

**Almanac:
Society for
Pacific Coast
Native Iris**

**FALL 1998
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PUBLICATIONS AVAILABLE FROM THE SPCNI TREASURER

Check List of Named PCI Cultivars

Lewis Lawyer, Editor: 59 pages. Lists and describes Pacific Coast iris and named hybrids through 1995. \$6.00 postage paid.

Diseases of the Pacific Coast Iris

Lewis & Adele Lawyer: ALMANAC, Fall 1986. 22 pages, 9 photographs. \$3.50 postage paid.

A Guide to the Pacific Coast Irises

Victor A. Cohen: The British Iris Society 1967. Booklet, 5.5 x 8.5, 40 pages, 16 line drawings, 8 color and 6 black-and-white photographs. Brief description of species and sub-species including their distribution. \$4.00 postpaid

A Revision of the Pacific Coast Irises

Lee W. Lenz: Photocopy of *Aliso* original. Booklet 5.5 x 8.5, 72 pages, 9 line drawings, 14 photographs, and 12 maps. Definitive work on the taxonomic status of the *Californicae*, with a key to the species and sub-species. Detailed maps and accounts of distribution. \$6.00 postage paid.

Hybridization and Speciation in the Pacific Coast Iris

Lee W. Lenz: Photocopy of *Aliso* original. Companion booklet to the above, 5.5 x 8.5, 72 pages, 30 figures, graphs, drawings, and photographs. Definitive work on naturally occurring inter-specific crosses of PCI, including detailed account of distribution. \$6.00 postage paid. If ordered together, both Lenz booklets may be obtained for \$10.00 postage paid.

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Seed of species and garden hybrids is available for \$1.00 for the first packet and \$.50 for each additional packet from the Seed Distribution Chairmen listed in the column to the right.

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MEMBERSHIP & SUBSCRIPTIONS

The Society for Pacific Coast Native Iris is a section of the American Iris Society; membership in AIS is a prerequisite for membership in the SPCNI. If you wish only to receive the ALMANAC (two issues per year), the annual subscription rate is \$4.00.

Membership	Individual	Family
Annual	\$ 4.00	\$ 5.00
Triennial	10.00	12.00
Supporting Annual	6.00	
Life	50.00	65.00

Please send membership-subscription monies to the SPCNI Treasurer.

ALMANAC

DEADLINES: March 1 and September 1. Back issues are available for \$3.50 each, postpaid. Complete chronological index \$2.00, postpaid. Index by subject matter, or by author, \$4.00 each, postpaid. Please address the Editor

PRESIDENT'S MESSAGE

Another six months have gone by and I can reflect on the events and happenings of the year.

Our annual meeting and program was held at the AIS Convention at Denver. Despite the cold weather, we all seemed to survive. This was a surprise for someone from California, who is lucky to see snow at his home every ten years. Our meeting was not as well attended as I would have liked to see, but the Siberian program was scheduled for the same time, and we all know that more gardeners grow them than PCIs. Our meeting highlights were a slide show and a panel discussion with Lewis and Adele and Gigi Hall answering questions from the audience. This was informative and I hope everyone went home with some new knowledge.

We approved the setting up a home page on the internet, and approved appropriating funds to do so. The person I was hoping to assist with this project has not followed through, so if you have the ability and skills, please offer to help.

I have appointed Damon Hill of Sebastopol, California to succeed Roland Kenitzer as Slide Chairman. Our thanks go out to Roland for all the years he served us well as slide Chairman.

Damon has been on most of the SPCNI treks, and he and his parents grow a large quantity of hybrids. He is an excellent photographer, and has accumulated a superb collection to combine with Roland's and others. If you have favorite slides you would like to contribute, please send them to Damon, whose address is on the facing page. When this is accomplished we will have various sets of species, hybrids, and combinations of the two which

can be distributed through our organization and the AIS.

Following the 1999 Region 14-Region 15 combined Spring Regional on April 16th in Tulare, Lewis and Adele will be leading a trek to see *I. munzii* in the Sierra foothills. Please contact them or myself for details. I look forward to seeing all of you. With irisarians having so many scheduled activities in 1999 and the year 2000, we have decided to have our next trip in 2001. Other societies have gone to this plan, so we will see how it works. Final plans will be announced later.

Having last written about the effects of El Niño, I must report that it was a devastating year for us. The rain continued almost until summer. Of all the plants put out in the spring, we lost many, as it appeared the new roots just received too much water, [70 + inches was a record for us]. Existing plants in the ground did just fine except for a few losses. A new display mound also did well. We have hillside banks, and plants there seem to survive without any special care. Fortunately, we had all of our new varieties in pots and they are doing very well. I highly recommend growing them in pots the first year. Those of you who have difficulty growing PCIs should really try this.

May the holidays and the new year be a joyous one for all.



FROM THE EDITORS

Partially because of our non-garden activities, and partially because of the heavy rains last winter, our garden has become a haven for weeds. This invasion may also be related to our increasing awareness that our half-acre garden seems to grow larger and more demanding of the two of us each year. Whatever it is that lets them increase at

such alarming rates, we must agree that weeds are phenomenally successful at what they do best,

The principal invader is relatively new to us *Sonchus oleraceus*, Annual Sow thistle. Its close relative, *Sonchus asper*, Spiny Sow thistle, is also present. Before we looked up the reference in *Selected Weeds of the United States*,

(*Agriculture Handbook 366*), we had called it "milkweed" because of its milky sap. The villains look like tall, vigorous dandelions. They now populate our entire garden, tiny to tall, wall to wall.

For the last two years we have applied pre-emergent weed killers in our PCI beds, mostly very successfully and with no damage to either established plants or just-planted seedlings. We have, however, experienced a couple of failures in weed control, and for no reason that we could explain. In the April, 1998, issue of the AIS Bulletin, Terry Aitken briefly discussed pre-emergence weed control. Among other things he notes that *Princep* or *Simazine* should not be used on beardless iris. I think it is time for the *Almanac* to address the subject. Please, all you readers who have had

experience with pre-emergence weed killers, good or bad, send us a note detailing your findings. We will try to get some useful information back to you.

Our newly acquired PCIs have been planted in pots, and our hybridized seedlings have been set out in the garden, pre-merged, and are growing well. So, while the essentials are taken care of, the accompanying flowers which make our property a garden, will have to take a back seat while we get out the ALMANAC

James + Adele

EXPEDITION 1999

Adele Lawyer

There has been a total change since our description of this trip in the Spring 1998 *Almanac*. This was because the logistics of transportation by bus was difficult to arrange economically between Santa Rosa and the Mendocino area. We regret that a quality trip to see the Hudson's nursery, the Mendocino Botanical Garden, and Mae Lauer's garden could not be arranged at this time. We expect such a trip will take place in 2001. For 1999, we have an intriguing alternative planned.

We can take advantage of a special happening which is occurring right in the heart of *Iris munzii* country!

The Sequoia Iris Society is hosting a joint Spring Regional Meeting of Region 14 and 15 on the 17th of April 1999. Region 14 encompasses Northern California and Nevada; Region 15 includes Southern California and Arizona. This will be headquartered at the Radisson Hotel at Visalia, California, where a group of 70 rooms have been reserved for the occasion.

The Society for Pacific Coast Native Iris is sponsoring a "Mini Expedition" on April 18th to see *Iris munzii*. These tall, large-flowered beauties occur only in a limited territory in the Sierra Nevada

foothills, and Visalia happens to be the closest city. It is at one end of a loop road leading up through *munzii* country and back down to Porterville at the other end. Mid April is normally peak time for *munzii* bloom! They flower later than other PCI species, and their more elevated location, (about 2000 feet) slows their bloom so that it matches that of the tall bearded iris on the valley floor.

If 40 people express interest in the trip, we will obtain a bus at a cost of no more than \$10 per person. If fewer people sign on, we will caravan, and the only charge will be for lunch.

Trying to interest a group such as ours to travel from many far flung locations to see *Iris munzii* is difficult, considering the travel time involved. Combining it with the added incentive of this special Spring Regional has made it more appealing. The Spring Regional includes bus visits to gardens in the Visalia, Turlock, and Porterville areas of Turlock County, California. George Sutton, Chairman of the meeting should be contacted if you wish to register for the Regional. His address is 16592, Road 208, Porterville, CA 93257. Telephone (209) 784-9011. Registration is \$45, This includes the extensive display of Tall Bearded iris from

domestic and foreign sources, lunch, and a banquet dinner in the evening. Ray Schreiner will be a guest, and Judge's Training sessions will be available.

In addition to our trip to see *munzii*, George Sutton has arranged another optional trip to see the giant redwoods in Sequoia National Park. These are the monster trees, *Sequoia washingtoniana*, popularly called Bigtree. These trees can be 4000 to 5000 years old as determined by tree ring counts. Most of the older trees which have not been cut for lumber, however, are 2000 to 3000 years old. Sutton warns that this trip is not recommended for those who get carsick on curvy roads. Please inform George Sutton if you are interested in going on this trip, and Adele Lawyer if you choose to see the *munzii*. The trips occur simultaneously, so you can not do both.

Seeing the giant redwoods, or the regal *munzii*s, the tallest of our PCI, will further reinforce your respect for the gifts and wonders of nature.

Getting to Visalia is most convenient, and probably cheaper, by car. It is also possible to fly into Fresno or Bakersfield, (around 60 miles from either side of Visalia) and rent a car.

We understand that an article on the Regional and accompanying optional field trips will appear in the American Iris Society Bulletin, as well as the bulletins of Regions 14 and 15. More precise and detailed information will be available in the Spring Bulletin. In the mean time, we would like to know approximately how many of you are interested. Please contact Adele Lawyer, who is arranging this Mini Expedition to notify us of your interest in visiting *Iris munzii*.

THE BOOK ON PACIFIC COAST NATIVE IRIS UPDATE

Adele Lawyer

It has been some time since we have informed our readers on the status of the book on Pacific Coast Irises which we have been writing for some time. Editors David and Evelyne Lennette have submitted outlines, sample chapters, and representative photographs to three publishers: first, Timber Press, second, Falcon Press, and lastly, the University of California Press. We have received rejection notices from all three, the latest last month from U. C. Press.

The Lennettes are very busy at Viro-lab, their laboratory in Berkeley, and as editors of scientific journals in their field of research. They are no longer able to devote the necessary time to this project which all of us initially thought would be quickly accomplished. We appreciate their efforts on behalf of the book, but now will proceed as co-authors.

Although only the chapter concerning PCI in Landscape Design has yet to be written, we are making changes throughout all other chapters according to our judgment. Harland Hand, a talented designer, particularly of rock gardens, who included PCIs prominently in his gardens,

had consented to write this section, but died quite suddenly last month. Ron Lutzco, another well-regarded Bay Area designer, renowned for his native plant gardens, had previously offered to assume this responsibility. The volume of his activities as a landscaper, however, prevented him from scheduling sufficient time to complete his writing in a timely matter. Perhaps this will change.

When we finish revising the chapters, we plan to submit the book to Timber Press again, since it seems to us that it would fit in well with their releases. And their promotion techniques are very advantageous. If this is unsuccessful, we will approach AIS, as suggested by the late Foundation Chairman, Dick Pettijohn.

It should be pointed out that the writing does not proceed rapidly, since it requires careful attention to detail, including the problem that many of its potential readers will have little, if any, background knowledge of the subject. We also have the Almanac to put out, our garden to maintain minimally, and our family and the enjoyment of music to fit into our lives.

PACIFIC RIM WINS THE MITCHELL AWARD, 1998

PACIFIC RIM, (Bennett Jones '91) has been awarded the 1998 Mitchell Medal with 72 votes. Runners up were Chief Sequoia (J.Weiler '91) 17 votes, and Smuggler's Cove (V.Wood '88) 11 votes. The 72 winning votes given are the highest vote ever for the Mitchell award, beating out the previous vote winners Native Warrior (A.Phillips '71), the 1975 winner which garnered 63 votes, and Canyon Snow (D.Emery'75) the 1978 winner with 56 votes. It is pictured on the color page.

Pacific Rim is a truly remarkable Pacifica. It has a great name, which describes both its appearance and its place of birth. Furthermore, it is a vigorous grower in all areas where it has been grown, has a lovely, softly ruffled form, and its light blue rim on white completes this elegant cultivar. In a 1997 Almanac

world-wide survey, it was one of a group of three cultivars rated third best, very good for a relatively new introduction competing in a field including all the old faithful. Only Ghio's WILDER THAN EVER was a more-recent selection among the top dozen in that survey.

Pacific Rim, pictured on the facing page, richly deserves this highest award!

AWARD OF MERIT

Pink Cupid (V.Wood'93)	22
Deep Blue Sea (J.Ghio'95)	20
Jean Erickson (C.Rigby'93)	20
Sea Admiral (V.Wood'95)	12
Escalona (J.Ghio'94)	11

HONORABLE MENTION

Pacific Snowflake (G.Shoop'95)	
Skylash (L.Belardi'94)	
Wishing (J.Ghio'93)	

DORA SPARROW RECEIVES AWARD

Adele Lawyer

While looking up some other information, we learned of an award given to one of our members in 1996 which was not reported in the ALMANAC. Many SPCNI members who have attended our Expeditions know Dora Sparrow from the three occasions when she traveled here from New Zealand to attend these trips. We remember her enthusiasm about seeing, in the wild, the Californicae species she had cultivated and hybridized in her garden for many years. We admired her energy in tolerating the long trip, and felt a special affection for her because she shared our joy in seeing the beautiful PCI natives in their home territory.

In the October 1997 issue of the American Iris Society Bulletin, an article

by Clarence Mahan noted that the Festival Crown Plate is presented by the British Iris Society to the New Zealand Iris Society to be awarded by that society for Meritorious Service. In 1996, this award went to Dora Sparrow, one of the founding members of the society. It was pointed out that she has held offices in many iris societies through the years, and was respected for her expertise in all aspects of cultivation, hybridizing, and exhibiting of iris.

It was noted, additionally, that although she has hybridized many types of irises, she is especially renowned for her work with Pacific Coast Natives. We in SPCNI are proud of her as one of our own, and appreciate the occasions she shared time with us.

COLOR PAGE

Pictures on the facing page illustrate the subject matter of 3 of the current articles. Top central picture is Pacific Rim, less blue than actual color.

To the left is the lavender form of *I. innominata* or *I. X thompsonii*, discussed in Nelson Young's article. This photograph was taken on the High Divide Road

above Smith River at the northern border of California.

To the left, below is *I. munzii*, tall and stately as will be seen when we visit the Visalia-Porterville area as suggested in the description of the 1999 Expedition article on page 4. Picture taken at Bear Creek, above Porterville.



NEW PAPER ON DNA STUDIES OF PCI SPECIES

Summary by Lawyers

Dr. Nelson D. Young, now in the Department of Biology, Vanderbilt University, Nashville, TN, is the author of an interesting paper on species concepts in the Pacific Coast Iris. This work, conducted in the Section of Ecology and Systematics at Cornell University, Ithaca, NY, was published in *Biological Journal of the Linnean Society* (1998), Vol 63: 99-120.

Young's research, incorporating DNA analysis, was initiated a year or so earlier than a similar study by Dr. Carol Wilson, to qualify for her Ph.D. degree at the University of California, Berkeley. Wilson's research, which was partially funded by AIS and SPCNI, focuses on the evolution of the *Californicae* rather than the differentiation of species.

SPECIES CONCEPTS

Dr. Young discusses three definitions of "species", 1) biological, 2) phylogenetic, and 3) genealogical. The **biological** concept defines species based on similarity and reproductive isolation. The **phylogenetic** concept defines a species as when its members can be consistently differentiated by a character, usually a morphological one. The **genealogical** concept defines species as the smallest group of organisms which are each others closest relatives

He points out that Dr. Lee W. Lenz and other taxonomists have given species status to the *Californicae* based on morphological characters which are distinct for the 13 PCI species and sub-species. Lenz considered the *Californicae* to be a group with localized natural hybridization and limited gene exchange. Furthermore, it is probably monophyletic, that is, it originated from a single common ancestor.

The Lenz classification of the *Californicae* species is published in his monograph *A Revision of the Pacific Coast Irises*, available from SPCNI (See listing inside front cover). This is the classification we all use and which Young proposes to retain as lying within the Phylogenetic species concept

He further qualifies their lack of any crossing incompatibility, quoting other authors who note that one common pat-

tern in perennial plants is that morphological changes can proceed well ahead of any crossing difficulties. This leads to a situation, as it is in the PCI, where phylogenetic species units are smaller than biological species units.

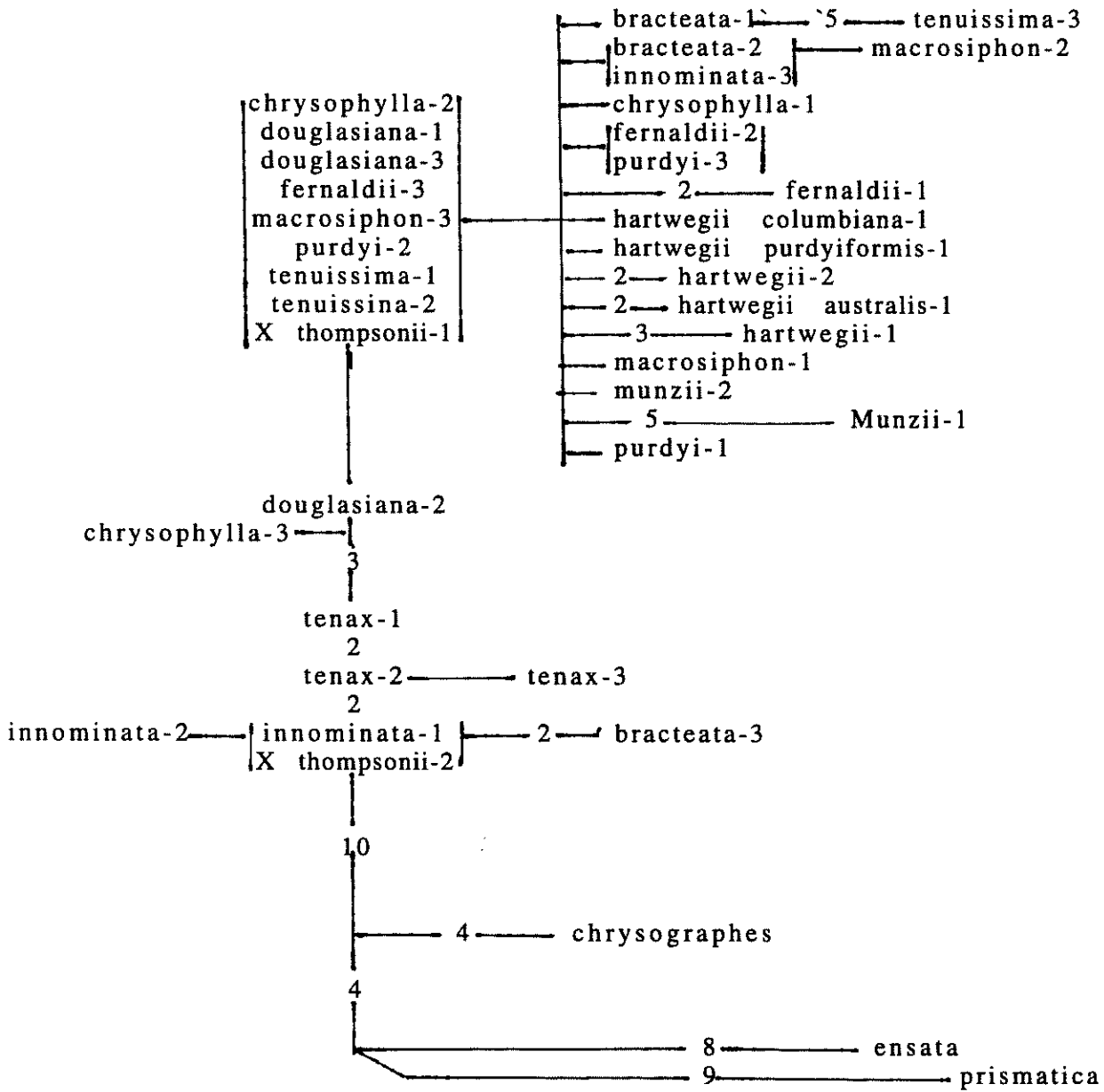
In a 1990 interview with Dr. Lenz, we asked him about the species concept and intercrossing compatibility. His reply was, "It is just a matter of definition of 'species', and that is an extremely difficult thing if you want to use crossability as a test of species. In the case of orchids, what's happened is that they (some species) are so distinctly different from each other that no one in their right mind could say they were the same species, and yet they are perfectly fertile. They have differentiated morphologically without changing genetically.

"The iris (PCI) could all be put in one species but still you recognize each one, - you're not changing them. They are still A, B, or C, and they are perfectly distinct. If you want to call them 'species' that's OK, or 'subspecies', that's OK, or 'varieties'. You're not changing anything".

MORPHOLOGICAL CHARACTERS

Young compared the five Oregon species plus *Iris X thompsonii* for nine morphological traits: perianth tube length, length and width of outer spathe valve, length and width of longest leaf, ovary length, pedicel length, branching, and flowers per inflorescence. Analysis of the data was based on all possible pairs of the species. Nine out of ten pairs could be discriminated, that is, their range of variation did not overlap. *Iris douglasiana* and *Iris bracteata* were the only two species that were not distinguishable on the basis of any one of the characters in his study. He noted, however, that if another character had been included, such as *I. bracteata's* lighter green leaf underside, it would have distinguished them. I have often wondered why the big difference in growth habits between species has not been used in their separation. Certainly *Iris douglasiana* produces more buds, fans, and leaves than most other species, especially *Iris bracteata* which is noted for its sparse growth

"FAMILY" TREE OF THE CALIFORNICAE
INCLUDING THREE OUTGROUPS



Vertical lines tie undifferentiated individuals together.
Numbers in the trunk and branch lines indicate relative
number of changes between the joined individuals.
Unnumbered lines indicate a single change

Adapted from figures 6 and 7 in Young's paper

IRIS X THOMPSONII

Young added *Iris X-thompsonii* to the analysis because it has been considered by some to be a phylogenetic species. In his morphological comparisons it could not be distinguished from *I. innominata*, so he combined their morphological characters to make one hypothetical taxon. Then he could no longer discriminate this new taxon from *I. douglasiana* and *I. bracteata*. He concludes that this supports the idea that *I. X thompsonii* is not a taxon, but a zone of integration between *I. Douglasiana* and *I. innominata*, containing traits of both. He adds further, that this conclusion is supported by the presence of *I. douglasiana* cpDNA in all of the populations of *I X thompsonii*. Note that of the two *I. X thompsonii* in the chart on the preceding page, one is indistinguishable from 7 other species in the top branch of the tree, whereas the other is at the very base of the PCI. Even then, as you will see later, they are not far apart in the DNA units included in this work.

PHYLOGENIC ANALYSIS

Young started by collecting samples of all the Lenz-designated species from sites where he thought no hybridization could occur. Fresh samples were shipped to Cornell University, where they were frozen for later nuclear analysis. Sequence data were taken from the chloroplast region considered optimum by Young,

Because series *Sberica* is thought to contain the nearest relatives of the *Californicae*, a species of that series, *Iris chrysographes*, was used as an outgroup. Also, since there was a slight possibility that series *sibericae* derived from within

the *Californicae*, other outgroups from other series were included. They were *Iris prismatica* (series *prismatica*), and *Iris insatae*.

The sequences were aligned using a program called MALIGN by which all the sequences were compared, and from this, the most parsimonious trees were constructed. Including all three, one, or none of the outgroups did not alter the tree topology, so the combined sequencing were analyzed using all three.

The most parsimonious tree, shown on the preceding page, is adapted from table 7, in Young's paper. The trees were able to separate some individuals from Oregon but all of the California individuals and the rest of the Oregon, individuals form a large polytomy, a large group with little variation. The later includes the 9 individuals representing 6 species and an inter-species hybrid that compose the group with matching DNA on the limb at the upper left

Young discusses the placement of the PCI under the biological or under the phylogenetic species concepts. For example, the set of individuals with identical sequences, on the top branch of the tree, contains individuals from 7 different morphologically defined species. All seven are also found elsewhere on the cladogram. Only one, *I. tenax*, has no individual member in the upper group. Therefore, none of Lenz' species are genealogically 'species'. In fact, the only genealogical species in this group, is the entire species *Californicae*. Morphologically, however, the species defined by Lenz are valid and useful phylogenetic species, not just races, and their placement should remain as Lenz grouped them.

LATE MATURITY

Lewis Lawyer

A couple of you wrote to ask what late-maturity selection was the last to bloom in 1998. In 1996, XP325A and XP325B, which started blooming May 3 and May 8, were the winners with a flower still open on July 7. This was 45 days after the last bloom on a named variety. In 1997, a hot, early, and short season, it was XP325H which closed its last bloom on June 13. This year it was XP325M. It ended the

season with a 9-flowered, branched stem which opened its eighth flower on July 2 and its ninth on July 4. It had two open flowers on July 4 and 5, the last closing on the evening of July 7. This was also 45 days after the last named variety finished blooming. It was also 70 days after its first bloom opened on April 28. This bloom span, 70 days, is 5 days longer than any we have previously recorded.

NOTES FROM NORTHERN CALIFORNIA

Norma Barnard, Paradise, California. Northern California SPCNI Representative

Let me introduce myself to all of you. I am Norma Barnard, your new representative for northern California. My husband, Leo, and I have Paradise Gardens in Paradise, California. He is the shovel pusher and I'm the paper shuffler in our partnership. Our garden covers about an acre and a half.. Our iris inventory runs the gamut, with approximately 1500 varieties of iris, bearded and beardless. In the last two years, we have moved the garden to our present location, and in doing so we made many common mistakes. For example, we planted moisture lovers in super-dry, well drained spots, tall bearded in the path of winter only springs. And we put a nice patch of PCIs in the shade of an oak grove, only to have the neighbors put down lime in their adjacent dog pen! [Lost them all before we discovered what had happened.] I would welcome any comments or solutions to an excess lime situation like this.

What we have done right is to utilize the shade of our towering oaks for many PCI seedling beds. We have developed some gardening tips from our experience.

Tip 1 -Leo mulches all the leaf and brush waste and we return it to the soil after it breaks down.

Tip 2 - If we use a general fertilizer on the PCI beds, we make sure it has a sulfur base. One of the first rules we learned when we first started growing PCIs was that lime is fatal!

Tip 3 - We have had much better luck with well sloped beds or raised beds rather than totally flat beds. All that we lost were on the flat. The soil is heavily mulched but the drainage was poor. This was the result of too much to do and too little time to do it over!

Tip 4 - Seed Planting: Leo did it right the first time! When we bought our first PCI seeds neither of us really knew what they were all about, so he relied on his seed planting experience from our nursery days in Tracy, California. He planted them in 6-inch pots of washed sharp sand. Out of the 250 seeds we bought, the germination count was 255 plants.

I kid you not!

If you will please share your tips with us I won't feel like I'm talking to myself. But since I haven't heard from anyone out there yet, I knew I would have to wing it this time.

For the next issue I'd like to hear comments from Northern California growers on surviving the long, hot summer from the viewpoint of your PCI plants.

Give us your last winter rainfall amount, your altitude, garden location and settings, highest summer temperatures, lowest winter temperatures, and anything special you did to help the PCIs survive and thrive.

I'll give you ours now so that you will know the type of information to send us.

We are in Paradise, California at an altitude of 1700 feet. Our rainfall amount for the winter of '97-'98 was 100 inches plus (as much as 5 inches in 24 hours), the last rain on June 4th. The lowest winter temperature was 26 degrees in March, which our hottest summer temperature so far has been 113 degrees on August 4th.

We have a variety of soil types. There was a large swampy area in the early days, and some previous owner had a lot of fill and rock hauled in, apparently from many areas. Because of this, almost every bed has been given a different treatment.

The garden has a variety of mini-climates, Full Sun on a south slope, Part Shade under an oak grove along a meandering creek. (This really gets up and roars in the winter), and Full Shade under the big oak trees in terraced beds. So far, these are in the best condition.

There are also 2 ponds, one deep and one shallow; so we utilize these for the Japanese and Virginia iris.

We hope to hear from all over Northern California so the rest of our members can get to know us better. We have a common interest, Pacific Coast Native Iris!

Till next time!

THE EAST COAST MAKES SMALL STEPS TOWARD ADAPTING PCIs TO WINTER COLD

John White, Minot, Maine: Eastern U.S. SPCNI Representative

It has been a very busy season keeping up with the garden, culling plants, lining out several hundred Japanese and Siberians, plus some species. Our bloom season has been excellent for all types.

The 11 inches of rain in 4-5 days in early June ruined my 2 or 3 PCI blooms, so I couldn't make any crosses. We have been very dry since that storm, and have had to water weekly all summer. This was our El Niño effect.

My Pacifica garden, off by itself, was getting too much to keep up with, so I moved about 40 PCIs to the Japanese and Siberian garden in a drier area in mid-August. I cut around them with a shovel and lifted the whole clump without disturbing the root ball. All have survived the move and are doing well and some are showing new growth. My tenax seedlings from my own cross on tenax are growing well. I expect to see bloom next year on the plants that are now 2 years old. These are from seed that came from named varieties from collected PCIs.

The garden is in excellent condition to go through the winter. Progress on getting hardy varieties for my Maine climate is slow, but keeping at it, we may get lucky!

David Schmieder, Concord, MA

Our adventure began with four plants from Dick Kiyomoto: 86K-8000-1, 86K-145-1, 2, and 3. I believe Dick grew them from seed obtained commercially from SIGNA, and selected the best of the survivors from a large number of seedlings. All 4 plants bloomed for the first time in 1991 according to our notes, and I think all would be huge clumps by now except for the rodents which tunnel them mercilessly. We have only lost one, however, 86K-145-3, and the rest have never missed a year blooming.

In the meantime, the bees and I have been making pods. (The bees being better at it than I am), and I have also ordered various species from the SIGNA seed exchange. From these, I now have growing somewhere between 50 to 100 individuals in various parts of the garden. Although from these we would like to select for

variations in color, form, and hardiness, the rodents do most of the selecting for us.

I enjoyed growing the seedlings John White gave me a couple of years ago, derived from named hybrids, some tetraploid. At first they looked like at least some were going to do well, but about half did not come up after the first winter. [This is not the right way to express it, since the foliage never dies all the way back to the root]. But after 2 winters, I don't think any have survived.

I keep thinking that the hybrids involve species other than tenax, that are more difficult for me to figure out how to grow here. I keep trying some of the other species from SIGNA, hoping that some other individuals will carry better traits for survival; and then, eventually, use them to get hardier hybrids.

I've been doing the same thing, crossing the surviving 40 chromosome Siberians from SIGNA seed with our hardest PCIs to see if some of the resulting Cal-Sibes will fare better here. Actually, IN STITCHES grew pretty well for a few years, but then died. HALF MAGIC is doing well this year, and set one pod with 35 very "iffy" seeds. Barbara and I both love the PCIs and Cal-Sibes and will continue to try to do better at growing them.

In general, I had pretty good germination from most of the seed I harvested last year. Unfortunately, I have been slow to develop seedling beds to set them out in. Barry and Leslie Blyth helped me get started on an area of woods when they were here in the late spring; but manually extracting several huge stumps has taken a while. I am now racing against winter to get them all in and hope that they all won't heave. I love planting the cute little plants and see the amazing range in appearance at this stage already.

Helga Andrews, Sudbury, MA

Wish I could say that I was successful with the PCIs, but truly I can grow them only in the cool greenhouse. I can't even keep tenax here, which should be hardy for me., I think its partly my heavy, wet soil; but even when I've tried amending

it, I've not kept the PCIs. Sometimes I think I lose them because they start into growth during a warm spell in February, say, and then it freezes again, and then they die! Frustrating!

I've given some seedlings to a friend in Acton (same zone as mine), but she has kept them on a dry bank, somewhat shaded; so they don't start their growth too soon, I'm guessing. Also, she doesn't water in summer. I shall have to try again. I do like them!

Elaine Hulbert, Floyd, VA I

When I look through my recent copies of the bulletin I am impressed with the activity and progress in the world of PCIs. I feel that I am cultivating only a very small corner of that world, but at least, I am having the same luck as always.

This corner is still the same, although the Post Office has chosen to change the address on our mailbox. The places where I first tried growing PCIs, are still places where you can find them, looking impoverished, but without disease. These plants were mostly from seed, but in some cases nursery transplants from Laurie's Garden and Portable Acres.

There is one exception. A small bed where seedlings and their own volunteers did well for a few years is now entirely empty of PCIs. It is a little more shaded than the permanent beds, and its basis is pure sand. The beds where the PCIs are surviving have a soil mix as it comes at the wood's edges, clay loam with a little duff and compost, but with almost no sand and gravel. The severe drought of the last few years (the driest being that of the current season) may be responsible for

the failure of the rather nice clumps that found themselves on the sand bed.

Since planting that one new and unsuccessful bed, nothing has happened to the PCIs at all. If a plant was alive in 1990, it is still there.

I hardly ever try anything new nowadays, with all the good sites already occupied, anyway. But last year at this time, I did slice off a small division from 4 small clumps, and planted these in somewhat sunnier locations, trying to coax some bloom. One that responded was my all time favorite, FORT POINT, and at least the others did survive.

Every spring I can count on bloom from long-established clumps of yellow innominata, red innominata, MINI MA, and some lackluster seedlings of FORT POINT. I assure you, if the dry seasons were not so discouraging to all gardening ventures, I would be trying to get out of this rut, but as things are, I am not branching out at all. If my irrigation problems solve themselves and I somehow discover new planting ground, I think I had better plant seedlings from my own clumps, where the capsules are always plentiful. There must be something about the longtime survivors here that would give them a better chance than the random genes of somebody else's PCI seed.

Writing about the limited success of my PCIs is naturally thought provoking. For one thing, it leads to the conclusion that somewhat more trouble taken would be rewarding. In other words, if you were to set up your garden next door and really try, you would probably have a nice lot of PCIs, with a breeding program leading to even better-growing irises.

EXPEDITION PLANNING

Adele Lawyer

Colin Rigby and his wife, Teresa, spent many hours on two separate trips in the process of planning a field trip for 1999. They traveled to the Santa Rosa area from their home in northwest Washington. This was to be his final Expedition as Trip Chairman. He wished it to be first class and was concerned because of the distances between colonies of PCI suitable for viewing. The area is remote from major cities, making air

transportation difficult. Also, because buses were only available from larger cities, it is expensive to hire them for transportation to the more rural areas where wild iris grow. Long drives to arrive at our destinations can be boring, especially when scenic features are few and far between along the way.

Colin had heard rumors of discontent about the long bus ride on the last day of the 1997 Expedition when only two

species were seen. Lewis and I had explored that area several times, including the previous day. Besides the two colonies visited, we had found two clumps of what looked like *Iris douglasiana* along the west bank of the road to Powers. About a quarter mile up a hill on the other side of the road, is what appears to be a large colony of the same iris. This intriguing colony, however, is on private property, and well protected by a fence. We had tried to find a way to get to this hillside on previous occasions, but even with a man much younger than either of us along, we were unable to penetrate the barriers. From the tranquility of our home in Oakland we had planned to return to Roseburg by way of Cow Creek to see a hybrid swarm of chrysophylla-tenax, but all the roads between China Flat and Cow Creek had been washed out the previous winter. That leaves these two colonies, with very little in between. But these two colonies are probably the best and most beautifully situated examples of *Iris chrysophylla* and *Iris innominata* that we have ever seen. What to do? We can't move them, yet we want to see them, in fact we have seen them, several times, and have yet to be bored.

Although it was a disappointment to give up the chance to see the Fort Bragg area in the coming year, there need not be an end to our bus or caravan field trips. There have been 39 loyal enthusiasts who have come on all, or at least 3 of the trips during the 8 trips arranged to date. There have always been enough other participants to fill the remainder of the 45 spaces on the buses. It has always been enjoyable exploring to see how nature has provided a setting for the iris and other wild flowers, often exceeding the vision of professional landscapers. And we feel there are many PCI areas left to visit other than the outstanding sites we have explored. I mention a few of these below.

1) We could look at the Feather River area of California to see *I. hartwegii*, which are lavender in that area. We could combine this with a visit to the Annand's Garden at Forest Ranch and the Barnard's Paradise Gardens in Paradise, both of which include PCIs along with other iris types in their gardens.

2) Above Sonora, at elevations between 6000 and 7000 feet, *hartwegii* is

bright yellow-orange. At lower elevations of the Stanislaus National Forest, it is paler yellow or cream colored.

3) Then, in Mendocino County, off Highway 101 north of Laytonville, there are many beautiful *I. purdyi* along the old Bell Springs Road leading to Garberville.

4) In the beautiful Carmel area, *douglasiana* can be found on trails at Big Sur, and even at Point Lobos. We could couple iris viewing with some wonderful food and window-shopping in this upscale tourist area, along with a walk on the white sand of the beach.

5) There are *I. fernaldyi* in the hills between Gilroy and Santa Cruz, where Joe Ghio got some of the initial germ plasm for his hybrids. They abound on trails in Big Basin State Park.

6) In Southern California, the *I. hartwegii* subs. *australis*, in the mountains on the road to Big Bear and Arrowhead Lakes could be a destination. In this case, however, air travel is more practical, but the colony is noted more for its remote geographical site than for its spectacular plants.

These are just a few of the many areas which we have not yet visited to see the *Californicae*. There are more in coastal Washington, Oregon, and California, as well as inland.

President, Jay Hudson, suggested that we ask our readers questions about their field trip preferences since he has heard that higher bus costs would be discouraging to members. Complaints about the long rides, noted above as sometimes necessary to arrive at habitats, have also been brought to his attention. We therefore are asking for input from those readers who have an interest in these trips.

Would you welcome trips which would require travel in private cars rather than bus tours on some of the years?

Do you object to the cost of the bus trips and lunches, and to the accompanying motel or hotel expenses? [SPCNI usually makes a small profit from these trips].

Would you prefer that we have trips 1) every year, 2) every other year? 3) every third year?

Would you be interested in exploring areas and recommending places we could visit in future Expeditions ?

Would you prefer to see directions to one habitat location in the Almanac fall issue each year so that you could visit there independently in the spring?

We realize that only about a quarter of our subscribers, about 100 individuals, have participated in one or more of the trips, and that trips are not an all-important focus of PCI membership.

I know that Lewis and I have enjoyed every trip since the first one in 1989. Most have been bus trips where we are together like a family.

There was one caravan trip after the 1996 AIS Convention at Sacramento. There were fewer participants; but it was much enjoyed. One year we met at

Orleans, CA with our private cars to see *Iris tenax* Subs. *klamathensis* on our way to the bus trip out of Crescent City. And that Orleans experience was a fun adventure. We didn't realize that there were no places to eat in that area. We did some minor suffering without lunch. So, although a little store had candy bars, and most of us cheated, it was an actual expedition into the unknown!

We would appreciate it if those who are interested in our trips, even those who think they may like to come along on one of the trips, 'someday', would write and tell us of your preferences. Write to President Jay Hudson, or to Adele Lawyer. See Page 3 for addresses.



NEW MEMBERS and ADDRESS CHANGES

Brantley, Bill
1433 Village Squire Circle,
Raleigh, NC 27610

Manning, Dr. H. J.
Jolendale Park, 9 Peterson Place,
Bridge Hill, Alexandra, New Zealand

McMahon Dennis
3690 Roblar Road,
Petaluma, CA 94952

Neill, Bill
PO Box 2609,
Weaverville, CA 96093

Pettenski, David A.
3408 218th St. SE,
Bothell, WA 98021

NEW ADDRESSES

Allery, Philip E., 199 Walsall Road,
Aldridge, Nr. Walsall
W. Midlands, WS9 0BE, England

Barnard, Leo and Norma
868 Buschmann Road
Paradise, CA 95969

Millar, Katherine
2881 Mountain Rd.
Duncan, BC V9L Canada

Moore, Shelly S.
P.O. BOX 334,
Moss Beach, CA 94038

Wing, Betty
2005 Woodland Loop SE,
Lacey, WA 98503

1998-1999 SEED EXCHANGE LIST

Colin Rigby, Seed Distribution Chairman

Seeds are available on a first-come, first-served basis. All seeds are priced at \$1.00 for the first packet, and \$.50 for each additional packet. Please order by number. Make checks payable to SPCNI, and address orders to Colin & Teresa Rigby, 18341 Paulson SW, Rochester, WA 98579

All orders will be held until we know approximately the total orders for each item. This usually is determined by some time in late January. All orders are tallied, and packets filled according to the amount of seed available for that particular lot. A packet, however, will contain no less than 5 seeds.

No orders on this year's list will be filled after March 1. We reserve the right to limit the number of packets if the item ordered is in short supply.

In any case, no more than 3 packets of any one item will be sent.

Because of the time and cost involved in returning small refunds, no refunds will be made. Please list substitutes in case an item ordered is sold out. Any dollar amount will be considered a donation to the SPCNI treasury

Unless otherwise specified, all seeds are open-pollinated
Lot numbers are followed by the donor-symbol, and the item.

SEED FROM NAMED GARDEN HYBRIDS

<u>LOT# DONOR VARIETY</u>	<u>LOT# DONOR VARIETY</u>	<u>LOT# DONOR VARIETY</u>
98001 F Agnes James	98019 A Foothill Banner	98037 A Pacific Rim
98002 H Agnes James	98020 F Foothill Banner	98038 F Pasadena Indian
98003 T Air Show	98021 T Gold Dusted	98039 J Roaring Camp
98004 F Ami Royal	98022 T Gone Native	98040 J Running Wild
98005 A Augie	98023 A Greenan Gold	98041 F Ruth Hardy
98006 H Augie	98024 A Harland Hand	98042 H Santa Rosalita
98007 A Banbury	98025 F Herald	98043 A Sierra
Princess	98026 F High Splendor	Butterflies
98008 F Big Money	98027 T Idlywild	98044 A Sierra Dell
98009 T Big Money	98028 T Ignacio	98045 J Sierra Dell
98010 J Big Wheel	98029 T Los Californio	98046 A Sierra Stars
98011 A Califia	98030 J Mayor	98047 F Small Town
98012 A Candy Banner	98031 A Mendocino	98048 J Spring Daze
98013 F Candy Banner	Banner	98049 T Westerlies
98014 J Casa Pacifica	98032 T Mission Santa	98050 J Western Queen
98015 F Clarice Richards	Cruz	98051 T Wild Party
98016 T Deepening	98033 F Mistress Perry	98052 H With This Ring
Shadows	98034 J Mocha Melody	98053 T With This Ring
98017 A Fairy Chimes	98035 F Pacific Dazzler	98054 V Mixed Garden
98018 T Fault Zone	98036 T Pacific Frost	Hybrids

SEED FROM UNNAMED GARDEN SEEDLINGS

<u>LOT# DONOR VARIETY</u>	<u>LOT# DONOR VARIETY</u>
98060 A Lawyer blue-violet blends	98065 A XP210F - Blue-violet with blue signal
98061 A XP1F - Sierra Sapphire type on 15"stalk	98066 A XP214A Blue lined self, 17 " branched stalk
98062 A XP41E - Valley Banner type	98067 A XP224A Blue-violet, vigorous, 14" branched stalk.
98063 A XP64E- Foothill Banner Sib	
98064 A XP143B - Veined blue-violet	

SEED FROM UNNAMED GARDEN SEEDLINGS (cont.)

LOT# DONOR VARIETY	LOT# DONOR VARIETY
98068 A XP228B Good, deep blue.	98081 A XP326: Very late bloom,
98069 A XP273B Pale blue blend	mix of all plants
98070 A XP317B Pacific Rim by XP215A	except the 3 above
98071 A XP319A: Powder blue	98082 A XP351: (XP90H X Late Doug):
98072 A XP320C: Large Valley Banner	Very late bloom,
type flower	branched stalk,
98073 A XP320D: Large Valley Banner	4 flowers per spathe.
type flower	98083 A XP353: (XP64F x Late Doug) .
98074 A XP325J: Very late bloom,	Very late bloom,
branched stalk	branched stalk,
98075 A XP325K Very late bloom,	4 flowers per spathe.
branched stalk	98084 A XP354: (XP320 X Late Doug):
98076 A XP325M: Very late bloom,	Very late bloom,
branched stalk	branched stalk,
98077 A XP325: Very late bloom, mix	4 flowers per spathe.
of all plants except	98085 A XP346-353 Blend of new lates,
the 3 above	very late bloom,
98078 A XP326A: Very late bloom,	branched stalk,
branched stalk	4 flowers per spathe
98079 A XP326B: Very late bloom,	98086 A Mixture of all XP Munzii-
branched stalk	derived seed except
98080 A XP326C Very late bloom,	the lines listed
branched stalk	above

SEED FROM HAND-POLLINATED CROSSES

LOT# DONOR VARIETY	LOT# DONOR VARIETY
98091 J Deep Blue Sea X Idylwild	98095 H Idylwild x <i>I. tenax</i> (93089) X
98092 H Idylwild X Night Editor	San Andreas
98093 H Osocales X Big Smile	98096 H Canyon Snow X Mission Santa
98094 H Pescadero X San Andreas	Cruz

SEED OF PCI SPECIES

LOT# DONOR VARIETY	LOT# DONOR VARIETY
98101 E <i>I. bracteata</i>	98112 U <i>I. douglasiana</i> O.P.
98102 M <i>I. bracteata</i> : Siskiyou Mts.	98113 U <i>I. douglasiana</i> O.P. Darker.
near 8-Dollar Mt.	98114 K <i>I. hartwegii</i> 1 mile SE Shaver
98103 C <i>I. Chrysophylla</i> Cow Creek,	Lake Village, CA.
Road, OR	Elevation 6500 Ft.
98104 B <i>I. Chrysophylla</i> Camas	98115 G <i>I. hartwegii</i> Hale Rd. Amador
Summit. OR	County. CA
98105 S O.P. Contains 1/4 or less	98116 G <i>I. hartwegii</i> Shake Ridge Rd.
<i>I. chrysophylla</i>	Amador County, CA
98106 A <i>I. douglasiana</i> Late Doug	98117 A <i>I. hartwegii</i> Subsp. colum-
98107 A <i>I. douglasiana</i> Univ. CA	biana, Italian Bar Rd,
Botanic Garden	Columbia, CA
98108 O <i>I. douglasiana</i> - Garden	98118 A <i>I. hartwegii</i> , Shake Ridge Rd.,
collected	Fiddletown, CA
98109 D <i>I. douglasiana</i> Mixed	98119 E <i>I. innominata</i>
98110 R <i>I. douglasiana</i> . Sandy, OR	98120 C <i>I. innominata</i> China Flat, Coos
98111 C <i>I. douglasiana</i> - Highway 33, 6	County, OR
miles from U.S. 101, Gold	98121 E <i>I. innominata</i> Coquille Falls,
Beach, OR	Oregon.

SEED OF PCI SPECIES (cont.)

LOT# DONOR VARIETY

98122 M *I. innominata* China Flat, OR
 98123 B *I. innominata* China Flat OR
 98124 C *I. macrosiphon* Indian Valley
 College, CA
 98125 C *I. munzii* Bear Creek, CA
 98126 K *I. munzii* Mineral King Rd., 3-
 5 miles above Three Rivers,
 California
 98127 A *I. purdyi* Garden grown
 98128 O *I. tenax*
 98129 B *I. tenax* Benton County, OR

LOT# DONOR VARIETY

98130 N *I. tenax* BLM Rd. 27-3-11-1,
 Douglas County, OR
 98131 V *I. tenax* Various shades
 98132 P *I. tenax* Var. *gormanii* Hagg
 Lake, OR
 98133 U *I. tenax* Hwy. 26, Boring, OR
 98134 C *I. tenuissima* Oregon State
 Hwy. 299,
 98135 E *I. thompsonii*
 98136 M *I. thompsonii* French Hill Rd.,
 California

LIST OF DONORS

A Lewis and Adele Lawyer	H Steve Taniguchi	R John and Kay Ludi
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F Colin and Teresa Rigby	O Mary Rose	
G Bonnie Bowers	P Roger Brewer	V Various

CULTURAL DIRECTIONS

Adele Lawyer

Except for areas bordering the ocean, where they tolerate full sun, Pacific Coast iris (PCI) are generally found growing wild in lightly wooded areas, with well-drained, gritty soils. They thrive where the summers are long and dry, but tolerate rain and snow cover, and some frost, in other times of the year.

Our most up to date recommendations for seed culture are as follows: Plant the seeds in a good, moist potting mix. The mix should be fast-draining with a pH of 6.5 to 7. Plant in pots or flats and cover and firm with about a quarter inch of potting mix. Plant as many seeds as you can physically separate from each other when it is time to transplant them, (1/2 to 1-inch apart). Keep in a cool area. PCI seeds germinate best at temperatures around 50 degrees F. They will not germinate at temperatures above 70 to 80 degrees F. Keep pots or flats in outdoors,

or, in hard-freeze areas, in a cool basement or garage. Refrigeration only delays emergence. Keep the soil moist until they germinate, which takes two months on the average.

Transplant the seedlings to the garden or into pots when they are 3 to 6 inches tall. This will generally be around April or May. If pots are your choice, use 6 to 8-inch pots for each seedling. When planted directly into the garden soil, plant them 6 inches apart in rows which are a foot apart. In that way you will have room to dig those you select when they bloom.

They transplant well as seedlings, but only when actively growing (in late fall or early spring) as adults. They grow best in filtered shade or morning sun. Most hybrid seedlings will bloom the following spring. Some species take two years to bloom.