

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

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PUBLICATIONS AVAILABLE FROM THE SPCNI TREASURER

Diseases of the Pacific Coast Iris
Lewis & Adele Lawyer: ALMANAC, Fall 1986.
22 pages, 9 photographs. \$3.50 postage paid.

Third Cumulative Check List
Francesca Thoolen: 36 pages. Lists and describes Pacific Coast native iris and named hybrids through 1985. \$4.00 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.

SEED AVAILABLE

Seed of species and garden hybrids is available for \$1.00 per packet from the Seed Distribution Chairmen: Louis & Caroline Fry, 4 Renata Court, Novato, CA 94947. (415) 382-1708

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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

ALMANAC deadlines are March 1 and September 1. Back issues are available for \$3.50 each, postpaid. Complete index arranged either chronologically, by subject matter, or by author. \$1.00, each or all 3 for \$2.00, postpaid. Please address the Editor.

PRESIDENT'S MESSAGE

Spring has sprung! or has it? Here in the San Francisco Bay area of California, the Pacific Coast Native Iris are already in bloom -- both the wild ones up the coast and a few of the advanced hybrids in my garden. It is the start of a bloom season following the absolute coldest and one of the driest winters in the thirteen odd years I've lived in Fremont. One day it rains (much needed). The next day is cold and gusty. Another two days and you can stroll wearing short sleeved cotton in the afternoon. Wait still another two days to see white frost covering the yard, front and back. Other parts of the country have seen hurricane force storms, record setting highs and/or lows and either well above normal or well below normal precipitation for the year. I hope and trust that you and your Iris are managing somehow to cope.

Perhaps I've just got spring fever. I'm counting the days until that glorious two to three week period when the PCNs are at peak in my yard. If the Iris are not terribly confused by the vagaries of the weather the bloom season will extend into the first weeks of May at home; it may extend longer in the wild at elevation. But there is a real concentration of bloom -- each clump a bouquet -- during the second and third weeks of April. I can't wait.

Back to business. The Society is in sound financial shape; we have a little better than a one year reserve for the first time ever. Dues pay only a portion of our expenses. Other income sources are sales of literature, sale of seed, sale of donated plants and a small profit from the First Annual SPCNI Expedition. A special word of thanks is in order to LaRue Boswell who handled the seed exchange

for many years and to Louis and Carol Fry who have ably taken over. Thanks as well to all those who donated seed.

We are continuing to look for additional ways to promote the Pacific Coast Iris and extend their garden range. Finding the right person for the position of slide chairman, potting up some of the extras from the older clumps for sale later this spring, and completing the arrangements for the Second Annual SPCNI Spring Expedition fill the near term.

For the long term there is a two part vision: to see Pacific Coast Native Iris growing and enjoyed in a much, much greater range of garden conditions; and to raise the funds for and publish a monograph on the PCI similar to what has been done by the specialty Iris societies for Siberian Iris and Louisiana Iris. Neither of these is a pipe dream, but both must involve many others to succeed. The natural habitats of the species cover a broad climatic range; the hybrids do not cover as wide a range because of the predominance of three tender species in the pedigrees of the modern hybrids and the limited number of hybridizers working the field. Funding and editorship need to be addressed before we start work on a book. Expect more on the vision at a later date.

For now, I hope you all have your own cases of spring (garden) fever.



A handwritten signature in cursive script, appearing to read "Stigi".

FROM THE EDITOR

We are devoting considerable space in this issue of the ALMANAC to the subject of winter-kill, especially of bare-root replants. We realize that this subject is of little consequence to the majority of our readers, most of whom reside in benign climates; but, if we expect to achieve our goal of making the Pacificas more widely adaptable, we will first have to resolve the problems some of our members in borderline climates have encountered.

We have compiled a complete index of all ALMANAC articles published to date, available in three formats: chronological, by subject matter, or by author. I considered publishing it in the ALMANAC, but felt that interest wouldn't be sufficient to warrant the space. For availability and price, see page 2, under "ALMANAC".

A handwritten signature in cursive script, appearing to read "L. M. B.". The signature is stylized and somewhat abstract.

REPORT ON THE SPCNI SEED EXCHANGE

Since the listing in the Fall 1989 ALMANAC, Louis Fry, our Seed Chairman, has distributed approximately 480 seed packets to those requesting them. He has not only distributed from the sources listed, but has often filled in with seed which he and his wife, Caroline, have gathered on their collecting forays to PCN territory.

It is interesting that *I. purdyi* was the most popular single item, with 20 orders, and the source listed was consequently soon exhausted. Louis Fry is still supplying *I. purdyi*, however, from his personal gleanings.

As they say in beauty contests, the first runners-up in the popularity poll were *I. bracteata* (#101), and *I. fernaldii* (#118), which were tied for second place. We still have an adequate supply of *I. bracteata*, thanks to Bill Ferrell's generosity, but have no more *I. fernaldii*. *Iris hartwegii* (#108), from Tuolumne County was also popular enough to have sold out.

According to Louis, "a number of others were equally or nearly equally popular: There were a total of 35 orders for the 4 listings of *I. innominata*, (only #119 is sold out), and 26 for Lawyer's 3 *I. munzii* hybrids. The interest in species has been especially gratifying. We also sold out #120, *I. macrosiphon*, with 10 orders, although we are still filling orders with some collected near our house." *Ii. chrysophylla*, *douglasiana*, and *tenax* all received a substantial number of orders.

The most numerous orders in the hybrid category were for open-pollinated SIERRA SAPPHIRE, followed by #122, Jean Witt's *douglasiana*-*innominata*-*tenax* combo. Next were Mixed miniatures, (#128), and GOLDEN NYMPH, F2 (#135). Also, both listings of SUSIE KNAPP seed were ordered heavily enough to sell out.

Some acquisitions received after the Fall 1989 seed list was printed are now available. These are:

139: *I. tenax*, Pale yellow blends from Coburg Ridge, Oregon, collected by Lorena Reid.

140: Mixed Garden Hybrids from Portable Acres, Santa Rosa, California, Proprietors: Jean Erickson, Colin Rigby

141: Garden hybrids involving recently collected Valley Banner types from Lane, Douglas, and Coos Counties, Oregon, from George Gessert, (in short supply)

142: *I. douglasiana* from Boulder, Colorado, from Gwen and Panayoti Kelaidis

143: *I. tenax* from Clackamas County, Oregon, from Claude and Joanne Derr

144: *I. douglasiana* from the Derr's garden, Estacada, Oregon

It is Louis Fry's opinion that "the most obvious need in the hybrids is for 'heat-tolerant' varieties, pretty much topping the comments of our members ordering seeds. Next most obvious is for just the opposite, 'cold-tolerant'. We could certainly use something along the lines of Roy Davidson's 'Rosedown' strain." We urge our readers to send us seed produced by PCNs established in extremes of temperature, so that through their distribution and further hybridizing this group will eventually be adapted to universal garden conditions. New items, 139, 142, 143, and 144, contribute to the cold-hardy offerings.

Of the 38 items listed on the 1989 seed list, 16 are sold out and several others are almost depleted. In some cases, even when an item is still listed, a limited supply, (possibly only a pod-full), is on hand and we need and would welcome additional seed. Top on the list of "wants", according to Louis Fry, are *Ii. hartwegii*, *purdyi*, *fernalidii*, *chrysophylla*, *munzii*, *macrosiphon*, *tenuissima* and their subspecies and selections. Additional VALLEY BANNER type seed is also needed.

Although germination is not yet complete at this date, (March 15), the Loops, Frys, Roderick, and Lawyers were surveyed for a preliminary assessment of the germination in the species seed. To date, *I. hartwegii* and *I. fernaldii* (#108, 118) are tops at 70 to 100 percent. The next best are *I. chrysophylla* and *I. bracteata*. Only the white form of *I. douglasiana* has not germinated at all. We hope those of you who have grown seed received from the the SPCNI seed lists will write the editor and report results so that we can present comprehensive germination results in the next issue of the Almanac

We especially want to thank the Ferrells, Loops, and Jon Splane, who provided seed from last year's wonderful field trip, and to the Frys, who have collected seed extensively and are hand-pollinating species and natural hybrids in their garden to insure purity and to increase items in short supply.

SPCNI FIELD TRIP, 1990

Gigi Hall

Because of illness in Louis Fry's family, I have assumed chairmanship of the second annual expedition of the SPCNI to see Iris in the wild.

Date: April 28th and 29th, 1990

Location: Headquarters in the Santa Rosa (California) area with the two days of bus tours covering parts of Lake, Napa, and Sonoma Counties.

Iris to be seen in bloom: *Iris microsiphon*, *Iris douglasiana*, and *Iris purdyi*. It will be a little late for *Iris fernaldii* which blooms a month before *I. microsiphon* in much the same locations.

Included in the expedition are two days of bus travel, motel on Friday (April 27th) and Saturday nights (April 28th), box lunch on both days, map of locations visited and lots of good company. We plan on having a botanist who is famil-

iar with the local flora to point out interesting plants other than the Iris.

Final expedition fee has not yet been set since we are still negotiating with the hotel and checking out different bus companies. It would be helpful to have a true indication of the interest in the expedition before we finalize our plans. As we did last year we are asking for advance registration. If you are seriously interested in attending please send your name, address, phone number, and the number of people in your party to Gigi Hall, 40417 Citrus Drive, Fremont, CA 94538 with \$30.00 per person, check or money order made out to SPCNI. The \$30.00 will be credited towards the final cost, and a full refund will be made for any cancellations received up through April 23rd.

At this point in time we have not provided for partial registrations -- However, the question has come up. Let us know if you can make it one day but not the other. If there is a common need, we'll work something out

CALIFORNIA MYSTIQUE WINS 1989 MITCHELL AWARD

Gigi Hall

The highest award of the American Iris Society exclusively for Pacific Coast Iris is the Sydney B. Mitchell Award. Only one Iris can receive the award in a given year, and in 1989 the variety 'CALIFORNIA MYSTIQUE' hybridized by Joe Ghio was selected by the judges of the American Iris Society for the honor.

This Iris is a crowd pleaser either in the garden or on the show bench. The description from Joe's 1982 catalog, the year of introduction, reads: "CALIFORNIA

MYSTIQUE. Very large blooms with the standards of light blue, veined deeper blue; falls are a deep blue-purple with a near black signal. Like a Pacifica version of the Dykes Medal winner". Parentage as shown in the 1985 Checklist is: PS-204I = PU232E: (Banbury Velvet x California Native) x PV1631: (Pacific Moon x California Native).

The Mitchell Medal, which accompanies the award has been engraved, and will be formally presented to Joe Ghio later this spring by SPCNI. Meanwhile, congratulations Joe

HISTORY OF THE MITCHELL AWARD

Lewis Lawyer

As nearly as I have been able to determine, the earliest written word about an award for excellence in the *Californicae* appeared in the April, 1972, Bulletin of the American Iris Society. The announcement was placed at the end of an article titled "At the Species Level", by Roy

Davidson of Seattle who was at that time Chairman of the Species Iris Committee,

"ATTENTION: PACIFIC COAST

IRISES HYBRIDIZERS

"Some time during the 1972 convention, a meeting will be called to discuss an awards system for the Pacific Coast native irises and their hybrids. Watch the bulletin board for the announcement."

This was 2 years before SPCNI and SIGNA became Sections of AIS. So I called Roy Davidson to see how the idea originated. He said that, while many other PCI enthusiasts were probably thinking about it, Joe Ghio was the first person to discuss it with him.

As suggested in the above announcement, a group did meet during the AIS Convention at Portland, and decided to present the idea of an award for PCNs at the next meeting of the AIS Board. The award, to be called the "Mitchell Award" in honor of Sydney B. Mitchell of Berkeley, California would be presented each year for the PCN judged most worthy. They also proposed a cup to be presented along with the Mitchell Award, to be known as the "Riddle Cup", in honor of Mathew Riddle, a Portland, Oregon physician and an ardent irisarian.

The idea was presented to the Board at their meeting in Omaha, Nebraska in November, 1972. The Mitchell Award would be comparable to an AM, and the Riddle Cup would be a keeper cup, endowed by a contribution from an AIS member through the AIS Foundation. A committee consisting of Marion Walker, Leroy Davidson, Ruth Hardy, August Phillips, and George Stambach was appointed to develop judging standards and set the conditions of implementation.

In May, 1973, the above committee presented its findings to the AIS Board, and the Mitchell Award became a reality. That same year it was listed for the first time as part of the 1973 Official Ballot. Unfortunately, however, the promised endowment never materialized, and the Riddle Cup was never actually presented to anyone. The first five recipients of the Mitchell Award received official notification from AIS, but never got the cup.

During the November, 1977, AIS Board meeting, it was brought out that the endowment for the Riddle Cup had never been completed, and the President asked Dr. Cosgrove to pursue the matter to completion. Because of the death of Clarke Cosgrove, however, nothing ever came of this.

Largely through the efforts of SPCNI President, Glenn Corlew, the idea of a medal to replace the Riddle cup was approved at the May, 1979, meeting of SPCNI. Glenn then informed the AIS Board that plans were well under way to replace the cup for the Mitchell Award with a new award medal, fully funded, and that only

approval of the AIS Board was needed before final plans could be drawn up and approved by the SPCNI.

Glenn immediately started a fund-raising drive, the first contribution coming from LaVerne Conrad in memory of George Stambach. Contributions totaling \$1,227.50 followed, the major contributors being the Clara B. Rees, Mt. Diablo, Santa Rosa, Sydney B. Mitchell, and the Westbay Iris Societies.

At the November, 1979 meeting of the AIS Board, Glenn Corlew notified the members that the necessary funds had been raised, and showed them a sample of the new Mitchell Award medal for their approval. The design was approved and permission given to present the first medal to the winner of the 1978 Mitchell Award.

On page 4 of the Fall, 1979, issue of the ALMANAC, Dara Emery is shown accepting this first medal for the 1978 Mitchell Award winner, CANYON SNOW, from SPCNI President, Glenn Corlew. On the same page, Glenn notes that the design on the face of the new medal was created in 1957 by Jack Craig as the logo for the Region 14 Bulletin's first issue.

That is about all of the historical background for the Mitchell Award and its medal except that in April, 1980 AIS requested that SPCNI manage the funds for striking and engraving future Mitchell Award Medals. Then, in July, 1980, Glenn Corlew, as President of SPCNI, notified AIS that our organization would assume all responsibility for custody and engraving, and for supplying future medals and engraving to the AIS.

Last year, our original supply of medals ran out and a new order for 10 additional medals was placed at a cost of \$381.00, all of which was funded by SPCNI.

Including the first Mitchell Award winner in 1973, there have been 15 named cultivars chosen for the honor. Prior to that time, only the HM had been awarded. Not that it made much difference, since up to that time only an elite few irisarians had paid much attention to the little Pacificas.

The first HMs were awarded in 1967 to RIPPLE ROCK and GRUBSTAKE, two sib crosses by Lee Lenz. In 1969, NATIVE MUSIC (Ferguson) received its HM, and the next year VALLEY BANNER (Hardy) was chosen. In 1971, APTOS (Ghio) and CALIFIA (Ghio) received 26 votes and 14 votes for their HMs. The next year, 1972,

WILDWOOD GARLAND (Hardy), a collected *I. innominata*, received 21 votes, and NATIVE WARRIOR (Phillips) received 17. Native Warrior, as you will see below, went on to win the Mitchell Award, and

Valley Banner and Ripple Rock were runners up on two different years.

The Mitchell Award winners are listed below in tabular form starting with the first award in 1973

MITCHELL AWARD WINNERS

1973 TO DATE

YEAR	MITCHELL AWARD WINNER	VOTES	FIRST RUNNER UP	VOTES
1973	OJAI (Walker)	27	VALLEY BANNER (Hardy)	22
1974	AMIGUITA (Nies)	27	RIPPLE ROCK (Lenz)	25
1975	NATIVE WARRIOR (Phillips)	63	SIERRA SAPPHIRE (Lenz)	18
1976	WESTERN QUEEN (Stambach)	29	SIERRA SAPPHIRE (Lenz)	28
1977	SIERRA SAPPHIRE (Lenz)	37	CHIMES (McCaskill)	16
1978	CANYON SNOW (Emery)	56	SAN LORENZO (Ghio)	21
1979	LOS GATOS (Ghio)	18	COUNCILMAN (Ghio)	15
1980	SOQUEL COVE (Ghio)	35	RESTLESS NATIVE (Ghio)	11
1981	RESTLESS NATIVE (Ghio)	18	COUNCILMAN (Ghio)	17
1982	COUNCILMAN (Ghio)	21	MAYOR (Ghio)	15
1983	SANTA RITA (Ghio)	19	DEL REY (Ghio)	12
1984	CITY HALL (Ghio)	12	CLAREMONT BLUEBIRD (Lenz)	9
1985	No iris received the minimum of 10 votes necessary for award.			
1986	BIG WHEEL (Ghio)	16	SIMPLY WILD (Ghio)	14
1987	SIMPLY WILD (Ghio)	20	CALIFORNIA MYSTIQUE (Ghio)	11
1988	No award: CALIFORNIA MYSTIQUE and BIG MONEY tied at 14 votes each.			
1989	CALIFORNIA MYSTIQUE (Ghio)	15	BIG MONEY (Ghio)	14



SIMPLY WILD (Ghio, 1981) Mitchell Award winner, 1987

COLLECTING WILD PCN SEED

TWO COUPLES HAVE FUN COLLECTING SEED FOR THE REST OF US

Part 1 -Gene and Joanne Loop

Joanne and I were on the SPCNI Expedition in May 1989 to view the native iris in bloom in the Oregon and California Siskiyou, and we stayed in the area two additional days following the SPCNI trip to look further for native iris. We were impressed with the flowers and want to grow them in our own garden. Being novices to growing PCN, and considering the hot summer climate at our home in Walnut Creek, California, it may be a challenge to grow some of the species. Our idea is to put plants of each series in various locations in the garden where conditions of soil, shade, or water are different. Let the plants tell us what they like, rather than trying to figure it out ahead of time. We plan to grow the plants from seed.

The SPCNI has recently made it easier to get native seed, but we thought it would be more fun and more educational if we collected seed from wild plants ourselves. Accordingly, we made a second trip into the area in late July to gather seed from the plants we had seen in the spring. The following is an account of our seed gathering.

The first seed we collected was of *I. douglasiana* growing on the headlands in the city of Mendocino, California. Across from the main street in Mendocino is a natural park that extends to the ocean. On the trail that runs along the bluff just above the ocean we came across large clumps of *I. douglasiana*, with many seed pods. The pods were rather green, but when they were opened the seeds were cream-colored and tightly packed. The seed was probably mature, but our problem was how to keep the damp seed from spoiling?

As it turned out, most of the seed collected throughout our trip was in green pods. Only occasionally was there a ripe, dry pod that still contained seed. Most dry pods were open and contained either no seeds, or maybe a few seeds at the bottom. Apparently the green pods ripen and distribute their seeds quickly.

We handled the douglasiana pods and the rest of the pods on our trip as follows: We kept the picked pods in a bag until we reached our motel in the evening. At the

motel we opened the pods and removed the seed. If the seed seemed particularly damp, we left it on an open tray to dry overnight. Then the seed was put into paper bags, (lunch bags purchased at a grocery store). The bags were closed by folding the top a couple of times and stapling them shut, leaving lots of air space. We traveled with the bags inside the car, not in the trunk. The result of all this was zero problem with mold, nor did we have any spoilage. So either the procedure worked, or our concern was unfounded. The seed dried, shriveled, and darkened in color in just a few days in the bags.

Our second collected seed was *I. purdyi*. The plants and flowers looked to us like *I. purdyi* when we saw them in May, but there is so much written about the pure strain of purdyi being scarce, that perhaps we have a cross with douglasiana. Anyway, ours is from a spot on Highway 101 just south of the entrance to John Hickey State Park in California. It is on the outside edge of the first left hand turn in the road after passing the entrance going south.

The most significant thing about the purdyi seed is that the pods contained worms. When the pods were opened a very healthy worm about half an inch long was laying in one end of a seed compartment with its head pointed toward the uneaten seeds. The worm ate very politely because it apparently devoured the seeds one at a time, taking each seed in turn without bothering the next. It was therefore easy for us to save the uneaten and undisturbed seeds. Only a very few pods were free of worms. I would be interested in knowing whether this is a common problem in collecting seed. We did not find it anywhere else on the trip.

We collected seed of white *Iris douglasiana* in Oregon on Highway 42S. This road runs between Bandon on the coast and Coquille on Highway 42. We had spotted these white flowers in May about 6 to 8 miles west of Coquille. They are on the north side, and there are several groups along about a half mile of road. These plants were the most prolific seed producers of the trip. There were lots of full pods.

The most important was the seed of *I. innominata* from the China Flat Road in Siskiyou National Forest. This location was one of the highlights of the PCN field trip. The astounding display of bloom in the wild, with the many variations in color, size, pattern, and vigor, is the one thing more than any other that has prompted us to attempt growing the plants at home. We had returned to this spot in May following the field trip to see the flowers again, and to hand-pollinate some flowers to be sure there would be seed. We had no idea how well the wild plants would set seeds on their own. We pollinated a number of plants at random, and then picked out one large clump in a secluded location with nice, large flowers and pollinated with pollen from the same clump. We then made sure we could find this clump again when the seed had set.

To our happy surprise, the seed had set well! We learned that the wild plants do well on their own to set seeds, but our special clump had more pods than most, so we believe we have been successful in obtaining the selfed seed. We also collected quite a bit of naturally set seed of *I. innominata*.

Next was *I. chrysophylla*. These were back on Oregon Highway 42 and further toward Roseburg at Camus Summit. We were a bit late for seed here. Most of the pods we found were small or open. Another problem at Camus Summit was that this was a stop on the SPCNI field trip, and others on the trip reported seeing *I. innominata* and *I. tenax* at that location. Since we didn't feel capable of identifying the plants from leaves and seed pods, we limited collecting to the small location where we remembered the chrysophylla flowers. We finally lucked out and found seeds on one of the clumps we had photographed; so we do have seed of *I. chrysophylla*.

On to *I. tenax*! These plants had been located from instructions handed out on the SPCNI field trip, but not on the field trip route. They were east of Interstate 5 on Oregon Highway 58, between Pleasant Hill and Lowell. In the *Almanac*, (Fall 1988), Lewis Lawyer states that he and Ron Lutsko have tried cutting the tops off the PCNs during the summer, and asks if others have had experience with clipped plants. I can now tell him that the Oregon Highway Department clips theirs. They had run the mower machine to cut the grass for the twenty or so feet between

the highway and the property fence and made it almost impossible for us to find the location. But find it we did, and were able to get some seed pods near the fence and from the base of a fir tree where the mower could not reach. These are a deep purple tenax.

Our last collection was *I. bracteata*. This was at Whiskey Creek, about 5 miles out of O'Brien, Oregon on Lone Mountain Road. O'Brien is on Oregon Highway 199. This location was the second day highlight of the SPCNI trip. The group had found *I. bracteata* at the Whiskey Creek bridge where they ate lunch, and again a mile back toward O'Brien in a meadow of wild flowers. We obtained seed at the lunch site, but the plants in the meadow had zero seed pods. Perhaps they had already been collected, we were too late in the season, or else seed had not set. We did find seeds across the road from the meadow in rather deep woods. These plants were not seen in flower, so again, the species is uncertain, but it is probably *bracteata*.

So much for the experience of two amateur seed collectors. We had a lot of fun. Our next task is to germinate the seed. We have separated the seed we want for ourselves and have given the rest to Adele and Lewis Lawyer for whatever the SPCNI wants to do to make it available to others.

Part 2 - Bill and Jeanne Ferrell

Well, the seed collecting trip to southern Oregon was a success! I think we hit the area at just about the right time. We had to look pretty closely at Camas Summit to find unopened pods there, but finally came away with 3500 seeds of chrysophylla. Then we went on to China Flat where we took the logging road and started searching for *innominata*. At first we feared that they had all opened, but we found a little side road with shade that had a lot of unopened pods. We finally found enough pods to yield about 9000 seeds from there.

On to the summit where we ate lunch in May, and on down the road into Agness. Collected a lot of seed there on the banks, actually 13,000, as it turned out! The pods there were for the most part not yet opening, but seeds were browning up. By the time we finished there it was late and we didn't try to collect the *douglasiana*

seed. We'd have needed a flashlight! We drove over the hill to Galice and thence to Jacksonville to stay overnight. The next day we went to Gasquet and collected thompsonii. (Had to spend a lot of time there gleaning since there were few unopened pods); but we finally collected 2500 seeds. And then on to O'Brien and Whiskey Creek. At first we found few pods of bracteata, but ultimately quite a few in areas somewhat below where we ate lunch. A goodly number had opened, but we ended up with a lot of pods and eventually 6200 seeds. Jeanne has a nose for them! Things were very dry and the seed of spring flowers won't last much longer on the plants.

Then on Monday we headed back home, stopping by Cow Creek enroute. We collected more chrysophylla here, some tenax and innominata. And here, too, we found seed of the chrysophylla-tenax hybrids, described in the Spring 1989 ALMANAC, (about 1900 seeds, according to our eventual counts).

After drying the seed we worked out a method to find out how many of each we had. To do this we got access to a scale of the right sensitivity so that we could weigh the whole lot and then see how much a known number of seeds weighed, and then figure out total numbers by proportion. The seed was distributed locally, with SPCNI, and with SIGNA.

SELECTING HARDY PACIFIC COAST NATIVE IRIS IN CONNECTICUT

Richard Kiyomoto, North Haven, CT.

My attempts at selecting Pacificas hardy to our environment have been haphazard. A survey of SPCNI members in the East shows that this is also the case with others. The climate in the East is varied. The Northeast is characterized by warm, humid summers and cold winters, whereas the Southeast has warm, humid summers and mild winters. Figure 1 summarizes the precipitation and temperatures experienced in 1988.

Table 1. Summary of Climatological Data collected at Bridgeport, CT*

Month	Mean Temp., F		Mean Precip., in	
	High	Low	Rain	Snow
Jan.	37	23	3.3	7.8
Feb.	38	23	3.0	7.5
March	46	31	3.9	4.6
April	57	40	3.7	0.5
May	67	50	3.4	Trace
June	76	59	2.9	0
July	82	66	3.5	0
August	81	65	3.7	0
Sept.	75	58	3.3	0
October	65	47	3.3	Trace
Nov.	53	38	3.8	0.5
Dec.	41	27	3.8	4.6

* Data from U.S. Dept. of Commerce,

cut in 1988 reached -12°. In Connecticut, the mean annual precipitation is 42 inches with a monthly average between 3 and 4 inches; however, the summer rainfall is more sporadic with rains associated with thunderstorms. In 1988 only 0.8 inches of rain fell in June. The result was a severe drought. Our soil is generally a well drained sandy loam. Two weeks without precipitation can lead to drought conditions for unirrigated plants.

In March, I sow seed of the Pacificas into flats containing Pro-Mix, place the flats outdoors, and water occasionally to keep the planting medium moist. Germination is usually excellent. The seedlings are allowed to grow throughout the summer in the flats. I felt it was risky to transplant the small seedlings directly into soil in the late spring or summer when there was a possibility of drought before the plants were established. I feel it may be better to transplant into the field in the late spring; however, I didn't because this would require more precise attention to irrigation than I would be able to provide. The seedling flats were kept in filtered sunlight. I have experienced considerable mortality, the cause of which I have not determined. No fungicides were applied to control soil-borne pathogens. The growing medium should have been more porous, but this, also, would have required greater attention to watering than I could afford.

In late September, surviving plants were transplanted into well-drained soil

Although the temperatures are relatively mild in coastal New England, the low temperature in New Haven, Connecti-

with full exposure to sunlight, and allowed to fend for themselves over the winter. The seedlings were not fertilized or mulched, and no adjustments were made for soil pH. My soil pH ranges between 5 and 6.5. Plants that survived the winter also fended for themselves over the summer without irrigation. I feel that these plants deserve better treatment; but my goal is to identify germplasm which will thrive under my growing conditions with minimal inputs, or inputs that would be no greater than the ones I use in growing and propagating Japanese and Siberian irises.

If I can identify germplasm that will tolerate these cultural practices and grow in the Connecticut environment, work could begin on breeding a good garden plant. I am certain, however, that I lost germplasm which would have survived if greater attention was paid to (1) a germination medium which was better drained, (2) if seedlings were kept drier during the summer or if young seedlings were transplanted into well drained soil in late spring, and (3) if fungicide applications were made to control soilborne pathogens.

Table 2 summarizes experience with seedlings grown from 1986 SIGNA seed. The seedlings were grown in the field from September 1987 to September 1989, when they were dug and divided.

Table 2. Survival of 1987 Pacifica Accessions in Connecticut, 1987-1989
(S = Surviving Seedlings)
(V = Vegetative Divisions)

Accession		S	V
86K1329	tenax	0	0
96K131	tenax/douglasiana	0	0
86K132	1/4 munzii	1	3
86K141	A. James/V. Banner	3	5
86K142	Ami Royal	0	0
86K143	Amiquita	0	0
86K144	Bertha Stone	0	0
86K145	Creamy Custard	3	61
86K146	Gabrielino Indian	0	0
86K147	Neah-kah-Nie	0	0
86K148	Pacific Moon	0	0
86K149	Pegasus	0	0
86K150	Ripple Rock	0	0
86K151	San Lorenzo	0	0
86K152	Valley Banner	0	0
Mixed PCNs*		2	21

*Seed from San Jose AIS Convention and Thompson and Morgan

The most vigorous and floriferous selections were seedlings from CREAMY CUSTARD, an unregistered PCN. The three seedlings were identical in appearance with creamy white flowers with blue veins. They produced an average of 20 divisions which I am not attempting to increase. If these selections survive and propagate well in the nursery, I will make them available as soon as possible as hardy germplasm.

These results are preliminary, but give hope that Pacificas can be selected for hardiness in the East. My correspondence with SPCNI members in the East brought in an excellent response. We are unable to report any consistent success with PCNs. Similar to my own efforts, most members are attempting to grow PCNs with a minimum of extra care other than paying some attention to soil conditions. Several grow their plants in filtered sunlight. I have several plants growing in filtered sunlight with good drainage; but they show little increase, although blooming for three years now.

Regarding named varieties, Elaine Hulbert of Floyd, Virginia, reports MINI-MA is apparently best for her conditions. Clarence Mahan of McLean, has produced "Best in Section" blossoms for BIG MONEY, but the apparently healthy, vigorous plant did not survive the following winter. Several respondents report the same experience with their plants. It seems an open question as to whether it is the cold or some other factors, (eg., wet winter and spring, diseases, natural senescence) which kill Pacificas in the East.

It might be best if we plant our seedlings with contrasting treatments such as wet-dry, shade-sun, mulched-unmulched, with and without fungicides, or combinations of these treatments so that we can identify problems the Pacificas face in the East. We should also vary our propagating systems such as media for seedling production, disease control in seedling flats, and the timing for dividing of mature plants. Several members and I feel that our success would have been greater had we paid more attention to our plants. Unfortunately, Pacificas have not been the main focus of our efforts. With the hints that genes for hardiness exist, it may be time that we devote greater effort to overcoming some of the barriers to their cultivation and breeding in the East.

AN EXERCISE IN FUTILITY

Dr. V. L. Winkler, Deerfield, Illinois

This isn't just AN exercise in futility, but an on-going one, trying to grow California iris 30 miles north of Chicago. Any ordinary fool might try once or twice, but now meet the fool extraordinary! I've been at it for years! Yes, years, so many I can't recall the number; but as a time frame, Joe Ghio was the Mayor of Santa Cruz when I started with my very first visit to his garden to view and buy his tall bearded iris. But as I was ready to leave, with my selections all neatly packaged to carry on the plane and was as happy as any irisarian in iris heaven, he said, "If you have time I would like to show you one other thing." Unfortunately, I had the time, so he took me back to an area I hadn't traversed before. With less than humility on his part, he showed me the macrosiphon-fernaldii from the Santa Cruz mountains that he was working with. After I recovered in a few moments from my state of awe, I asked, "These are what?" He answered, "California native iris. But they don't grow in your part of the country." Too late. I was smitten. I heard him, but I couldn't listen. So I gave the order to wrap up a bunch. I was in no condition to listen to reason.

Early the next morning I was on the plane heading home to be the first Chicagoland gardener to successfully grow PCNs. Before dark that day they were planted in my garden with great expectations. After all, I've grown quite a few things people said couldn't be grown under my conditions. So, I'll grow PCNs, too. The TBs were most cooperative and the PCNs looked green and lush. They didn't increase, but no matter because Joe gave me big clumps; they would be beautiful next year. Well, they weren't. They were green and lush looking in the spring. I was elated. Then they all just dried up at the same time in the span of approximately ten days.

I'll get it right this time! I selected a new area. I took out the soil, bought sacks of sterilized soil. I mixed equal parts of sand and milled sphagnum moss, and off to Ghio's for more PCNs and a few TBs. I was very careful of the new white roots. I planted them in this new area which was protected from our howling winter wind, and lightly shaded from the intense sun.

Hurrah! They were growing, really growing! Oh, why is next year so far away? Next year finally arrived. The plants were looking good. Surely that should have given me success,- well not exactly. I had a lot of fun and enthusiasm, but the plants did exactly as the year before. All dried up at the same time in about a ten day period. Darn! I did something wrong or didn't provide the plants with something they needed. So, back to the drawing board. I couldn't give up.

Think, think, think. Ah, ha! I've got it. Oriental lilies don't last in this part of the country for more than 2 or three years. It was discovered via research that we lack a symbiotic organism in our soil which provides the plants with breakdown products they need for getting nourishment. This must be the secret with the PCNs. This time, success will be mine. What is it that California has that we don't? Redwood trees! So off I went to the local garden supply store and purchased bags of redwood bark mulch and ground redwood bark. If there is a symbiotic organism it must be in these redwood products. I mixed it into the existing prepared soil with a generous hand. Stepping back and feeling quite pleased with myself, I decided not to plant immediately, but to wait a year or two to allow the "stew" to cure. This was the hard part, looking at that EMPTY garden space, which wasn't easy. But I somehow managed to curb temptation by visualizing the future PCNs which would one day be growing there in all their splendor and glory.

When the time was right, it was back to California to get more irises. This time I purchased from three different sources including both bare rooted and potted plants. They were flown right home and planted straight away before the sun set. Wunderbar! Everyday I went out to look at, admire, and praise my precious PCNs. Yes, yes, my secret weapon was working. The irises were growing strong and healthy. The year raced on. Autumn with its rains arrived and the plants were growing even better. Winter followed with its snow blanket and sub-zero temperatures. This would be the test. Could the PCNs tolerate the cold? *I. munzii* were not included in the collection. The winter wore on as it always does, but that year it

seemed even longer than usual. Would the Vernal Equinox ever arrive? Well, of course it finally did. The dimension of time is such a fickle thing. The snow melted, spring arrived, and, miracle of miracles, the irises were looking just like I saw them in some happy California gardens. They were lush and apparently increasing. I had really done it. The mystery was solved. Now everyone in the Midwest who wanted to grow PCNs could do so. And who wouldn't want to grow them? Now I was free to turn my attention to other pressing needs, like magnolias. So I went off to the magnolia convention in Louisiana. I got back home about ten days later because I had to visit my way through Louisiana and Alabama, (these are surely the most hospitable people on earth). The first thing to be checked outside were THE irises. To my horror and dismay ALL the PCNs were dry as straw. The tops were dry and the roots were even drier, just like before. What went wrong?

The problem didn't seem to be the same as the descriptions I had read of those in California where the diseases might start at one end or the other or both and progress or spread to other fans or individuals. Mine didn't rot. The leaves didn't turn brown. They didn't get soft. The roots didn't rot. The leaves stayed lackluster-green, but dry; and the roots were intact but dry as straw. Probably the most accurate description I can think of would be to compare them to plants which have been in silica gel to be preserved as dried flowers. I kept a couple of these plants for a year, just to see what would happen to them, but nothing did. They stayed just the way they were. The dried leaves stayed firmly attached to the dried roots.

So what now? Do I quit? No! Think, think, think. There must be an answer somewhere. Let us try to determine what we have learned from this experience:

1. The summer heat didn't seem to visibly affect the leaves of the plants. They were protected from the sun.

2. The autumn rains didn't visibly affect them. They went into the winter apparently thriving.

3. The sub-zero weather didn't seem to affect them. They were a healthy green in the spring, and appeared to be growing well for a time.

4. They all died at the same time within a span of ten days.

5. Death was not progressive, but rapid and complete.

6. It was not like any other disease process I have seen in the garden. The foliage was not streaked with virus, nor chewed by insects. They didn't turn brown or get soft as from bacterial infections. There was no sign of fungus as in mildew or black spot.

7. The root system did not rot. It just dried up like the foliage. The entire plant remained intact.

8. The plants were carefully planted, watered, fed lightly with 5-10-10 and not crowded. There were no other chemicals in the soil.

What did I overlook? Maybe the time was wrong. Maybe the plants resent being dug, cleaned, transported, and replanted when their new white roots were emerging. If poppies and some other plants can be very fussy about when they are transplanted, maybe the PCNs are also, but to an even greater degree. So what was there to do short of moving to the Santa Cruz mountains? Just then I received a catalog from one of your fine California growers advertising PCNs grown in pots for either what is considered the proper planting time when the white new roots are starting to emerge or for spring planting. I sent in a double order, one for each shipping time. The first order arrived at the supposed proper planting time. They ended up exactly as all the previous ones did in the spring. Then that same spring, the second order, packaged in a sawdust media, arrived, and were immediately planted out. All of these came through the growing season. A few even bloomed. I wished they hadn't so that all of the strength would have been conserved for the next growing season. I still remained the eternal optimist. The seasons changed, - autumn, winter, and spring came again at last. They were looking good as always; but as the year went on the majority dried up as their kin before had done. But, most important, some did survive, **SOME SURVIVED!** They did not look as vigorous as the year before, but they were alive. I was now down to three remaining plants. Two of them bloomed, both with the same yellow blossoms. I planted two of each variety widely spaced with other perennials in between them. These were probably **LEMONADE SPRINGS**, an early *I. innominata* hybrid by Davidson which was not registered at the time. When I went out one morning, 3 or 4 days later, one of the yellow ones was missing. I suspect either a crow or some

small animal made off with it entirely. The two remaining plants with blossoms had dried up and that was the end.

Am I going to give up, admit defeat after investing all these years? Yep!

If you have any thoughts regarding a possible solution to this mystery, please share them with us. Some people have succeeded to some degree. Florence Stout in Lombard, Illinois, has obtained a bloom from seed in her cold frame. It was yellow, but is now gone. Joan Cooper in Roseville, Minnesota, said she got some to survive. I believe she said they were *I. tenax* which I understand will survive but is susceptible to soil fungus. I cannot use the Vapam fumigant because I have many different kinds of plants intermingled and would not be able to dig everything out. I have not tried Subdue, but it would be worth trying. I have not had trouble with fungus anywhere else in the garden which also means our summers are apparently getting dryer and we are forced to water more often. Spring always brings some flooding for the entire backyard where the irises are planted. One area can be under standing water for days, but I do have another area with some elevated terraces. I've gotten the same poor results from PCNs in both areas. I have success with Siberian iris, Japanese iris, *I. graminea*, peonies, jack in the pulpits, trillium, standard dwarf bearded iris, and spring bulbs. I've also been successful with *I. setosa*, *I. chrysographies*, and BLUE FORTY, a 40-chromosome Siberian from Dr. McEwen, but I have not been able to grow any Cal-Sibes. Daylilies do very well, as does *I. cretata* and *I. tectorum*. Please let me hear from you and maybe I'll give it just one more try.

EDITOR'S COMMENT

After reading the above article by Virginia Winkler, I decided that we should not just leave her problems dangling, but instead should try to obtain suggestions leading to their solution. Furthermore, this wasn't the first time I had heard similar stories from others who were trying to grow PCNs in colder parts of the world. I wrote to Virginia and told her, as I had previously told the others, that it seemed to me that the only logical cause of her problem was freezing of the barely-established roots of the new replants.

In my own California garden, however, I had never experienced a real freeze, so who was I to tell her that her

problem was winter kill? With this in mind, I sent copies of both Virginia's letter and my reply to four of our members for comment. The following replies are from Panayoti Kelaidis, curator of the Rock Alpine Garden at Denver Botanic Gardens, Roy Davidson, long-time PCN grower in the Seattle, Washington area, Bob Ward, SPCNI District Representative of Central United States at Little-rock, Arkansas, and Dr. Richard Kiyomoto, SPCNI District Representative of the Eastern United States.

MILE-HIGH OBSERVATIONS

Panayoti Kelaidis, Denver, Colorado

Pacificas are notoriously difficult to establish from division, even in areas where they grow optimally. I can establish them thus only if we pot them up in just the right sort of soil (fibrous, gritty loam with acid pH) and keep them all winter in a cool greenhouse where they generate a mass of roots by spring. We plant them out in May, and then indeed they establish quite nicely. Although we have had a dozen or so Ghio introductions established in this fashion, I still think it is a mistake to try to start with such highly bred cultivars.

Seed germinates well in early spring if soaked and sown at cool temperatures. In a greenhouse you can prick out seedlings as early as February, and by May these are husky young plants that will produce up to seven fans their first summer. They usually bloom the spring following germination if treated in this fashion. This is the optimal way of establishing Pacificas in cold climates.

We have grown *I. bracteata*, *I. chrysophylla*, *I. douglasiana*, *I. fernaldii*, *I. innominata*, *I. macrosiphon*, *I. tenax* and its very different variety, *I. gormanii* in numerous accessions, and in many different sites: They all prefer at least a half day's cool sun (in our very sunny climate), and a light mulch of pine needles and porous, acid, humusy loam. I suspect they would not want to be too wet in the Midwest during the summer months; but here in Colorado they are given much the same treatment as most garden plants, (frequent overhead watering from June to September). Plants grown on a gentle, northfacing slope without too much tree root competition, deep root run, and dappled shade appear to be almost eternal.

We have clones of *Iris douglasiana* -collected randomly in the Santa Cruz Mountains that have been growing here for 30 years, still producing hundreds of flowers.* Mind you, we have no rain here from September to April, but heavy frost practically every night during that same period and frequent sub-zero cold, (often without snow cover), every winter within that time frame.

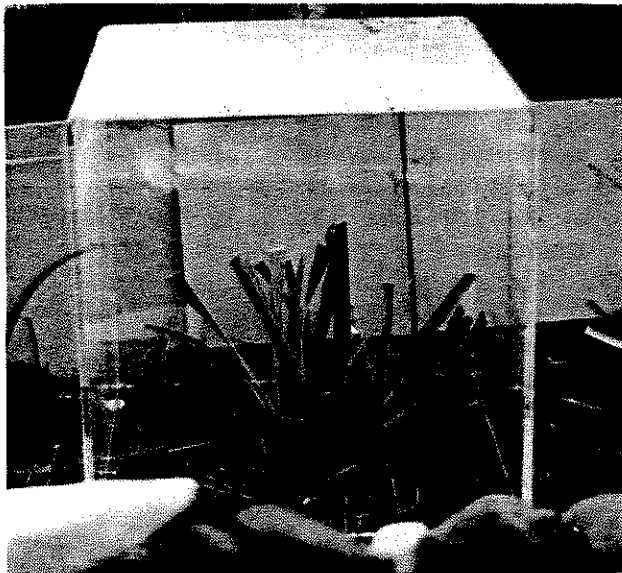
I am convinced that many of the problems encountered with growing pacificas in colder climates are due to misunderstanding their cultural needs rather than their supposed lack of tolerance to extreme cold. Also, I have come to think more and more that natural drainage, i.e. a 33% or greater slope, preferably sloping away from the sun, (but they need sun), is essential to growing PCIs well in wet, cold climates

* A generous supply of seed from this source was contributed by Panayoti and Gwen Kelaidis and is available through SPCNI's Seed Chairman, Louis Fry.

THOUGHTS FROM LITTLEROCK

Bob Ward, Littlerock, Arkansas

I read Dr. Winkler's article and am not surprised at the results considering the freezing weather and the blowing winds in the Chicago area. But what she didn't say is, did she provide a mulch or cover for the irises? What about watering during the winds which rapidly dry out soils?



Bob Ward's plastic cover for tender plants

It is distressful to spend all the money on plants and not have them perform for you; however, in my region I have no luck either with Joe Ghio's "Cadillacs". I

see her repeatedly attempting to plant these desirable irises, but I don't see any solutions.

Several years ago I wrote a small article on Winter-Kill: Here are some excerpts from that article.

"What is winter-kill? It starts with a prolonged period of very low temperatures which freezes the soil. Then, as the soil begins to thaw out, the root system of the *Californicae* which can best be described as "fleshy", suffers damage. Also in this process the fibrous roots are damaged, especially when soil moves about from freeze to thaw several times during the cold season. Eventually the fibrous roots die, cutting off all nutrition to the plant. For several weeks or months the plant appears healthy, but only reveals the true results during the spring season.

"In 1983 we had what is considered a very hard winter when temperatures dropped into the teens for several weeks with much snow and ice. During this time many of my Pacificas which went unprotected suffered winter-kill. Now, during any cold spell, preparations are made to protect the irises and other plants in the garden. The weather bureau warned us of the cold of December 1989, when the temperature dropped to 2 degrees Fahrenheit. This, of course, is too cold for most Pacificas; so before the cold front reached Littlerock, the irises that were more exposed were covered with one foot of pine needles and cloth materials. So far little damage has been noted."

A NORTHEAST OUTLOOK

Dr Richard Kiyomoto, New Haven, CT

Regarding the article by Dr. Winkler, it seems that there are several problems, but the most important seems to be one of transplanting bare-rooted plants. I have only had recent experience with bare-rooted plants, but my results are similar to hers. Last fall I received 30 bare-rooted PCNs from the West Coast. They were treated with Subdue and planted in the greenhouse, (70°) in a growing medium consisting of a 50-50 mix of peat and perlite. They remained green for longer than a month, but today, all are completely red-brown in color, presumably dead or dying. I conclude that it is not easy to keep such plants alive. Their decline is not due to a disease, but is more like a physiological reaction.

I don't know if Dr. Winkler's plants experienced a freeze in the spring when the plants could have de-hardened, or in the fall before plants were adequately hardened; but if occasional severe freezes do occur, some protection may be required. The symptoms in which the foliage remained a dull green, but the plants were dry and not rotted or blighted, suggests some general injury, most likely to the roots, as mentioned by Lewis in his letter to Dr. Winkler.

Plants which I had grown from seed and selected for tolerance to our growing conditions were also divided in the fall and placed in the greenhouse. Greater than 90% of the divisions are producing new shoots, and one clone is flowering today. I have noticed, however, that PCNs grown from seed, including seed from the 1988 breeding project, differ greatly in vigor. In my report, I note that many seedlings are lost in the germination trays. In fact, I have lost over 70 percent of the plants grown from seed. Part of this loss could be due to inbreeding depression of vigor, since seed are often self-pollinated. For this reason, developing cultivars for cold climates may require the production of hybrid seed from controlled crosses. By thus combining the proper genes for hardiness and for hybrid vigor we may yet succeed in developing hardy, garden worthy-Pacificas.

THE VOICE OF EXPERIENCE

Roy Davidson, Bellevue, WA

You've touched on a matter I've mentioned several times in the past, that of establishing plants of PCI in northern climates. I think Lewis has hit on the problem: "winter kill of roots". I have made it a firm practice to try to establish PCI only in the spring and have had no trouble.

Forty years ago when I commenced growing these irises, new to me then as was the Seattle climate, I assumed that because *Iris douglasiana* was a maritime plant of the benign Pacific Coast, that did not occur north of the Coquille River in Oregon, it was not likely to prove very frost hardy. I've changed my mind, and particularly so on seeing how they succeed in Colorado. What we grow under the designation "PCI" are mainly plants strongly infused with *douglasiana*, and so I mention my original concern. Forget it!

Select a rather sheltered spot if you can, mulch if you want to, but plant in the spring. Once established, PCIs are very rugged.

They inevitably tell us to plant "in the fall when the fat, new, white roots are emerging". That is good, sound advice if you live in a mild winter climate, but these irises also put out fat, new, white roots in early spring, and in our climate here, in the cool, wet winter area of the Puget Sound trench, we prefer to make garden divisions in the spring. The soil is warm, the moisture is right, and we have total success. Our fall weather is cool and divisions can succeed; but shallow roots are vulnerable to freezing, and in the fall we can't count on the soil warmth that really promotes deep rooting.

I think Virginia, and others in really frigid winter areas, would be further ahead to plant seeds from known hardy parents. Also, I think she would be further ahead if she was trying to establish some strain of PCN not selected in the benign climate of the Pacific Coast. I think she should try seeds from plants selected in the north such as the Rosedown strain from my own garden. Here, the majority of things grown stem from *Iris tenax* and *Iris innominata*. This doesn't give you the big, soft flowers Joe gets, but the plants are hardy.

THE LAST WORD

Lewis Lawyer

It must be wonderful to be a PCI enthusiast and live in the temperate climate of the San Francisco Bay area. It must also be wonderful to be editor of the Almanac and always have the last word.

In the fall 1986 edition of the Almanac I summarized several years' experience with fall transplants, mostly from Joe Ghio, with the statement that out of 308 bare-root transplants, all but one had survived. Since that time we have planted another 138 bare-root transplants, of which all but three survived. This averages just slightly better than 99% success. Of course, planting outdoors in our garden is tantamount to Panayoti's idea of keeping them over winter in his cool greenhouse before planting them out in the garden.

As I see it, the consensus is that Virginia's plants died from winter kill before they could become well established. Also

that some of the clones she was trying to grow might never survive conditions in Illinois. I would like to point out here, however, that genetically speaking, there is no reason why some of them, once established, could not survive as well as any cultivar, - they just haven't been tested.

In Virginia's article, mulching is not mentioned, and the contributors have commented that in areas where sub-zero temperatures are routine to the winters, some sort of protective mulch could be advisable.

There is complete agreement that she would do better starting with seed, and in all fairness, that is exactly what Virginia decided on her own. I looked at the list of seed which she ordered from Louis Fry, SPCNI Seed Distribution Chairman, and it seems to be an ideal choice for her pur-

poses. Now we will just have to wait until Virginia lets us know how her seedlings behaved. For her, and for all the rest of you gardeners in cold climate areas, we will try to include some of Roy Davidson's "Rosedown Strain" seed in our fall seed listing.

I'd like to make one more comment. It seems to me that Richard Kiyomoto's report of 30% survival in his seedling beds is far too low to accept without a fight. Even with my highly inbred, munzii-derived lines, some of which are very weak growers and must eventually be discarded, I have no losses in the seedling beds. I would imagine, therefore, that his problems are caused by some controllable factor such as disease, varmints, or a cultural problem which he will be able to correct in the future.

PCNs IN SOUTHERN CALIFORNIA

Duncan Eader, Arcadia, CA

The Southern California area is not a native habitat to any of the eleven species (plus several subspecies) of the Pacific Coast Native iris, except a form of *I. hartwegii* identified as *australis*, which grows in the San Bernardino mountains and may as well be left there. I have tried to transplant some from my mountain lot up there with dismal results; and seed which I collected had a germination rate of about 5 and zero percent survival. I suspect that the problem is related to altitude. *I. hartwegii* subsp. *australis* grows at 4-5000 feet and my garden is only about 500 feet elevation. It is probably a somewhat similar situation to the *I. missouriensis* seed which I gathered hopefully in Utah at about 7000 to 8000 feet, and which didn't even germinate.

My initial interest in the PCNs came from displays of mostly seedlings from the McCaskill garden in Pasadena which were entered as a commercial exhibit in the Southern California Iris Society (SCIS) shows in the Los Angeles Arboretum here in Arcadia. Already having an interest in the tall bearded iris, I had joined SCIS in the early sixties. I bought some PCN seedling plants from the McCaskills, and one named plant, RIPPLE ROCK. George Stambach, the "Johnnie Appleseed" of PCNs,, gave me some seed which I planted and got some plants. I did a lot of crossing, using RIPPLE ROCK, both as a pod and pollen

parent. When the seedlings bloomed in my garden, I was hooked.

I was fortunate to have close contact with George Stambach, who shared seed with me, with Thornton Abell who gave me plants, and with August Phillips and Barbara Serdynski who shared plants and advice, to name a few. I visited the Rancho Santa Ana Botanic Garden in Claremont to admire the efforts of Dr. Lee Lenz. Then there were the gardens of Russell and Jennie Hopson in San Gabriel and later in San Clemente, the gardens of Charles and Doris Foster first in Sierra Madre and then in Vista, and the garden of Clarke Cosgrove in San Gabriel and then his garden combined with that of his sister and brother-in-law, LaVerne and Ralph Conrad, in Bonsall. All of these irisarians had a wide interest in iris, but all of them grew and admired the PCNs.

I have continued hybridizing, selecting my pod and pollen parents on the basis of characteristics which I admired and which I hoped to combine in plants "with everything". Well, just as frequently one gets plants "with nothing". No, that isn't quite true! In all the crosses that I have brought into bloom there have only been a very few that were such "dogs" that they were immediately discarded. Most of my discards are because I have limited space, and because seedlings produced more recently are improvements. I do not grow any pure specie PCNs. At one time I had three pure *I. munzii* plants, but

one by one, they died without ever blooming. I obtained some douglasiana, some innominata, and some tenax seeds several years ago. I was able to germinate and grow a few of the douglasianas for a while, but in a garden upheaval due to the removal of a large tree, they were lost. Since then, I have worked only with hybrids, many of which have known parentage.

My garden is a city lot located in the North Central portion of the San Gabriel Valley about twenty miles from the Los Angeles Civic Center. Southern California is a land of widely varying microclimates, so what may be descriptive of my growing conditions may not be true a mile or so away, and yet may be repeated again and again in the general area. Our temperatures may get over 100° in summer and as cold as the high 20's in winter. Humidity is usually in the dry range. It seldom rains between May and December. My soil is a sandy loam to which I have added my composted garden waste for about forty years; but I still add an azalea-camelia planting mix to the beds where I plant PCNs. It is a mix of ground redwood bark and peat moss.

I have found that my best growth is under, or at least, shaded by deciduous trees. I have tried growing them in full sun, but not with great success unless the cultivar had *I. munzii* in its parentage and the plant growth form indicated it.

Perhaps some of the readers from Northern California, Oregon, and Washington will snort with derision at some of my objectives in hybridizing, but outside of compact foliage, vigorous growth, and floriferousness, which everybody wants, I have been working toward producing flowers with the following characteristics: They should be 3 1/2 inches in diameter or more and somewhat flat; have falls that are wide; have standards that are also relatively wide and tend to be more horizontal than erect, thus filling the spaces between the falls; and their stems should be 12 to 18 inches in height with 2 or 3 flowers per stalk, with branching, maybe. I know that the purists prefer the spidery, airy flowers that are more like the species; but I prefer the bolder, flat form.

George Stambach favored the smaller forms of the PCNs with short stalks and grasslike foliage typical of *I. innominata*. He wanted to establish a separate classification for miniatures, which would have

included the little ones like FAIRY CHIMES separate from the standard sizes. August Phillips leaned toward the narrow hafted types which he felt were more natural looking. I will not profess to know or list Dr. Lenz's preferences; but many of his, which include *I. munzii* background, have wide petals and large flowers. The cultivar, ALMA ABEL, named for Thornton Abell's wife, Alma, is an example. Lenz has many beautiful, large flowered, blue seedlings that are outstanding.

This article could fill more pages if I were to detail my methods of propagation and culture, but I will be brief and suggest that you all read Adele Lawyer's splendid article in the July 1988 issue of the American Iris Society Bulletin entitled, "Pacificas from Seed, A Summary". (Ed.: Reprinted from the Fall 1987 SPCNI ALMANAC.) Basically, my methods are simple and work well for me.

Most of the seed I plant are from (hopefully) controlled crosses. I "hope" I got there before a hummingbird or a bee, or before the anthers self-pollinated the flower. Crosses are numbered, tagged, and recorded, and then harvested before the pods split. Each pod is put into a container to dry and then is stripped of seed. Some selected crosses are planted in September and October. I use a sterilized potting mix called "Supersoil" when available, but a mix of finely ground redwood bark, sand, and peat moss with some perlite added will do fine. The moistened mix is put into 4-inch-square plastic pots and firmed. Usually sixteen seeds from one cross are planted in a pattern that leaves them equally spaced. The quantity and spacing facilitate separation later. Seeds are covered 1/4 inch with the same mix and again firmed. Pots are then set into a pan of water until they become saturated from the bottom. Each pot is then covered with plastic, and the initial soaking is usually all the water that is required until germination occurs. I usually get between 75 and 100 percent germination, but may lose a few plants in the transplanting process. The pots are placed in a shaded area with overhead protection from rain. If the soil surface becomes dry, I repeat the soaking-from-the-bottom procedure. Plastic covers are removed as soon as the first few green shoots touch them. When most of the seedlings have 3 or 4 leaves and are 3 or 4 inches tall, the "earth" ball is knocked out of the pot and placed in a pan of water. Slight side pressure on the

saturated root ball permits careful removal of the individual seedlings with minimal damage to the roots and the still-attached seed.

The individual seedlings are planted in 2 1/4-inch square plastic pots in the same potting mix. When white roots are visible in the drainage holes of the small pots, the seedlings should be repotted, either into 4-inch plastic, or if particularly vigorous, into 1-gallon containers. In this operation, I use essentially the same mix to which has been added about 1/4 part of good garden soil. After each transplanting, the pots are soaked from the bottom in plain water and then watered from the top with a solution of Subdue mixed at the rate of 8 drops per gallon. Subdue is a fungicide which seems to control damping-off and also the water mold fungi which attack mature PCN plants. All

plants continue to be tagged with their identification number. As they bloom, they get an additional letter added to distinguish them from their siblings, and they are described in the record book.

I have a fair collection of named cultivars from several hybridizers, but the majority have been from Joe Ghio. I have had sometimes disappointing results with his plants which are shipped bare root, being difficult to establish and slow to increase. I am not faulting Joe as a hybridizer or grower, and the problem is probably with me and my methods or the climatic difference between coastal Santa Cruz and a relatively dry and hot inland valley. I have had better results since the Subdue drench. I do have to first establish plants in pots when they come to me bare root. When planted directly into the ground, they just do not grow.

A CALIFORNIAN REMINISCENCE

Florence Day, Sierra Madre, CA.

My interest in Pacific Coast iris started when George Stambach gave me a packet of his seeds. Distributing native iris seed was his foremost interest, (and probably delight), as he always carried packages of Pacific Coast iris seeds in his pockets. He loved, lived, and worked with them, and when he came to meetings, he gave his little packages to those who would grow them.

I planted my seeds in a fruit crate taken from the grocery store bin. Fruit crates were wooden in those days and made a good flat to plant in. I used Super-Soil with sand and some redwood shavings as a planting mix. I got seven plants the next spring. From these, over the years, the lower garden became full of Pacific Coast irises.

I have registered 5 plants, COCO INDIAN, DAY OF DREAM, GOLD CHIPS, HIGH COAST, and LAVENDER PINK LADY, my favorite being COCO INDIAN, a nice, ruffled dark pink.

In growing Pacific Coast irises one needs a good drainage. Here in Sierra Madre, fall is the best time for planting so they get the winter rains. They don't need as much watering in summer as other irises, and they like part shade.

Even though it does not involve a Pacific Coast iris, I want to close with a very pleasant iris memory. Back in 1966 we were rock hunting in Oregon, and when driving back home to Sierra Madre, we came through the Alturas, California valley area. The valley was just acres and acres of blue missouriensis or longipetala iris for as far as you could see. It was like a blue lake!

TREASURER'S REPORT

Adele Lawyer

Because of the delay due to a change in the AIS Membership Chairman, we do not have an accounting of members or money received through AIS from July through December, 1989. Until we hear from AIS, we can not tell which members have renewed, nor how much money is involved.

Obviously, also, the January 1989 to January 1990 Treasurer's Report can not be reported at this time. When the records and money due us are received from AIS, last year's financial report will be presented. Hopefully it will be in time for the next issue of the ALMANAC.

Our balance as of March 15, 1990 is \$2281.14.

THIRTY NINE NEW MEMBERS AND TWELVE ADDRESS CHANGES

<p>Gardenview Horticultural Park, Inc. 16711 Pearl Road, Strongsville, OH 44136</p>	<p>Shasta Iris Society, 1770 Jacqueline Street, Anderson, CA 96007</p>	<p>Bulbes D'Opale, Le Courgain Offekerque, 62370 Audruicq, France</p>
<p>Andrews, Helga 11 Maple Avenue, Sudbury MA 01776</p>	<p>Bobbink, Stephen R. 320 Melrose Avenue, E., #305, Seattle, WA 98195</p>	<p>Brown, Mary E. 809 S. Sprague Avenue, Tacoma, WA 98405</p>
<p>Cantrell, Allen 2586 Hwy. 11 West, Chesnee, SC 29323</p>	<p>Care, Cynthia 10370 Menhart Lane, Cupertino, CA 95014</p>	<p>Cherry, Mr. & Mrs. Richard 14531 Viewcrest Drive. Riverside, CA 92504</p>
<p>Christo, Catherine 1311 West 14th Street, Benicia, CA 94510</p>	<p>Christy, Scott R. 11611 S.W. 55th Street, Portland, OR 97219</p>	<p>Cole, Debby 7417 92nd Place SE, Mercer Island, WA 98040</p>
<p>Destefano, Frank PO Box 871 Pine Grove, CA 95665</p>	<p>Doe, Linda Sollima 3135 Durand Drive, Hollywood, CA 90068</p>	<p>Due, Linnea A. 16 Loran Court, Kensington, CA 94707</p>
<p>Fedy, Mary L. PO Box 7630. Menlo Park, CA 94026</p>	<p>Ferguson, Mary Route 1, Box 76 Labadie, MO 63055</p>	<p>Flynn, Barbara E. 1332-232nd Place, NE, Redmond, WA 98053</p>
<p>Fraser, Mrs. M. Barsham House Ruckles Ln, Kings Langley, Heris WD4 England</p>	<p>Grainger, Ruth 2706 Queen Anne N., Seattle, WA 98109</p>	<p>Jessop, Edward 34619 S. Bernard Drive, Tracy, CA 95376</p>
<p>Kelaidis, Panayoti 909 York Street, Denver, CO 80206</p>	<p>Korn Ruth B. 3606 Robin View Drive, West Linn, OR 97068</p>	<p>Leopold, Sharon 3455 Salem-Dallas Highway, Salem, OR, 97304</p>
<p>Lichti, William F. RR #2, Ariss, Ontario Canada</p>	<p>Litfors, Peter Lilla Frescativagen 1, 10405 Stockholm, Sweden</p>	<p>Little, Barbara 1717 Chickasaw, Jonesboro, AR 72401</p>
<p>Longwell, Kevin 10318 111th Avenue NE, Lake Stevens, WA 98258</p>	<p>McGavran, Carla 11118-169th Avenue SE, Renton, WA 98056</p>	<p>Millar, Katheryn R.R. 3 Mclay Road, Duncan BC V9L Canada</p>
<p>Muller, Paul & Kathryn 548 Harmony Lane, San Jose, CA 95111</p>	<p>Near, Mrs. Jean 14909 Tomki Road, Redwood Valley, CA 95470</p>	<p>O'Connor, Richard J. 486 Cape Cod Drive, San Leandro, CA 94578</p>
<p>Pressley, Maybeth 6509 Sunnyside Avenue N., Seattle, WA 98103</p>	<p>Rahr, Elfie 16509 SE 18th, Bellevue, WA 98008</p>	<p>Rutten, Pierre Avenue Du 8 Mai 1945 83600 Frejus, France</p>
<p>Sheffel, Toby A. 1132 Garfield Street, Port Townsend, WA 98368</p>	<p>Stuart, Thomas P.O. Box 517, Croton Falls, NY 10519</p>	<p>White, John W. RFD 2, Box 980, Auburn, ME 04210</p>
<p>Japan Iris Society, 3-9 Tanimachi 6-Chome Chuo-Ku, Osaka Japan</p>	<p>Northern Illinois Iris Society 429 Lois Lane Lake Zurich IL 60047</p>	<p>Abrego, Thomas & Elien 19105 NE Trunk Road, Dundee, OR 97115</p>
<p>Brooks, Bob 965 Salem Street, Vista, CA 92084</p>	<p>Chaney, Arnold E. 30544 Terrace View Lane Valley Center, CA 92082</p>	<p>Chesnik, Raymond & Janice P.O. Box 1179, San Marcos, CA 92069</p>
<p>Hawkinson, Mr. W. D. 10425 Winesap Avenue, Cherry Valley, CA 92223</p>	<p>Howard, Beverly 2701 Stratford, Austin, TX 78746</p>	<p>Lattie, James E. 53 Lupine Avenue, San Francisco, CA 94118</p>
<p>Rockwell, Jr., Mr. & Mrs. C.C. 4312 S. 31st #27, Temple, TX 76502</p>	<p>Saltzman, Virginia 70 Valentine Street, West Newton, MA 02165</p>	<p>Shields, Diane 5369 Hwy. 100 Aurora, MN 55705</p>