irises we have not seen before.

Gardenwise, this has been an unreasonably "interesting" year all over the country I think, but certainly on this patch in London since summer set in. Flowering, after an unhelpful spring, was poor and it looked as if we were going to have a cold, wet season so I told my visiting Aussie that she should bring a warm sweater. In fact, for her stay, the weather was pleasantly warm. After she left, the Furies moved in and the temperature in this "heat sink" stayed around 40°C for something over a fortnight with disastrous results. Believe it or not, I am pretty certain I have lost *I. confusa* which I have always regarded as a weed. Mind you, I'm sorry it has gone because it dated back to my first adventures in species irises. I don't remember where it came from, but I do remember finding it in the garden looking like a healthy bearded seedling. Then it started to grow upwards in a very un-bearded fashion and over the months I realised how it got its name – no pogon ever achieved a stem like that. There are several of its cousins and they all look very, very depressed. Even my newest weirdo, 'Twiddle', looks unprepossessing though I think that if we don't have a disastrous winter it will come through. I lost a form of *I. formosana* and it had appeared happy here. On the other hand, the form I had from Sidney Linnegar is definitely a house-plant though it too will succumb to heat-stroke if left in too sunny a window. Two ancient sibiricas seem to have gone for good, but I've added a purple toadflax to my weed collection as it is a really nice blue and should be easy to weed if it gets too enthusiastic; I notice that the dwarf green nightshade is spreading around; again easy to weed. Spurias were poor, but

I think that was probably due to the spring. Once the drought was over and I could consider replanting or repotting, it settled in to rain at the most inconvenient times. Now, I feel that most of the plants are nearer drowning than anything else, but I shall watch carefully as the days draw out because it is always surprising how fast things start into growth and there is the matter of some spurias in urgent need of replanting. They couldn't be done in the autumn because the seed pods wouldn't ripen! All the same an inch of rain a day in London, which is one of the driest parts of the British Isles, is too much. Extra feeding is probably indicated.

Which reminds me that when replanting PCIs, there is a lot to be said for standing them in a fairly deep container with about half an inch of water in the bottom. Parked in a cool place, they will wait happily for two or three days while you decide what to do with them.

I hope that all of you have had a look at Lech Komarnicki's posting about beardless hybrids on the BIS website. And for those of you who do grow bearded irises, Milan Blazek's "Searching for Roots" about the origins of our cultivars should not be missed.

For next season's reticulatas let me also draw your attention to Dr. Janis Ruksan's offerings of Alan McMurtrie's Canadian raised reticulata hybrids. Some of them are splendiferous.

You can find details of both of them on their websites.

Meantime I hope you will find lots of interesting seeds to raise on the Group seed list which Janet has worked so hard on. And I sincerely hope that none of you have been afflicted by these horrible floods. At least Brita is providing you with reading matter of value while you stay off the flower beds and poor Alun can only contemplate his raging stream. And we do thank them for what they do for us. Then later we'll hope to see some of you at Harlow Carr in March. And I can sign off with the happy news that an *I. cretica* is flowering happily which is more than can be said for its larger cousins.

Seed Exchange
Janet Miller

What has been happening to the weather, not just here but all round the world? I was beginning to worry that seeds would be in short supply on this year's list but after the sun appeared, things finally changed for the better and the welcome envelopes began to arrive. I would like to thank ALL the donors for being so generous with their seeds and the time they spent collecting, cleaning and then sending them to me. Without them, there would be no seeds, no list. I have been kept busy sending out seeds but there are still plenty available to fill any orders to anyone who applies. The water loving irises have proved to be a popular choice this year, I wonder why!!

The seeds from our seed exchange come from all around the world, very often from top iris breeders which cannot be bought from anywhere else and what is more – THEY ARE ONLY 50p PER PACKET. You could produce plants costing as little as 10p each. Very few commercial seed companies actually stock ANY iris seeds never mind some of these with excellent parentage. All you need to get going is a seed tray and some compost. The main thing is not to let the seeds dry out for long periods. Once through, there's no rush to pot on. It couldn't be easier. Admittedly, you won't be rewarded with flowers for a year or two but they are extremely resilient once they are growing AND there are so many varieties to try that you will soon be hooked! If anyone would like to send me 4 x 1st class stamps, I will send them 5 individual packets of seeds (my choice) to start the ball rolling.

Next year the editor would like to include in the *Review* some photos of plants that came from GBI seed. These photos would be a real encouragement to members who wonder what they can produce from GBI seed. Please email the photos to me or the editor. Thank you.

Keep seed sowing.

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A New *Iris* from North-Eastern India
Tony Hall and Brian Mathew

While Michael Wickenden and Magnus Ramsay were trekking in the remote Mishmi Hills in the Arunachal Pradesh region of north-eastern India in 2003, the latter noted a low-growing *Iris*, just east of the Delei Valley; at the time it was in fruit. It was seen on a further visit by the pair in 2007, this time accompanied by Matt Reese who recorded it in a similar area. The group recognised it as being an unusual and possibly significant find and in order to take it further sent material to Kew in 2007 for cultivation and identification. It grew well for a while in an open situation on the rock garden there and soon formed a spreading patch which, vegetatively alone, indicated this to be a previously unknown species. A later planting was sited in a cooler position where it fared rather better, presumably a reflection of the fact that it is a plant of a monsoon region and growing amongst other vegetation. Michael Wickenden notes the habitat as being “a NE facing slope, rather sandy soil, in grass and herbs and between the last shrubs before the alpines take over, at 3500 m”. At his garden in Gatehouse of Fleet, S.W. Scotland, the plant has been grown in part shade where it has spread steadily and stayed low-growing at about 20 cm (8"). Kew’s first planting tended to be even more compact, not more than 15 cm (6") in height, but this was in a more open site on the rock garden. At Claygate in Surrey it is growing alongside a small pond where it has thrived in humus-rich soil, some of the horizontal rhizomes growing to 12 cm (c. 5") in length in one season. This plant has, in 2013, produced 10 capsules and many small seeds (over 60 in each capsule), although it is not known as yet if these will prove to be fertile and capable of germination. Seeds sown by Michael Wickenden have germinated but the resulting seedlings have not yet flowered.

One of the most noticeable features of this interesting new *Iris* is the branching, stem-like rhizome which runs along the surface and is green due to its exposure to the light; it bears along its length fibrous bract-like remains of previous seasons’ leaves. The small purple flowers too are distinctive, produced singly on short wiry stems and lasting in good condition for only 2-3 days. At flowering time the stems (peduncles) are only about 5-8 cm (c. 2-3") long so the flowers are well overtopped by the leaf fans which bear leaves up to twice this height at around 15 cm (6"); by fruiting time in late summer and early autumn the stems have elongated to around 10 cm (3.5") and the leaves up to 45 cm (18"). The overall vegetative growth habit is not unlike one of the more vigorous forms of *I. ruthenica* although it is almost certainly a member of the Sibiricae and, with its solid flower stems, appears most closely allied to the much larger widespread Himalayan *I. clarkei*. There is, however, no doubt that this is a distinct species and we describe it here as *I. ramsayi* after its discoverer. Magnus Ramsay was for many years Head Gardener at Threave School of Gardening at Castle Douglas where his plantsmanship and enthusiastic teaching made

gardening exciting for the students, many of them going on to establish notable careers in horticulture. A keen traveller, explorer and climber, in spite of going through a period of serious illness he has become one of the select band of people to complete ascents of all the Munroes, Corbetts and Grahams in Scotland, in all some 1100 hills (and known as a "full house" by the aficionados); he climbed the first of these when about eight years old!

It is hoped that in time more information can be added to this account, for example a chromosome count, DNA studies and, if suitable contacts in the Arunachal Pradesh region can be made, population studies to ascertain its variability in the wild and rarity status. Dr P. Lakshminarasimhan of the Central National Herbarium, Botanical Survey of India, Howrah has suggested possible contacts in the region where it occurs.

"A New *Iris* from North-Eastern India", by Tony Hall and Brian Mathew was first printed in the 2013 *Year Book* and Brian very kindly gave me permission to reprint for the GBI *Review*.

Iris setosa var. *arctica* forma *platyrhyncha* ©Stephanie Boot

Iris setosa var. *arctica* forma *platyrhyncha*

Tony Hall (Kew Gardens) had been giving lectures in New Zealand to the NZ Iris Convention and afterwards was visiting other various gardens when he found this lovely dwarf form of the beardless *I. setosa*. It is barely 5cm tall, with a single flower 3cm across and, unlike most forms of the species, has quite large standards, not the usual reduced bristle-like appendages. It is very attractive with pronounced veining to the tepals and ideally would be suited as a plant for the rock garden or trough. Michael Midgley cultivates it in the garden of the Backpackers Hostel, near Lake Tekapo which is situated in the centre of the South Island of New Zealand.

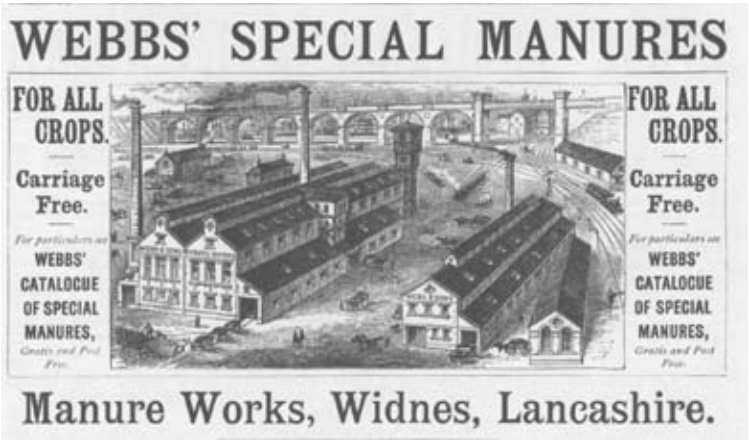
Michael cannot remember where he got it but remembers it only as *Iris setosa* var. *arctica*, but after consulting and discussing with Brian Mathew, Tony added forma *platyrhyncha*. Michael tells me they have similar weather conditions to Scotland, but with better summer temperatures at usually about 30°C and generally good sunshine and ideal rainfall.

I have consulted Michael Midgley and Lesley Cox. Lesley doesn't know anything about it but would like to!! Michael thinks if he didn't buy it from Lesley it may have been seed from one of the rock garden societies.

Brita Carson

What are you doing about Potting Compost?
Alun Whitehead

I'd really like to know.
Since we have stopped selling at shows and plant fairs, we haven't needed wholesale quantities and have been looking at what is available retail. However, a comment last year from someone who has studied this subject went along the lines: “after trying nearly all the retail composts, analysis shows that not only do they vary batch to batch, they can also vary bag to bag”. This does highlight how difficult it can be to get consistency. No doubt it was simpler in the old days?



From Webb's 1884-5 Catalogue

When we began selling plants in the 1990s we did use retail compost. This was generally 100% peat with 10 weeks' added fertiliser. The main problem is peat in pots drying out and then it is very difficult to “wet” again. You can stand the odd plant in a saucer of water, but a few hundred pots become impractical. At least commercial composts have a wetting agent. Another problem is once the fertiliser is all used, the peat has almost no goodness for the plant so you either have to feed while watering or use a slow release fertiliser. For interest, anecdotal evidence suggests a weak feeding at each watering works much better than slow release.

To overcome the lack of nutrients, we have tried composts with loam added, but the benefits seemed slight. Our main compost for many years consisted of a peat/grit/bark mix. This worked well; it gave good rooting, kept moist but also aerated. We grow outside and therefore nature does much of the watering and the use of a liquid feed isn't practical. The composted bark theoretically gave off a small amount of nitrogen, but we relied on slow release. The other benefit from this mixture was the weight.

Weight is probably forgotten by many, but if you are carrying trays of plants it can be critical. To keep some plants upright we added plenty of grit to keep them bottom-heavy. To alleviate the weight problem, commercial firms

have tried to add things like polystyrene beads into the mix to reduce the density. As this only adds volume and leaves the non-degradable beads to mar the border soil for years to come, using smaller pots seems a simpler solution and I am sure you will see that logic in action at many garden centres. The introduction of peat-free did nothing to help. Because it is denser than peat, commercial bags are only half the size. Plants in peat-free and peat based composts are not compatible; a plant grown in one will often be unhappy or die if re-potted in the other.

An alternative for small scale use is garden soil but it produces very heavy pots and the soil needs to be sterilised to kill weed seeds. Chemicals can be used, and friends who use this favour Heath-Robinson contraptions for "cooking" the soil. The odour is probably for the connoisseur. Clearly, the plants grown in this way should settle in the garden better when planted out, except in heavy clay.

Our natural inclination is to use an environmentally friendly product. It was several years ago that a friend mentioned that they used shredded hedge-clippings for rooting their cuttings. They didn't even compost them first but simply put a layer in a shady cold-frame and added the cuttings. A very short step from this is to use the green waste from the council which is shredded and composted on a large scale. Unlike our small compost heaps, this compost *does* get up to temperature and kills all the weed seeds. When the lorry arrives, the sides are hot. It may still contain some fungus, but nothing to concern us. We first tried potting *Iris* 'Gerald Darby' with it and it liked it. I should point out that green waste/mulch does vary depending on source. We currently use Severn Waste at Pershore with good experience, after we tried a more local source which was most unsatisfactory. There is a small amount of foreign matter in the waste – plant labels, wood and small bits of glass. As we pot by hand, anything untoward can be taken out and it usually looks and smells good enough to eat! There has been bad publicity with horror stories about the use of green waste, but the biggest complaint we hear is unavailability in some areas or the price. For us the main cost is the haulage but it is worth every penny. One thing that might put you off is that Severn Waste give the pH as 8.5 which is extremely alkaline – all I can say is that it has not been a problem as rotting matter is usually acidic.

So what is our current practice? While we like the green waste, we have noted that it can "set" and have poor root penetration especially with an autumn potting. This is unlikely to affect something robust like a Siberian, and we have potted many Siberians in it neat. For general potting we mix it about 50:50 with a general purpose retail compost which lightens it. As we cannot be certain what else might be in the green waste, we do not use it for our edible herbs and vegetables.

I am no expert, but hopefully you have found it interesting to see something of our path through the maze of composts. Perhaps you have a better path to share with us?

http://www.severnwaste.com/composting.htm

A Beardless Rebloom Theory
Terry Aitken

For many years, we have enjoyed an extended bloom season on our Siberian AND Japanese irises in the Portland/Vancouver area. Probably the latest bloom we had was a year when we were moving an acre of plants when some stray pieces of Siberian plants got left behind. They were not watered, fertilised or weeded but they remained in bloom well into August. I thought this was "normal" for Siberians to perform this way. It was not until we started growing Marky Smith's Siberians that we became aware that rebloom was a unique feature in our area. In the second year of growth in our yard, 'Haleakala' remained in bloom from mid May until early August. When we told Marky, she said she had never seen extended bloom on 'Haleakala' in her garden east of the mountains. We began to speculate on what environmental conditions could be responsible for this variation in plant behaviour.

Marky lives in Yakima on the eastern slopes of the Cascade Mountain range, maybe 100 miles east of Portland as the crow flies. Their temperatures run much hotter in summer and much colder in winter. Our garden lies west of the Cascade Mountains in the Willamette valley between the Cascade Mountains and the Coast range with much Pacific Ocean influence, cool nights, and a coastal marine climate. Our soils are subject to leaching from heavy rains whereas Marky's soils are much drier. Our soils, on the wet side of the mountains, are pH 5.3 to 5.8 (our city water is well water at pH 6) whereas Marky's soils on the dry side are pH 7. Not enough difference to affect Siberian growth.

I tried to come up with a theory as to why a Siberian iris would rebloom in one climate (the wet side of the mountains) and not in another (the dry side of the mountains) in Washington state. I obtained a soil (compost) thermometer and stuck it in the middle of our Siberian field. It penetrated about 12" deep into the root zone of the Siberian clumps. During bloom season in May, the soil temperature was constant at 60°F (15°C). Rebloom continued through June and on into late July. Our

'Haleakala' (Marky Smith '06)
It can have up to 10 buds per stem and blooms all the time until August.

soil temp remained at 60°F (15°C). Then in late July, we had a heat wave with air temps near 100°F (38°C). Soil temperature rose and rebloom stopped.

'Majestic Overtures' (Aitken '06)

Only a few specific clones seem to rebloom or respond to environmental conditions. 'Coronation Anthem' is the grand champion with 'Majestic Overtures' right behind. Marky Smith's 'Haleakala' runs neck and neck. 'Devil's Dream', 'Careless Sally', 'Reddy Or Not' all put on a reliable display. Most of these will bloom for 2 to 3 months until the soil heats up.

This may be useful information for people trying to grow Siberians and Japanese irises in warmer climates. To keep soils cool, several inches of mulch (wood shavings are good because they stay loose). Applications of irrigation water that is cool might be helpful. Evaporation of water in the wood shavings would also have a cooling influence. Half-day shade is a cooling influence. Avoiding solar heat by utilising north facing slopes.

Chad Harris, living in the Columbia River Gorge, has had similar excellent luck keeping Japanese irises in bloom almost all summer. In his case, he is watering heavily with mountain spring water (cool) which may be keeping the soil temperature down for the

'Sun Comes Up' (Schafer/Sacks 2004)

Japanese irises. He also mulches heavily with compost which would prevent solar heating of the soil on his south facing slope.

It would appear to be a coincidence that we happen to live in a climate that allows rebloom to occur naturally. A by-product of this phenomenon is that we can work on breeding Siberians and Japanese irises in the more relaxed days following Bearded iris bloom season using, exclusively, those Siberian and Japanese varieties that grace our fields during June and July. Of course, we are then selecting seedlings which also exhibit extended bloom. Perhaps, someday, this feature will become strong enough to delight gardeners in more diverse climates?

I have been quite fascinated with the sequential bloom on some Siberian cultivars. My theory on this phenomenon is that some Siberians will bloom at their appointed time in the spring but a few of them will continue putting up stems for a month or two. In discussion with other growers, we have determined that these plants will continue blooming as long as the soil remains about 60°F (15°C) and will stop when the soil rises above 68°F (20°C). This is determined with a compost thermometer. Our Siberian iris introduction for 2013, 'Burgundy Fireworks', puts up an explosion on sequential stems, then blooms continuously until mid-summer. Our hope is that we can focus this type of performance even stronger to get an ever-blooming Siberian.

The year that was unusually cool and moist in the summer, the Siberians continued blooming until they got tired. That year the Siberian field was moved in September, and we were still cutting bloom stems of 'Sun Comes Up' (Schafer/Sacks). It is the new "long time rebloomer" at Aitken's. Every year is a new adventure!

This deep purple Japanese seedling (A#02J-2E_3031) started in bloom in June and flowered without let-up until freeze-up.

‘Burgundy Fireworks’ an excellent example of sequential bloom on a Siberian.

Eye Shadow Iris or Iris pseudata
Hiroshi Shimizu, Japan.

The range of colours in *Iris ensata* is extensive: white and almost all shades of pink, blue, blue-violet and red-violet. Most of the colours provide a strong contrast to the yellow signal spot at the base of the styles. Yellow petals, however, is the one colour that has eluded hybridisers. Many attempts have been made in the past to get yellow-brown into this iris by using *Iris pseudacorus*.

Dr Osugi bred the first of these hybrids and his seedling first bloomed in 1962. It was named 'Aichi no Kagayaki'. It has elegant flowers that are a rather pale but clear yellow, with *I. ensata* shape and *I. pseudacorus* signal markings. It is, of course, sterile. Mr Ueki bred a second hybrid in 1971 which he named 'Kimboshi'. I decided to start interspecies hybridising using *I. pseudacorus* and *I. ensata* in 1993. I will introduce you to my F1 hybrid cultivars in this article.

Seedling 01 - 17

My first stage was from 1993 to 1995, when I collected many strains of *I. pseudacorus* seed from seed exchanges of the British Iris Society (BIS) and the Species Iris Group of North America (SIGNA). In the second stage, 1996 to 1998, I mixed pollen from several Japanese iris cultivars and put it on about 100 stigmas of various *I. pseudacorus* clones. The results of these crosses prompted me to select a special *I. pseudacorus* clone, which I named 'Gubijin'. Although 'Gubijin' is aneuploidy (having an abnormal number of chromosomes): 2n=35. It is a very fertile pod parent and excellent at setting seed.

About half of my F1 hybrid seedlings bloomed the year after they

germinated in pots in the spring. The leaves of these seedlings were almost green, showing little yellow, and the plants demonstrated hybrid vigour and rapidly increased in size and number. I noted two significant features of the seedlings from 'Gubijin'. Firstly, some of the F1 seeds from 'Gubijin' germinated in their pots in autumn. Secondly, some of the 'Gubijin' seedlings, those resulting from pollen taken from white *I. ensata*, have white flowers with a yellow signal. This led me to conclude that 'Gubijin' possesses a gene for white colour in heterozygous condition.

The third stage of my interspecies hybridisation programme began

Shiro-Yamabuki

in 1999. I made selective crosses using 'Gubijin' and selected Japanese iris cultivars with flowers of various colour and colour patterns. I obtained about 1200 hybrid seeds in three years. I selected about 20 beautiful F1 hybrid plants from approximately 300 seedlings that bloomed. These included hybrids with flowers of near white with blue halos; yellow with dark veins; bicolour yellow and creamy brown with lavender veins; yellow with crimson sanding; yellow with blue margins; and lavender-pink self. All of the flowers have beautiful blue halos around yellow signals. I named their hybrid plants 'Eye Shadow Iris' because the blue halos remind me of eye shadow used by women to appear more beautiful.

It is unfortunate that, as in the case of most wide-cross hybrids from diploid parents, all of the 'Eye Shadow Iris' are sterile. I will, however, be able to select many plants with unique flowers every year without resorting to embryo culture because 'Gubijin' is a very fertile pod parent and Japanese irises have so many colours and patterns. 'Eye Shadow Iris' may make a new wave in the iris world.

This article was printed in Bulletin 191 *of the New Zealand Iris Society, September 2013 and I was very kindly given permission to*

reprint it by Hiroshi Shimizu and Bernard Pryor, the editor of the Bulletin. *A very similar article was included in the 2002* Year Book.

Additional information is included here from Bernard on the cultivation.

Pseudata cultivation.

I. pseudata grow in ordinary garden conditions but prefer full sun. They require a rich soil with ample organic matter and moisture, especially when

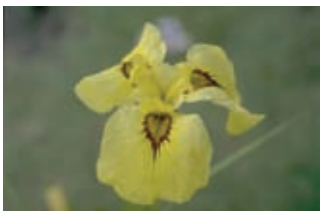
Seedling 01 - 74

they are transplanted. Good culture will increase height, branching, flower size and bloom quantity. Pseudatas are heavy feeders.

Plant strong divisions of at least 2 or 3 fans in a small depression of 4-7cm below soil level. Mulch well. The roots should at no time be allowed to dry out during transplanting. Plants that are irrigated become dependent on irrigation and will continue to require it if transplanted.

Divide every three or four years, or when overcrowded and the amount of bloom is reduced, from spring until autumn, but shortly after the bloom period or autumn is better.

Kinshizan



Seedling 01-36

Seedling 01-60

Producing Pseudatas
Brita Carson

It isn't easy to produce these beautiful flowers, which is a great pity, but it does make them all the more desirable. Their availability is extremely limited to a few nurseries so here are a few suggestions for you to have a try yourself at making them. Pollen is needed from the ensata to pollinate the pseudacorus. I don't believe it works the other way round. There is a problem in most locations because the pseudacorus has finished flowering long before the ensata comes into flower.

Hiroshi has very cleverly developed much earlier flowering ensatas. They flower 3-4 weeks earlier than normal. This sounds like a really good idea and it is except, he tells me, it has taken him 30 years to achieve this. I don't think I have 30 years left unfortunately.

Next I asked Lech Komarnicki, one of the kings of the wide crosses, whom I thought would be sure to have tried this cross. He has but without any success. His interests are vast in wide crosses but his problem is totally different as he explains,

> "Pseudatas are rather difficult to obtain. I have tried once without success. For me the problem was not with the time of bloom - I have a pseudacorus which flowers together with ensatas - but with the small number of blooming ensatas which do not like the conditions of my garden, and the big number of crosses that one should make. The percentage of takes is very low. I found in the literature that a breeder had to make about 70 crosses to obtain only a few pods. Germination is supposed to be unreliable. Growing 'Gubijin' should give you a better chance.
>
> Pseudacorus planted in partial shade could flower much later, nearly in time of ensata flowering in the sunny place. However the technique

is very simple. I've used plastic boxes from the photographic films to put the anthers into and before closing I enclosed something like the small hygroscope packets, desiccants; they are put into products that need to have moisture removed. It is then placed in the freezer at -20°C. It should work, and such containers do not take much space, but the vitality of pollen may vary. Many breeders maintain they have used this method successfully. It is similar to the pollinating of other different plants. I had received pollen once by mail which was still valid to use after three weeks. It seems to me that one may try frozen pollen but the best way would be to plant pseudacorus in partial shade and obtain the later bloom of it".

These small packets of desiccant (silica gel) can often be found when you buy new shoes, or leather goods. They are also useful to stop seeds becoming damp. Pharmacists get them in the top of tablet containers and they might keep them for you or they should be able to supply you with larger quantities, but not in little bags. I feel it would be necessary to make sure the silica gel isn't in direct contact with the pollen but be very close.

Search the web for different methods to successfully freeze pollen, not specifically irises, and all the instructions emphasise the need to use fresh pollen from the anther as soon as it has dehisced and will fall freely from the pollen sac although it is possible to collect the anthers before the pollen is ready. Choose a warm, not hot, dry day to collect the anthers/ pollen in a very clean container. Quickly dry the anthers/pollen in a warm atmosphere in hours rather than a day. As soon as you think the pollen is completely dry either fill individual vials with the pollen or use a pill/tablet box that has individual cells (usually come with 28 cells, "buy" from the pharmacy). Each cell could hold different pollen. After freezing it is necessary to use all the pollen in each container that you open. It really cannot be guaranteed to refreeze for future use. In fact there is no guarantee that keeping the ensata pollen for up to ten months will produce pollen still viable but it is worth a try. Alternatively keep the containers in the fridge.

My own untested thoughts are to cool but not freeze the container first with the lid. Add the pollen, then open freeze in the container, without the lid on, in the Fast Freeze area of the freezer to minimise condensation forming. Once frozen, cover and name. Double bag to avoid freezer burn.

Forced Cultivation of the Japanese Iris Blooming in Winter

Experiments on forced cultivation by Nobumasa Yamawaki
(Or the Japanese art of flowering Japanese irises nearly all year round!)

When Takeyuki came over from Japan for the 90th birthday celebrations (whose 90th birthday?) he brought with him many gifts, one of which was a lovely illustrated publication written in Japanese but which included an English translation. Nobumasa Yamawaki is the author and he explains his eight years of "forced cultivation" experiments after 40 years

of cultivating Japanese irises. His objective is to enjoy ensatas in bloom in an extended flowering season and he is now able to enjoy ensatas up to six months of the year. It is not uncommon in Japan to have pots of flowers in bloom indoors; peonies and chrysanthemums are also grown like this, in pots, and then brought inside for the duration of bloom.

Hiroshi Shimizu, one of the most eminent ensata breeders in Japan, supplied Nobumasa with his original earliest flowering varieties which were not generally available. The Japanese iris is a long day plant so the amount of light determines when it becomes dormant in November/December and when it starts to re-grow in spring. Light is therefore the most important factor of control. Plants need to be lifted, potted and brought inside during the winter months of December, January and February when the plants should be dormant.

Nobumasa's next experiment was to induce premature dormancy by cutting off all autumn growth; very drastic after the long held view that "the leaves of autumn are vital to achieving the floral buds for the following year". He started to lift the ensatas earlier each year, achieving earlier bloom with them until now they can start to flower from January onwards. The length of time from lifting to bloom is between 110 and 130 days.

These ensatas need all the possible natural light they can get through the day and then Nobumasa uses fluorescent lighting from dusk until bedtime, and again from the time you surface in the morning until daybreak. Ensatas, being cold tolerant, still grow slowly through winter until the temperature drops below freezing. Heating is therefore not critical but needs to be between 18°C and 23°C while plants are in daylight, and morning and evening artificial light. No heat is given during the night. It is important to keep the pots on a saucer of water all the time so that the plants never dry out. Nobumasa is keen to keep to similar heating and lighting that is generally found in the home throughout winter to avoid any extra expense. Fertilising isn't required at this point although ensatas are heavy feeders. Some information is unfortunately missing in his book but perhaps common sense is supposed to be used for feeding. There is no mention of cultivation after flowering or whether the irises will return to flowering at their normal time if they are replanted outside or whether the same ones can be used the following year without loss of vigour or bloom. In his book, Nobumasa has detailed results of his interesting experiments.

This year I am trying Nobumasa's first experiment just to have some pollen available to pollinate a pseudacorus with an ensata. If you like a challenge, why not join me by lifting an ensata or two now. It may be the Chinese "Year of the Horse" but in my case it is the Japanese "Year of the Pseudata Seed". I think I will need to borrow Nobumasa's own personal motto: "perseverance is power".

Nobumasa's book is in the GBI library if anyone would like to borrow it. Please email me for information and postal charges.

Louisiana Iris Collection Update
Mark Haslett

I have been trying various methods to encourage shy flowering LAs to produce flowers. I am still working on this with various experiments but I have learned from chatting to plant collectors in the USA that some Louisianas are found in shady areas under trees, sometimes even in thick undergrowth. The plants found in these situations are shorter and have a much broader leaf to the ones found growing in full or semi-sun.

I placed a select number of good flowering LAs in a shady part of my garden under a cherry tree so some plants received semi-shade while others were in complete shade growing beside a few ferns. All plants were in planters which act as mini bogs and all had the same feeding routine as the other LAs, I still had bloom even under the tree; some of cultivars that performed were - 'Wall Street', 'Rhett', 'Black Gamecock', and *I. brevicaulis*. One interesting note was that the plants did produce much broader leaves and 'Black Gamecock' and 'Rhett' blooms were very rich in colour. I had wondered if lower light levels would reduce colour intensity.

So if your Louisianas are not blooming well it is worth moving them around to find the right spot and they will reward you with wonderful blooms to enjoy. They can also make great pond plants and depth seems no problem. I know 'Clyde Redmond' has bloomed in a pond margin and has actually grown down 2ft and performed better there than where it was originally grown.

I have also been trying to build up the number of seedlings to produce my own hybrids by obtaining seeds from the USA to get better material to work with in my programme. It is necessary to hold specimens of all 5 of the species within the collection and I am pleased to say that I now have, in the Collection, a number of the tall *Iris giganticaerulea*, a species which can reach over 7ft in the Louisiana swamps. The rate of growth of my seedlings is amazing, they are almost 3ft and they are only 8 months old. Hopefully they will bloom this year. I will skip their first winter season outside to enable them to bulk up by growing them on a warm window sill and under lights.

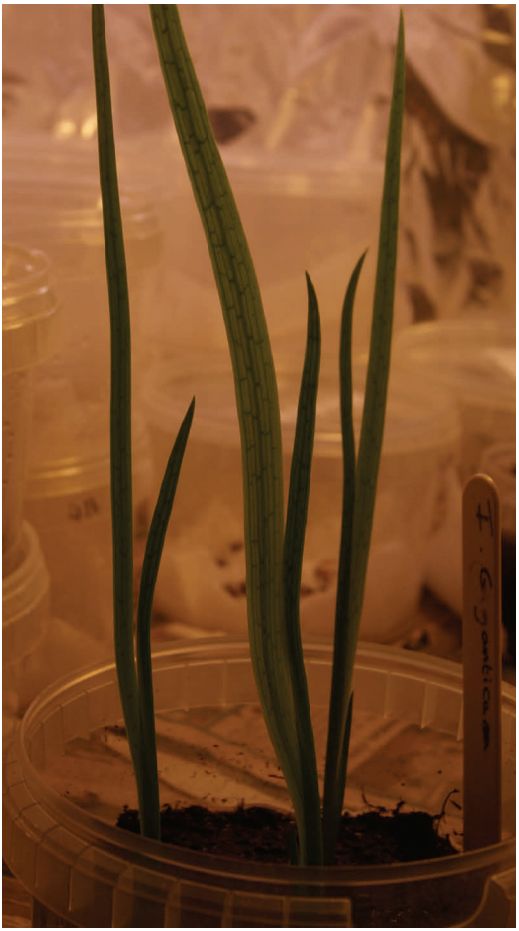
My experience of getting Louisiana seeds to germinate has been interesting as I have had slow germination in the past and then have lost seedlings which germinated late and were killed off by winter cold. Since I changed to my current modified method, the one I read about being used for Japanese seed, I have achieved a much better germination rate of nearer 70%+ and think this method can be used for all damp-loving irises as I also had success with *I. laevigata*. The method involves soaking the seeds for 24hrs in distilled water, then sterilising them for 10 minutes in a bleach solution before rinsing them. This is to prevent fungal attacks as the seeds are kept in micro-propagation pots on damp towels until they germinate under lights and then they are transferred to a slurry mix and allowed to grow on until ready to be potted up. Once I have tried my experiments a few more times I will explain my methods in more detail.

I am hoping to register my first seedling this year; the plant took 3 years

to flower grown under natural conditions but was well worth the wait, with lovely lilac flowers and lacing to the edges. I have a number of other seedlings which I'm looking forward to seeing when, fingers crossed, they bloom later this year. I hope to produce some garden-worthy Louisianas for UK growers to enjoy. I will also be launching a website for my collection which will be available this spring and will have a gallery of my *Irises* in bloom with cultivation tips. www.louisianairiscollection.co.uk

New Seedling all photographs©Mark Haslett

Seeds on damp paper towels.



Seedlings. Note the water marks on the leaves and the central midrib which is very prominent on species that are commonly called water irises.

Some Hints on Pollinating
Jennifer Hewitt

Questions have been asked so this is an attempt at answers. One concerns the use of tweezers. Hybridisers have different methods and some prefer to use a small soft artists' paintbrush to transfer pollen from anther to stigma. It is gentle to the flowers but needs really thorough cleaning between different pollens and most of the time I find tweezers simpler to use and certainly to clean. They must not be designed to grip too savagely or cut as either will damage the anther. For years I've treasured a philatelic (stamp collector's) pair which aren't easy to find, but recently have twice found sets of four assorted kinds among DIY tools at only £1 per set. Two of the four are nippers, to be kept for one's eyebrows though it may be possible to flatten the ends. The other two pairs have broad flat ends set at different angles. Both are satisfactory though the smaller blades are more convenient. They are the upper pair in the photo which are the ones I found for Brita.

The anther is gently but firmly held below the pollen sacs so that the filament can be broken. Put it in a dish, with others of the same variety and a label; you should have taken it from a fresh flower so the sacs are closed and no insect has contaminated it with 'foreign' pollen, and the chosen pollen won't be available for at least a few hours. To apply pollen to a stigma, hold the lowest part of the sacs with the tweezers – not the filament which is fragile and easily broken – and brush the pollen onto the exposed surface of the stigma; your other hand holds the style arm steady. If pollen has fallen into the dish you can collect it on the tweezer blades' end to apply it. Wipe them on anything handy before using them on a different cultivar or species – any grains are very visible.

One other, crucial question is: just which bit is the stigma? Irises are rather unusual and it isn't obvious. But you know the style arm and it ends in upward flourishes, the crests. Just below and a little behind them, on the underside of the arm, is either a sort of tiny ledge or frill, or a little triangular flap. That is the stigma and it is to the upper side of it, which is pressed against the style arm on a fresh flower, is where the pollen goes. On a flower that has been open for a day or two the ledge or triangle will have bent forward slightly and be more obvious, and that upper surface will probably be glistening and sticky so the pollen will adhere.

One further point: as well as pollinating in damp conditions being a waste of time as the pollen grains swell and split and are useless, hot dry weather can also be unsuitable as pollen that is dried out won't usually work. Early morning, as long as there's no dew, or evening, give better chances of success.

Style Crests

Stigmatic lip still closed

Anther showing the pollen sacs

Filament - delicate and easily broken

Style crests.

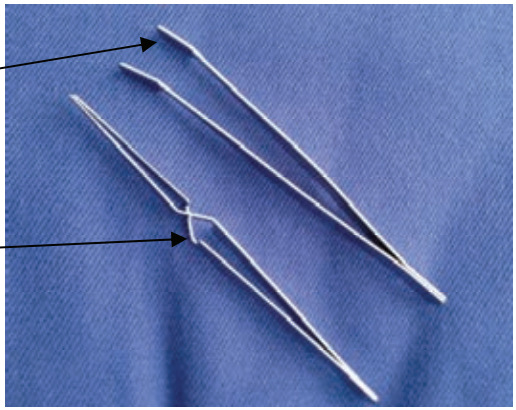
Open stigmatic lip

Anther

Hover fly touching the stigmatic lip

Tweezers showing the flattened blade ends for gently holding up pollen sacs.

Another pair of tweezers which won't cause any damage and may be easier to hold. They open by pressing in the middle.



Hybridisers' Award - Olga Wells

The Hybridisers' Award is given annually by the British Iris Society and was instigated in 2011. The Society was left a legacy by Margaret Hall, who expressed a wish that it should be used to "promote research into the growing and breeding of irises'. Olga Wells was the very worthy recipient in 2013. Olga has been breeding irises since the late 1980s and has bred both bearded and beardless. But it is her beardless irises which this Group values the most, particularly her Siberians but also her spurias e.g. 'Wealden Elegance'. I know of ten Siberians that she has registered, there may well be more and there are certainly some in the pipeline. I think of them all my favourite is 'Wealden Mystery'. As Olga herself has said that she aims to breed Siberians with smaller flowers but plenty of them and certainly this is very true for this iris.

'Wealden Mystery'

It is noticeable in the naming of her irises that there is a definite Kent connection and one can presume that Olga is proud of her Kent origins. If you ever visited Olga's allotment you will fully understand why she chose the Wealden prefix, it has the most stunning views over the Weald of Kent. A really good testing ground as to which seedlings can take the odd breeze or so! Olga tells me the rest of the name was the result of sending several varieties for trial at Wisley. One, under its seedling

number, proved not to be what it was supposed to be, hence it was something of a mystery at the time, and that is how it got the name.

Of course, if you are also interested in those other irises which we don't mention here then Olga's MTBs are really stunning. She has been the main hybridiser in Britain of MTBs for years. I believe it was Nora Scopes who first suggested that Olga should look at MTBs and encouraged her to breed further. Over the past 20 plus years Olga has developed a good eye for discerning the gems amongst the hordes of seedlings she has grown and I have a sneaky suspicion that she has a soft spot for Siberians and beardless in general, which is to our benefit!

Congratulations Olga, and thank you from all of us for breeding such beautiful irises.

'Wealden Skies'

'Wealden Spires'

Two more of Olga's small-flowered Siberians. 'Wealden Spires' was registered in 2011. This has bright yellow buds opening to masses of cream blooms; very dainty and a lovely garden plant.

Jill Whitehead

Midsummer in Scotland – Irises and a Primula
Jennifer Hewitt

In the past 6 years I've paid four visits to Orkney, primarily for archaeological reasons (prehistory, especially the Neolithic, fascinates me) but have kept an eye open for wild plants. *Iris pseudacorus* is abundant around lochs and in wet places but as I've been there in late July/early August there's only been the odd final bloom to be seen. In fact my impression is that it doesn't flower very freely as I've seen few seedpods. Probably this is because the islands lie north of mainland Scotland where, though summer days are long, the growing season is short even though the climate is generally mild thanks to the influence of the Gulf Stream.

The 2013 visit saw less archaeology and more of the variety Orkney offers, including more flowers, wild and in gardens. Still just the odd Yellow Flag and I couldn't help thinking what a wonderful display it could make with a bit more encouragement, especially on the little northern island of Papa Westray (Papay) where there is a stretch about 20 yards wide and at least a quarter of a mile long. Years ago I saw the 6 miles long spread at Tauranga in New Zealand which was in full bloom and showed how effective it can be.

We did have a different reward on Papay, seeing numerous plants of the very rare *Primula scotica* in bloom. It only grows there and on Hoy plus Caithness on the mainland. Generally it doesn't take to cultivation and was one of the main reasons for the visit.

I do peer over garden walls, given the chance, and on Westray and Papay saw another beardless iris, a white 'Dutch' bulbous one; the owner of the Papay garden said she had a blue iris elsewhere but we had a ferry to catch. However I have sent her seeds from Siberian cultivars in assorted colours so perhaps in a few years' time there will be more beardless irises on Orkney?

The Dutch weren't the last irises I saw as, back on the mainland staying with my family, I spent a happy day with Brita and Tom. Brita being a Hardy Planter, there was a lot to be seen in the lovely garden she's made and among the flourishing National Collection of Siberians, Olga Wells's dark blue tet 'Atlantic Crossing' had at least 10 reblooming spikes with more to come. A perfect finishing touch!

© Rachel Wilcox

Primula scotica showing the delicate and beautiful farina on the leaves.

© Brita Carson

Siberian Iris 'Atlantic Crossing', photograph taken in mid-August

PCIs 2013
Philip Jones

A few years ago I was looking through old copies of the *Almanac* of the Society of the Pacific Coast Native Iris and I was drawn to an article where the author had sown PCI seed one year and saw them flowering the next. I had recently come into possession of a strip of ground three yards wide and eight yards long and the article opened up new possibilities. The author had planted out his seedlings quite close to each other, and in one largish pot he had 24 small irises all flowering together. I decided to acquire PCI seed from as many sources as possible and then within a year I would have a fairly good idea what types of PCIs were being grown and were available from seed.

There were two hiccups. First the indelible pencil was not indelible – at least not after three years. And yes, it took three years. The first year they were small but failed to flower and then the second year it rained and rained and the plants simply put on growth and became overcrowded. Even this year when many of them flowered there are many others still to introduce themselves to the big wide world. I felt it necessary to replant all of these to give them more "elbow room".

I say "elbow room" because it has been often the case of one large iris dominating the others. Perhaps this is an example of what Professor Dawkins has called "the selfish gene". I try hard to imagine what a "selfish gene" looks like. I see the selfish gene as a fellow citizen - it could be a him or a her - but much bigger than me, with whom I would not wish to be trapped in a lift during a power strike, and especially as the hours pass, and the sandwiches begin to run out.

Among the irises that have flowered I have been doing some "selecting" myself. Some flowers reminded me of "the garish day" in Newman's hymn, *Lead Kindly Light*. I consigned them to the compost heap, but then in a creepy sinister sort of way they started to reappear. It reminded me of "the Day of the Triffids". I would turn a corner and there they were - in straight lines: PCIs in formation. It appears they have done a deal with the Polish gardener and now they have taken over and reign supreme over the large rockery at the entrance to the Monastery. And I have agreed to all this. I have said that next summer they will be a sight for sore eyes.

It was the lavender coloured irises that put on the most growth without flowering to become a large mass of vegetation that had to be dug up and replanted. They are the largest group of the hundred and thirty plants that are still to flower. Some of those that did flower are very beautiful and it was not difficult to decide what to keep and what to throw out. There were also medium to small plants with bright green rather wide leaves and small flowers; some good yellows and some Wedgwood blues. I

am attracted to these smaller flowers. Some of the yellows have distinctive narrow petals. These have been planted out together. There were also smaller plants in shades of red and purple. These all look promising, and not to be rejected – for the moment. There is, however, the possibility that what I am seeing now is the reverse of the ugly duckling. What is now young and beautiful may turn out to be something reminiscent of the "garish day" with family connections to "the selfish gene".

The question of what we actually see when we look at flowers is becoming a matter of interest, even of concern. There are two articles in the 2013 Iris *Year Book* that give pause for thought. An article by the centenarian iris specialist Georgyi Rodionenko is very useful. With the help of illustrations he gives a comprehensive breakdown of the different formations of the flower petals: the standards, the falls, the perianth segments and the crests. How often the first impression we have of a plant is a view from above: we look down and see only a two dimensional view from the air.

The colours are the main impression, the formation of the flowers becomes a secondary feature. This is particularly the case when the plants have all been grown too close together in a trial bed. I am making a New Year's promise to examine my plants more closely in future, and the renowned author has given me a practical guide how to go about it. This is particularly important this year because I have over a hundred seedlings of crosses I made with my *Iris* 'Kinnoull'. I am hoping many of them will flower but it would also be good to have in hand a definite programme to identify distinctive characteristics and to note how often they appear.

The second article by Jan Sacks served to draw attention to an embarrassing state of affairs concerning my photographic reproductions. The article is accompanied by many examples, four of which are irises with very different pictures of the same plant. There are noticeable differences in colour, and my first reaction was to blame either the camera or the light. But no, the plants themselves have sharply different coloured flowers. The main reason for a strong colour rather than a weak colour seems to have much to do with the formation of the bud. The determining factors are the light, the temperature and the humidity. These factors determine how long the bud is forming before flowering and what kind of formation is taking place. A cool mild climate and a continually damp climate may lead to the same length of time in bud formation but it is the cool mild climate that is more likely to give rise to a strong coloured flower.

The "embarrassing state of affairs" referred to above has to do with Christmas cards I send out with pictures either of the Carmelite Monastery overlooking the Firth of Forth, or my favourite lily or iris. Last year it was *Iris* 'Kinnoull'. This year it is another picture of *Iris* 'Kinnoull'. They are very different, but at least now I can give a reason how this state of affairs has come to pass.

Where you grow plants and what the weather is like affects not just how they look but how they are. I have always thought that the light coloured irises look more clearly defined in half shade than out in full sun, and I put this down entirely to the nature of the light – the brighter the sun, the flatter everything looks. But it appears that is only half the story. The flowers look more clearly defined because they are more clearly defined. I am particularly concerned with my *Iris* 'Kinnoull' which appears in stronger and weaker colours in different places. I put the differences down to light and shade. This year I will be keeping a closer eye on the camera and to photograph the same plant in the same situation at intervals of days and weeks.

I have discovered that *Polemonium* 'Bressingham Purple' is a valuable foil for a number of irises. (see the seedling 02 of *Iris* 'Kinnoull'). The flower of this polemonium seems to me more light blue than purple. I am using it to highlight particular colours such as the small purples and reds. The long wands of small blackish green leaves go all over the place and contrast with the green of the irises and other taller plants. They help to bring different plants together and fit in with the informality which is part of the PCIs distinctive style.

Seedling 02 of *Iris* 'Kinnoull'

The original *Iris* ‘Kinnoull’

Seedling 03 of *I.* ‘Kinnoull’

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My sincere thanks to all the contributors of articles and photographs for this edition of the *Review*. Please do get in touch if you have something to say and would like to write for the next edition.

Back Cover - Siberian Seedling no 18 (Olga Wells)

The British Iris Society

RHS Garden Harlow Carr

Crag Lane, Harrogate, North Yorkshire HG3 1QB

IRIS EVENT

Saturday & Sunday March 22 & 23, 2014

10.00 am—4.00 pm each day

Saturday

11.00 am 'Irises Through the Year' - Denis Lobidel

1.30 pm 'A Beginner's Guide' - Sidney Linnegar

2.15 pm 'Irises and their Breeders' - Sarah Cook

Sunday

11.00 am 'Bryan Dodsworth, Yorkshireman and Iris Hybridiser' - Barry Emmerson & Simon Dodsworth

1.30 pm 'A Beginner's Guide' - Sidney Linnegar

2.15 pm 'Beardless Species in the wild' - Brian Mathew

All Welcome

Entry to the Garden is free to BIS and RHS members

www.britishirissociety.org.uk